UNIVERSITY OF SOUTHERN QUEENSLAND
AUSTRALIA

THE POSSIBLE FUTURES OF WORK ENGAGEMENT BY 2030: A MIXED METHODS STUDY INVESTIGATING STRATEGIC LEADERSHIP AND WORK ENGAGEMENT IN SINGAPORE

VOLUME II: APPENDICES

A Thesis submitted by

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MApplSc (PsychCoach), MBA, BScE&Eeng

For the award of

Doctor of Professional Studies (Research)

2021

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Appendix A

Human Research Ethics Approval

Subject: [RIMS] USQ HRE Application - H19REA140 - Expedited review outcome -Approved
Date: Friday, 30 August 2019 at 9:26:06 am Australian Eastern Standard Time
From: human.Ethics@usq.edu.au
To: ▬▬▬▬▬▬▬▬▬▬
CC: Luke.VanDerLaan@usq.edu.au

Dear Wade

I am pleased to confirm your Human Research Ethics (HRE) application has now been reviewed by the University's Expedited Review process. As your research proposal has been deemed to meet the requirements of the National Statement on Ethical Conduct in Human Research (2007), ethical approval is granted as follows:

USQ HREC ID: H19REA140
Project title: Workforce engagement futures: Scenario analysis linking strategic leadership and workforce engagement in Singapore by 2030
Approval date: 30/08/2019
Expiry date: 30/08/2022
USQ HREC status: Approved

The standard conditions of this approval are:

a)   responsibly conduct the project strictly in accordance with the proposal submitted and granted ethics approval, including any amendments made to the proposal;.

(b) advise the University (email:ResearchIntegrity@usq.edu.au) immediately of any complaint pertaining to the conduct of the research or any other issues in relation to the project which may warrant review of the ethical approval of the project;

(c) promptly report any adverse events or unexpected outcomes to the University (email: ResearchIntegrity@usq.edu.au) and take prompt action to deal with any unexpected risks;

(d) make submission for any amendments to the project and obtain approval prior to implementing such changes;

(e) provide a progress 'milestone report' when requested and at least for every year of approval.

(f) provide a final 'milestone report' when the project is complete;

(g) promptly advise the University if the project has been discontinued, using a final 'milestone report'.

The additional conditionals of approval for this project are:

(a) Nil.

Please note that failure to comply with the conditions of this approval or requirements of the Australian Code for the Responsible Conduct of Research, 2018, and the National Statement on Ethical Conduct in Human Research, 2007 may result in withdrawal of approval for the project.
Congratulations on your ethical approval! Wishing you all the best for success!

If you have any questions or concerns, please don't hesitate to make contact with an Ethics Officer.

Kind regards

Human Research Ethics

Appendix B

Normality Descriptive Statistics

	N	Skewness Statistic	Skewness Std Error	Kurtosis Statistic	Kurtosis Std. Error
I am known for generating ideas.	330	-.808	.134	4.034	.268
Being organized is important to me.	330	-.624	.134	3.369	.268
People think of me as a visionary	330	-.371	.134	2.390	.268
People think of me as organized.	330	-.832	.134	4.442	.268
I tend to dwell on "what was"	330	-.856	.134	3.717	.268
People think of me as structured.	330	-.838	.134	3.222	.268
I am known for invention/innovation.	330	-.593	.134	2.819	.268
People think I am best at planning and organization.	330	-1.017	.134	3.986	.268
I often think about past decisions	330	-.640	.134	2.639	.268
Test new products/trends very early	330	-.844	.134	4.327	.268
Don't like changes that disrupt opportunity	330	-1.455	.134	5.533	.268
Quickly adjust to new situations	330	-1.268	.134	5.877	.268
Hold the line when new plans are imposed	330	-.951	.134	3.956	.268
Don't want too much change	330	-.790	.134	4.060	.268
Consider how trends interact	330	-1.014	.134	3.833	.268
Against changes that threaten one's position	330	-.825	.134	3.307	.268
Focus on future questions	330	.504	.134	-.597	.268
Conscious of big trends in society	330	1.154	.134	4.497	.268
Go along when new trends come	330	1.024	.134	3.301	.268
Interested in future questions	330	.589	.134	4.513	.268
Focus on greater future questions	330	.490	.134	2.959	.268
Make things happen when future demands it	330	-1.609	.134	6.806	.268
Take advantage of trends that pop up	330	3.446	.134	18.729	.268
Flexible person	330	-.958	.134	2.193	.268
Have a position with status	330	7.114	.134	57.026	.268
Be the best in my field	330	-1.696	.134	4.427	.268
Achieve recognition for my work	330	-.843	.134	2.883	.268
Feel secure in my job	330	.	.	.	.
Are technical and well defined	330	-.808	.134	4.034	.268

Have considerable variety	330	-.624	.134	3.369	.268
Allow independent action	330	-.371	.134	2.390	.268
Involve people	330	-.832	.134	4.442	.268
Productive and fast	330	-.856	.134	3.717	.268
Highly capable	330	-.838	.134	3.222	.268
Committed and responsive	330	-.593	.134	2.819	.268
Receptive to suggestions	330	-1.017	.134	3.986	.268
Practical results	330	-.640	.134	2.639	.268
The best solutions	330	-.844	.134	4.327	.268
New approaches or ideas	330	-1.455	.134	5.533	.268
Good working environment	330	-1.268	.134	5.877	.268
In a direct one-to-one basis	330	-.951	.134	3.956	.268
In writing	330	-.790	.134	4.060	.268
By having group discussions	330	-1.014	.134	3.833	.268
In a formal meeting	330	-.825	.134	3.307	.268
Current problems	330	.504	.134	-.597	.268
Meeting objectives	330	1.154	.134	4.497	.268
Future goals	330	1.024	.134	3.301	.268
Developing people's careers	330	.589	.134	4.513	.268
Rely on proven approaches	330	.490	.134	2.959	.268
Apply careful analysis	330	-1.609	.134	6.806	.268
Look for creative approaches	330	3.446	.134	18.729	.268
Rely on my feelings	330	-.958	.134	2.193	.268
Specific facts	330	7.114	.134	57.026	.268
Accurate and complete data	330	-1.696	.134	4.427	.268
Broad coverage of many options	330	-.843	.134	2.883	.268
Limited data which is easily understood	330	-.053	.134	-.831	.268
Rely on intuition	330	.631	.134	-1.072	.268
Search for facts	330	-.344	.134	-1.378	.268
Look for a possible compromise	330	-.385	.134	-1.160	.268
Wait before making a decision	330	.763	.134	-.952	.268
Long debates	330	.320	.134	-1.484	.268
Incomplete work	330	-.241	.134	-1.364	.268
Using numbers or formulas	330	.159	.134	-1.447	.268

Conflict with others	330	.362	.134	-1.335	.268
Remembering dates & facts	330	.173	.134	-1.458	.268
Solving difficult problems	330	.193	.134	-1.416	.268
Seeing many possibilities	330	-.447	.134	-1.273	.268
Interacting with others	330	.689	.134	-1.016	.268
Decide and act quickly	330	.144	.134	-1.451	.268
Follow plans and priorities	330	.103	.134	-1.499	.268
Refuse to be pressured	330	.182	.134	-1.393	.268
Seek guidance or support	330	.138	.134	-1.558	.268
Speak with others	330	-.852	.134	-.791	.268
Think about what is being said	330	.586	.134	-1.096	.268
Observe what is going on	330	-.274	.134	-1.215	.268
Listen to what is going on	330	1.186	.134	-.006	.268
People's names	330	.451	.134	-1.250	.268
Places we met	330	-.624	.134	-1.000	.268
People's faces	330	.000	.134	-1.441	.268
People's personality	330	.815	.134	-.865	.268
The power to influence others	330	-.016	.134	-1.380	.268
Challenging assignments	330	-.809	.134	-.609	.268
Achieving my personal goals	330	.122	.134	-1.465	.268
Acceptance by the group	330	1.648	.134	1.153	.268
Energetic and ambitious	330	-.252	.134	-1.242	.268
Self confident	330	-.441	.134	-1.267	.268
Open minded	330	.362	.134	-1.392	.268
Polite and trusting	330	1.026	.134	-.485	.268
Become anxious	330	1.011	.134	-.403	.268
Concentrate on the problem	330	-.858	.134	-.817	.268
Become frustrated	330	-.130	.134	-1.305	.268
Am forgetful	330	.526	.134	-1.173	.268
Aggressive	330	-.266	.134	-1.296	.268
Disciplined	330	-.134	.134	-1.415	.268
Imaginative	330	1.389	.134	.430	.268
Supportive	330	-.139	.134	-1.470	.268
Realistic and direct	330	.433	.134	-1.415	.268

Systematic or abstract	330	.264	.134	-1.373	.268
Broad and flexible	330	-.216	.134	-1.369	.268
Sensitive to the needs of others	330	.134	.134	-1.487	.268
Losing control	330	-.236	.134	-1.475	.268
Boring work	330	-.393	.134	-1.205	.268
Following rules	330	.873	.134	-.786	.268
Being rejected	330	.399	.134	-1.246	.268
The CEO primarily defines our firm's 'vision' – its basic purposes and general direction	330	.696	.134	-1.114	.268
The CEO plays a key role in monitoring and controlling functional activities in this company	330	.614	.134	-1.100	.268
Based on feedback from the marketing place, our company continually adjusts its strategy	330	-.633	.134	-.987	.268
Strategy is developed on a continual basis, involving managers, staff and executives in an ongoing dialogue	330	-.066	.134	-1.350	.268
Business planning in our company is ongoing, involving everyone in the process to some degree	330	1.245	.134	.104	.268
Our middle managers play a critical role in converting top management's general vision into specific strategies	330	.541	.134	-1.100	.268
Our business planning process involves customers, suppliers and investors	330	-.597	.134	-.971	.268
Most people in this company have input into the decisions that affect them	330	-.446	.134	-1.302	.268
Strategic planning in our firm is a formal procedure occurring on a regular cycle	330	.225	.134	-1.445	.268
We have a clearly defined vision of the products and services we provide and the customers we serve	330	-.398	.134	-1.325	.268
This company has a well-defined niche in the market-place	330	-.049	.134	-1.411	.268
There is a clear set of values in this company that governs the way we do business	330	.869	.134	-.720	.268
This company has a distinctive 'management style'	330	.216	.134	-1.472	.268
Employee initiative and entrepreneur ship shape our firm's future strategic directions	330	.898	.134	-.589	.268
The strategy for this company emerges upward from the 'firing line' rather than downward from the top	330	-.501	.134	-1.159	.268
We spend a lot of time with customers, listening to what they have to say about our company	330	.013	.134	-1.496	.268
What is your gender?	330	-.340	.134	-1.129	.268

What is your nationality?	330	-.809	.134	-.857	.268
What is your age?	330	.686	.134	-.929	.268
What is your level of education?	330	1.098	.134	-.344	.268
Have you ever been exposed to futures thinking / foresight education or courses	330	.652	.134	-1.168	.268
If yes, please indicate at what level	330	-.026	.134	-1.401	.268
How long have you been working within your current industry?	330	.455	.134	-1.215	.268
What position do you hold in your organisation?	330	-.466	.134	-1.258	.268
How long have you been working in this position?	330	-.657	.134	-1.089	.268
What is your role in your organisation's strategy formulation?	330	.603	.134	-1.100	.268
Rate your influence on the strategy formulation of your organisation?	330	.049	.134	-1.387	.268
In terms of strategy formulation in my organisation; (You may select more than one option)	330	.553	.134	-1.173	.268
Strategy, in this company, is primarily set by the CEO and a few of his or her direct subordinates	330	-.249	.134	-1.362	.268
The CEO primarily defines our firm's 'vision' – its basic purposes and general direction	330	-.209	.134	-1.468	.268
The CEO plays a key role in monitoring and controlling functional activities in this company	330	.813	.134	-.788	.268
Based on feedback from the marketing place, our company continually adjusts its strategy	330	.272	.134	-1.410	.268
Strategy is developed on a continual basis, involving managers, staff and executives in an ongoing dialogue	330	-.756	.134	1.296	.268
Business planning in our company is ongoing, involving everyone in the process to some degree	330	-1.733	.134	4.318	.268
Our middle managers play a critical role in converting top management's general vision into specific strategies	330	-.466	.134	.352	.268
Our business planning process involves customers, suppliers and investors	330	-.748	.134	.503	.268
Most people in this company have input into the decisions that affect them	330	-.398	.134	-.735	.268
Strategic planning in our firm is a formal procedure occurring on a regular cycle	330	-.751	.134	.729	.268
We have a clearly defined vision of the products and services we provide and the customers we serve	330	-.422	.134	.232	.268
This company has a well-defined niche in the market-place	330	-.587	.134	.400	.268
There is a clear set of values in this company that governs the way we do business	330	-.564	.134	-.305	.268

This company has a distinctive 'management style'	330	.428	.134	-.423	.268
Employee initiative and entrepreneur ship shape our firm's future strategic directions	330	.405	.134	-.240	.268
The strategy for this company emerges upward from the 'firing line' rather than downward from the top	330	-.117	.134	-.110	.268
We spend a lot of time with customers, listening to what they have to say about our company	330	.511	.134	.061	.268
Personal and organizational information: The following questions seek general anonymous information about you and your organization. Please provide your response by clicking on the appropriate option.	330	.973	.134	.848	.268
What is your gender?	330	.336	.134	-.159	.268
What is your nationality?	330	.786	.134	.385	.268
What is your age?	330	.169	.134	-.572	.268
What is your level of education?	330	.196	.134	-.406	.268
Have you ever been exposed to futures thinking / foresight education or courses	330	.173	.134	-.289	.268
If yes, please indicate at what level	330	.029	.134	-.435	.268
How long have you been working within your current industry?	330	.012	.134	-.584	.268
What position do you hold in your organisation?	330	.081	.134	-.401	.268
How long have you been working in this position?	330	.092	.134	-.409	.268
Valid N (listwise)	330				

Appendix C

Descriptive Statistics

	N	Mean	Std. Dev at on	Var ance
I am known for generat ng deas.	329	5.2310	1.11864	1.251
Be ng organ zed s mportant to me.	329	6.0942	1.08493	1.177
Peop e th nk of me as a v s onary	329	4.6474	1.22362	1.497
Peop e th nk of me as organ zed.	329	5.3222	1.22206	1.493
I tend to dwe on "what was"	329	3.9696	1.55165	2.408
Peop e th nk of me as structured.	329	5.1033	1.21033	1.465
I am known for nvent on/ nnovat on.	329	4.6565	1.24962	1.562
Peop e th nk I am best at p ann ng and organ zat on.	329	4.9696	1.17610	1.383
I often th nk about past dec s ons	329	4.4711	1.48363	2.201
Test new products/trends very ear y	308	3.0065	1.33114	1.772
Don t ke changes that d srupt opportun ty	308	2.6396	1.23862	1.534
Qu ck y adjust to new s tuat ons	308	3.8799	1.16484	1.357
Ho d the ne when new p ans are mposed	308	2.9123	1.25643	1.579
Don t want too much change	308	2.3149	1.13639	1.291
Cons der how trends nteract	308	3.4773	1.17082	1.371
Aga nst changes that threaten one s pos t on	308	2.4318	1.22084	1.490
Focus on future quest ons	308	3.7857	1.21051	1.465
Consc ous of b g trends n soc ety	308	3.5390	1.19518	1.428
Go a ong when new trends come	308	3.3766	1.19215	1.421
Interested n future quest ons	308	3.9156	1.20505	1.452
Focus on greater future quest ons	308	3.7760	1.24197	1.542
Make th ngs happen when future demands t	308	3.8052	1.13332	1.284
Take advantage of trends that pop up	308	3.6688	1.19747	1.434
F ex b e person	308	4.1753	1.22744	1.507
Have a pos t on w th status	277	3.6173	2.72365	7.418
Be the best n my f e d	277	5.0397	2.87705	8.277
Ach eve recogn t on for my work	277	5.0181	2.58823	6.699

Fee secure n my job	277	3.3249	2.82763	7.996
Are techn ca and we def ned	277	3.9711	3.02632	9.159
Have cons derab e var ety	277	4.8773	2.74246	7.521
A ow ndependent act on	277	4.2166	2.81881	7.946
Invo ve peop e	277	3.9350	2.76942	7.670
Product ve and fast	277	4.3032	2.80561	7.871
H gh y capab e	277	4.1661	2.77042	7.675
Comm tted and respons ve	277	5.1841	2.83841	8.057
Recept ve to suggest ons	277	3.3466	2.74966	7.561
Pract ca resu ts	277	4.2238	2.82466	7.979
The best so ut ons	277	4.3610	2.88292	8.311
New approaches or deas	277	4.1444	2.71751	7.385
Good work ng env ronment	277	4.2708	3.02807	9.169
In a d rect one-to-one bas s	277	5.7437	2.84299	8.083
In wr t ng	277	3.5415	2.67488	7.155
By hav ng group d scuss ons	277	4.8123	2.51534	6.327
In a forma meet ng	277	2.9025	2.53409	6.422
Current prob ems	277	3.7870	2.73095	7.458
Meet ng object ves	277	5.4621	2.68034	7.184
Future goa s	277	4.4946	2.76051	7.620
Deve op ng peop e s careers	277	3.2563	2.80450	7.865
Re y on proven approaches	277	4.5126	2.61767	6.852
App y carefu ana ys s	277	5.5812	2.60255	6.773
Look for creat ve approaches	277	4.4585	2.73780	7.496
Re y on my fee ngs	277	2.4477	2.56826	6.596
Spec f c facts	277	4.7762	2.54960	6.500
Accurate and comp ete data	277	5.1191	2.85207	8.134
Broad coverage of many opt ons	277	4.0650	2.83919	8.061
L m ted data wh ch s eas y understood	277	3.0397	2.76269	7.632
Re y on ntu t on	277	3.0469	2.57805	6.646
Search for facts	277	5.7690	2.87620	8.273

Appendices

Look for a poss b e comprom se	277	4.5054	2.53900	6.447
Wa t before mak ng a dec s on	277	3.6787	2.70962	7.342
Long debates	277	4.8700	2.65895	7.070
Incomp ete work	277	4.7509	2.73054	7.456
Us ng numbers or formu as	277	2.6787	2.59766	6.748
Conf ct w th others	277	4.7004	2.87677	8.276
Remember ng dates & facts	277	3.7653	3.03825	9.231
So v ng d ff cu t prob ems	277	4.1625	2.69170	7.245
See ng many poss b t es	277	4.7473	2.77169	7.682
Interact ng w th others	277	4.3249	2.86581	8.213
Dec de and act qu ck y	277	4.8809	2.93965	8.642
Fo ow p ans and pr or t es	277	5.0397	2.68150	7.190
Refuse to be pressured	277	3.2310	2.82536	7.983
Seek gu dance or support	277	3.8484	2.61242	6.825
Speak w th others	277	3.5018	2.95574	8.736
Th nk about what s be ng sa d	277	3.6029	2.74807	7.552
Observe what s go ng on	277	5.3935	2.73604	7.486
L sten to what s go ng on	277	4.5018	2.59546	6.736
Peop e s names	277	2.7581	2.55007	6.503
P aces we met	277	3.7220	2.53640	6.433
Peop e s faces	277	5.3610	2.63470	6.942
Peop e s persona ty	277	5.1588	2.89991	8.409
The power to nf uence others	277	4.1011	2.86355	8.200
Cha eng ng ass gnments	277	5.1733	2.81410	7.919
Ach ev ng my persona goa s	277	4.5415	2.71788	7.387
Acceptance by the group	277	3.1841	2.69434	7.259
Energet c and amb t ous	277	4.2238	2.87425	8.261
Se f conf dent	277	3.2094	2.54372	6.470
Open m nded	277	5.2130	2.76523	7.646
Po te and trust ng	277	4.3538	2.90884	8.461
Become anx ous	277	4.8159	2.45659	6.035

Concentrate on the prob em	277	5.7076	2.82927	8.005
Become frustrated	277	3.5018	2.56174	6.562
Am forgetfu	277	2.9747	2.76024	7.619
Aggress ve	277	3.4801	2.96547	8.794
D sc p ned	277	4.5307	2.67231	7.141
Imag nat ve	277	3.7762	2.65131	7.029
Support ve	277	5.2130	2.84148	8.074
Rea st c and d rect	277	5.5162	2.86481	8.207
Systemat c or abstract	277	3.5162	2.72480	7.425
Broad and f ex b e	277	4.3213	2.65696	7.059
Sens t ve to the needs of others	277	3.6462	2.76713	7.657
Los ng contro	277	4.8195	2.78387	7.750
Bor ng work	277	4.8700	2.88507	8.324
Fo ow ng ru es	277	3.2960	2.66195	7.086
Be ng rejected	277	4.0144	2.83351	8.029
The CEO pr mar y def nes our f rm s v s on – ts bas c purposes and genera d rect on	157	3.8535	.82287	.677
The CEO p ays a key ro e n mon tor ng and contro ng funct ona act v t es n th s company	157	3.9363	.75686	.573
Based on feedback from the market ng p ace, our company cont nua y adjusts ts strategy	157	3.7516	.82940	.688
Strategy s deve oped on a cont nua bas s, nvo v ng managers, staff and execut ves n an ongo ng d a ogue	157	3.7261	.83675	.700
Bus ness p ann ng n our company s ongo ng, nvo v ng everyone n the process to some degree	157	3.6306	.94249	.888
Our m dd e managers p ay a cr t ca ro e n convert ng top management s genera v s on nto spec f c strateg es	157	3.4841	.93098	.867
Our bus ness p ann ng process nvo ves customers, supp ers and nvestors	157	3.7452	.89087	.794
Most peop e n th s company have nput nto the dec s ons that affect them	157	3.5541	.93641	.877
Strateg c p ann ng n our f rm s a forma procedure occurr ng on a regu ar cyc e	157	3.1592	.99685	.994

We have a clearly defined vision of the products and services we provide and the customers we serve	157	3.5860	.74287	.552
This company has a well-defined niche in the market-place	157	3.5924	.87673	.769
There is a clear set of values in this company that governs the way we do business	157	3.6688	.77118	.595
This company has a distinctive management style	157	3.6433	.80871	.654
Employee initiative and entrepreneurship shape our firm's future strategic directions	157	3.5032	.79763	.636
The strategy for this company emerges upward from the frontline rather than downward from the top	157	3.3694	.92186	.850
We spend a lot of time with customers, listening to what they have to say about our company	157	3.2357	.98150	.963
What's your gender?	154	1.4156	.49443	.244
What's your nationality?	153	4.2026	1.15485	1.334
What's your age?	230	1.7087	.66570	.443
What's your level of education?	232	3.9526	.60474	.366
Have you ever been exposed to futures thinking / foresight education or courses	232	1.6164	.54597	.298
If yes, please indicate at what level	95	5.6947	1.79878	3.236
How long have you been working within your current industry?	157	1.3885	.71297	.508
What position do you hold in your organisation?	158	4.5949	1.50599	2.268
How long have you been working in this position?	156	1.1795	.74042	.548
What is your role in your organisation's strategy formulation?	152	3.9079	1.22531	1.501
Rate your influence on the strategy formulation of your organisation?	153	3.0784	.82342	.678
In terms of strategy formulation in my organisation; (You may select more than one option)	44	1.0000	.00000	.000
Strategy, in this company, is primarily set by the CEO and a few of his or her direct subordinates	330	3.8535	.56663	.321
The CEO primarily defines our firm's vision – its basic purposes and general direction	330	3.9363	.52117	.272

The CEO p ays a key ro e n mon tor ng and contro ng funct ona act v t es n th s company	330	3.7516	.57112	.326
Based on feedback from the market ng p ace, our company cont nua y adjusts ts strategy	330	3.7261	.57618	.332
Strategy s deve oped on a cont nua bas s, nvo v ng managers, staff and execut ves n an ongo ng d a ogue	330	3.6306	.64900	.421
Bus ness p ann ng n our company s ongo ng, nvo v ng everyone n the process to some degree	330	3.4841	.64107	.411
Our m dd e managers p ay a cr t ca ro e n convert ng top management s genera v s on nto spec f c strateg es	330	3.7452	.61345	.376
Our bus ness p ann ng process nvo ves customers, supp ers and nvestors	330	3.5541	.64481	.416
Most peop e n th s company have nput nto the dec s ons that affect them	330	3.1592	.68643	.471
Strateg c p ann ng n our f rm s a forma procedure occurr ng on a regu ar cyc e	330	3.5860	.51154	.262
We have a c ear y def ned v s on of the products and serv ces we prov de and the customers we serve	330	3.5924	.60371	.364
Th s company has a we -def ned n che n the market- p ace	330	3.6688	.53103	.282
There s a c ear set of va ues n th s company that governs the way we do bus ness	330	3.6433	.55687	.310
Th s company has a d st nct ve management sty e	330	3.5032	.54924	.302
Emp oyee n t at ve and entrepreneur sh p shape our f rm s future strateg c d rect ons	330	3.3694	.63479	.403
The strategy for th s company emerges upward from the f r ng ne rather than downward from the top	330	3.2357	.67585	.457
We spend a ot of t me w th customers, sten ng to what they have to say about our company	330	1.4156	.33717	.114
Persona and organ zat ona nformat on: The fo ow ng quest ons seek genera anonymous nformat on about you and your organ zat on. P ease prov de your response by c ck ng on the appropr ate opt on.	330	4.2026	.78496	.616
What s your gender?	330	1.7087	.55539	.308
What s your nat ona ty?	330	3.9526	.50673	.257
What s your age?	330	1.6164	.45749	.209

Appendices

What s your eve of educat on?	330	5.6947	.96149	.924
Have you ever been exposed to futures th nk ng / fores ght educat on or courses	330	1.3885	.49095	.241
If yes, p ease nd cate at what eve	330	4.5949	1.04034	1.082
How ong have you been work ng w th n your current ndustry?	330	1.1795	.50821	.258
What pos t on do you ho d n your organ sat on?	330	3.9079	.83011	.689
How ong have you been work ng n th s pos t on?	330	3.0784	.55969	.313
Va d N (stw se)	14			

Appendix D

Delphi Round one survey

The Possible Futures of Workforce Engagement in Singapore – Introduction

The purpose of the study is to investigate the conceptual relationship between strategic leadership and workforce engagement in organisations in Singapore by 2030. The study adopts a futures research approach in conducting a scenario analysis method and an analysis of secondary quantitative data.

The study aims to consider the premised interaction between strategic leadership and staff engagement and how this can be enhanced given the possible futures of workforce engagement as outlined by scenarios for 2030. The study utilises the DELPHI method.

The Delphi method seeks to synthesise contributions from several experts aimed at addressing a clearly stated problem. Experts anonymously respond to semi-structured questions, in this case via an electronic link to be sent through an email. The Delphi method is a broader agreement-building process, which is based on selected 'group of experts' who agree or disagree with the statements, assumptions, or operationalised definitions (Erlene Rosowsky et al. 2018).

The participants in this study will be asked to answer online questions that will take approximately 30mins to complete for each round, and the entire study is expected to take three to four rounds.

In this first round, the participants of the DELPHI panel we will first validate the drivers of employee engagement that has been categorised in line of the PESTEEL method for environmental scanning (Political, Economic, Societal, Technological, Environmental, Ethical, and Legal). For each element, the drivers are classified into two categories; key drivers and other drivers, we will first examine the impact of each key drivers and then rank its influence. In addition, you will be asked if there are any missing drivers, and we will also encourage your comments and feedback. Second, we will ask you to examine the impact of the other drivers.

By answering this questionnaire you are consenting to your participation in the DELPHI panel, if you have any concerns about the study please contact the study principal supervisor Dr Luke Van Der Laan, Luke.VanDerLaan@usq.edu.au.

Thank you for your participation and support.

This 7 sections
*Required

1. Email address *

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Political Drivers	For the purposes of this study political drivers are understood as those forces/trends that relate to or are concerned with a system of government, or the conduct of government involving, or involved in politics and especially party politics

2. Q1.1 Key Political Drivers - Impact *

The following political drivers have been identified from the research carried by the study in an environmental scan of drivers that can impact employee engagement. Please rate to what extent you estimate the impact of each driver on engagement, from strong negative to strong positive.

	Strongly Negative	Negative	Neutral	Positive	Strongly Positive	I dont'l know
Changing global politics	☐	☐	☐	☐	☐	☐
Loss of trust in national politics	☐	☐	☐	☐	☐	☐
Tax Policy	☐	☐	☐	☐	☐	☐
Social welfare	☐	☐	☐	☐	☐	☐
Ethnic tension	☐	☐	☐	☐	☐	☐

3. Q1.2 Key Political Drivers - Influence *

Please rank the most influential key political driver (rank 1) to the least influential key driver (rank 5)

	1	2	3	4	5	I don't know
Changing global politics	☐	☐	☐	☐	☐	☐
Loss of trust in national politics	☐	☐	☐	☐	☐	☐
Tax Policy	☐	☐	☐	☐	☐	☐
Social welfare	☐	☐	☐	☐	☐	☐
Ethnic tension	☐	☐	☐	☐	☐	☐

4. Q1.3 Are there any other key political drivers we may have missed? *

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5. Q1.4 Do you have any further comments on the key political drivers? *

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6. Q1.5 Other Political Drivers - Impact *

Please rate to what extent you estimate the impact of other political drivers on engagement, from strong negative to strong positive.

	Strongly Negative	Negative	Neutral	Positive	Strongly Positive	I don' know
Regulation	☐	☐	☐	☐	☐	☐
Trade control	☐	☐	☐	☐	☐	☐
Import restrictions	☐	☐	☐	☐	☐	☐
Healthcare services	☐	☐	☐	☐	☐	☐
Unemployment	☐	☐	☐	☐	☐	☐
Employee Compensation	☐	☐	☐	☐	☐	☐
Housing assistance	☐	☐	☐	☐	☐	☐
Childcare assistance	☐	☐	☐	☐	☐	☐

Appendices

Democratisation	☐	☐	☐	☐	☐	☐
Governement stability	☐	☐	☐	☐	☐	☐
Bureaucracy	☐	☐	☐	☐	☐	☐
Corruption level	☐	☐	☐	☐	☐	☐
Freedom of speech	☐	☐	☐	☐	☐	☐
Awareness of workers rights	☐	☐	☐	☐	☐	☐
Hong Kong migration, business and workers	☐	☐	☐	☐	☐	☐
Political coalition and shift in government	☐	☐	☐	☐	☐	☐
Major government scandal	☐	☐	☐	☐	☐	☐
Rise of organised crime	☐	☐	☐	☐	☐	☐
Regional relations	☐	☐	☐	☐	☐	☐
China relations	☐	☐	☐	☐	☐	☐
USA relations	☐	☐	☐	☐	☐	☐
EU relations	☐	☐	☐	☐	☐	☐
Australia relations	☐	☐	☐	☐	☐	☐
US/China trade war	☐	☐	☐	☐	☐	☐
Risk of bioterrorism	☐	☐	☐	☐	☐	☐

Appendices   19

7.   Q1.6 Are there any other political drivers we may have missed? *

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8.   Q1.7 Do you have any further comments on the other political drivers? *

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Economic
Drivers

For the purposes of this study economic drivers are understood as those forces/trends that relate to or are based on the production, distribution, and consumption of goods and services forming the system and conditions of economic life in a country, region and globally

9. Q2.1 Key Economic Drivers - Impact *

The following economic drivers have been identified from the research carried by the study in an environmental scan drivers that can impact employee engagement. Please rate to what extent you estimate the impact of each driver on engagement, from strong negative to strong positive.

	Strongly Negative	Negative	Neutral	Positive	Strongly Positive	I don't know
National income at risk	☐	☐	☐	☐	☐	☐
Risk of cyberterrorism endangering the system	☐	☐	☐	☐	☐	☐
Risk of pandemic endangering the economy	☐	☐	☐	☐	☐	☐
Inequity between poor and rich	☐	☐	☐	☐	☐	☐
Changing global economy through deigitaisan and robotisation	☐	☐	☐	☐	☐	☐

10. Q2.2 Key Economic Drivers - Influence *

Please rank the most influential key driver (rank 1) to the least influential key driver (rank 5)

	1	2	3	4	5	I don't know
National income at risk	☐	☐	☐	☐	☐	☐
Risk of cyberterrorism endangering the system	☐	☐	☐	☐	☐	☐
Risk of pandemic endangering the economy	☐	☐	☐	☐	☐	☐
Inequity between poor and rich	☐	☐	☐	☐	☐	☐
Changing global economy through deigitaisan and robotisation	☐	☐	☐	☐	☐	☐

11. Q2.3 Are there any other key economic drivers we may have missed? *

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12. Q2.4 Do you have any further comments on the key economic drivers? *

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13. Q2.5 Other Economic Drivers - Impact *

Please rate to what extent you estimate the impact of each driver on engagement, from strong negative to strong positive.

	Strongly Negative	Negative	Neutral	Positive	Strongly Positive	I don't know
Low employment rate	☐	☐	☐	☐	☐	☐
Economic growth upper limit	☐	☐	☐	☐	☐	☐
High inflation rate	☐	☐	☐	☐	☐	☐
High interest rate	☐	☐	☐	☐	☐	☐
Less favourable exchange rate	☐	☐	☐	☐	☐	☐
Forced monetary policies	☐	☐	☐	☐	☐	☐
Forced fiscal policies	☐	☐	☐	☐	☐	☐
Low productvity	☐	☐	☐	☐	☐	☐

Credit availability for business	☐	☐	☐	☐	☐	☐
Increased government grants	☐	☐	☐	☐	☐	☐
Increased government subsidies	☐	☐	☐	☐	☐	☐
Increased rental waivers	☐	☐	☐	☐	☐	☐
Increased interest rates	☐	☐	☐	☐	☐	☐
Higher labour cost	☐	☐	☐	☐	☐	☐
Higher material cost	☐	☐	☐	☐	☐	☐
High disposable income	☐	☐	☐	☐	☐	☐
Higher cost of living	☐	☐	☐	☐	☐	☐
Increased trade agreements	☐	☐	☐	☐	☐	☐
Stronger trade flows and patters	☐	☐	☐	☐	☐	☐
Continuation of climate change	☐	☐	☐	☐	☐	☐
The experience economy, as goods become services	☐	☐	☐	☐	☐	☐
Dollar loses status of world reserve value	☐	☐	☐	☐	☐	☐
Cash flow injections by government	☐	☐	☐	☐	☐	☐

14.   Q2.6 Are there any other drivers we may have missed? *

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15. Q2.7 Do you have any further comments on the other economic drivers? *

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| Social Drivers | For the purposes of this study, social drivers are understood as those forces/trends that relate to or are based on human society, the interaction of the individual and the group, or the welfare of human beings as members of society that tend to form cooperative and interdependent relationships with others while living in more or less organized communities especially for the purposes of cooperation and mutual benefit |

16. Q3.1 Key Social Drivers - Impact *

The following social drivers have been identified from the research carried by the study in an environmental scan of drivers that can impact employee engagement. Please rate to what extent you estimate the impact of each driver or engagement, from strong negative to strong positive.

	Strongly Negative	Negative	Neutral	Positive	Strongly Positive	I don't know
Ageing population and generational conflict	☐	☐	☐	☐	☐	☐
Casualisation of the workforce	☐	☐	☐	☐	☐	☐
A more holistic approach to life, work, leisure, career and retirement	☐	☐	☐	☐	☐	☐
Reduction in the welfare state	☐	☐	☐	☐	☐	☐
Rise of automation and the need for human to learn new skills	☐	☐	☐	☐	☐	☐

17. **Q3.2 Key Social Drivers - Influence** *

Please rank the most influential key political driver (rank 1) to the least influential key driver (rank 5)

	1	2	3	4	5	I don't know
Ageing population and generational conflict	☐	☐	☐	☐	☐	☐
Casualisation of the workforce	☐	☐	☐	☐	☐	☐
A more holistic approach to life, work, leisure, career and retirement	☐	☐	☐	☐	☐	☐
Reduction in the welfare state	☐	☐	☐	☐	☐	☐
Rise of automation and the need for human to learn new skills	☐	☐	☐	☐	☐	☐

18. **Q3.3 Are there any other key drivers we may have missed?** *

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19. **Q3.4 Do you have any further comments on the key drivers?** *

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20. **Q3.5 Other Social Drivers - Impact** *

Please rate to what extent you estimate the impact of each driver on engagement, from strong negative to strong positive.

	Strongly Negative	Negative	Neutral	Positive	Strongly Positive	I don't know
Up-skilling of older generations	☐	☐	☐	☐	☐	☐
Slow population growth rate	☐	☐	☐	☐	☐	☐
Increased immigration rate	☐	☐	☐	☐	☐	☐
Increased life expectancy rate	☐	☐	☐	☐	☐	☐
Unbalanced gender demogrpahics	☐	☐	☐	☐	☐	☐
Reduced social obedience	☐	☐	☐	☐	☐	☐
Increased health consciousness	☐	☐	☐	☐	☐	☐
Increased emphasis on education	☐	☐	☐	☐	☐	☐
Traditions shifting towards reduced standards	☐	☐	☐	☐	☐	☐
Higher emphasis on safety	☐	☐	☐	☐	☐	☐
Increased digital information leading to enriched reality	☐	☐	☐	☐	☐	☐
Increase in mental health issues	☐	☐	☐	☐	☐	☐
Increased indentity theft and privacy violation	☐	☐	☐	☐	☐	☐
Aspiration towards life style	☐	☐	☐	☐	☐	☐
Increased interest in higher education	☐	☐	☐	☐	☐	☐
Positive attitudes towards imported goods and services	☐	☐	☐	☐	☐	☐

Higher inclination towards

quality products and better services	☐	☐	☐	☐	☐	☐
Higher interest toward savings and investing	☐	☐	☐	☐	☐	☐
Higher inclination towards ecological prodcuts	☐	☐	☐	☐	☐	☐
Increase attention to religion and beliefs	☐	☐	☐	☐	☐	☐
In crease sense of inequality and social classes	☐	☐	☐	☐	☐	☐
Reduces family size and structure	☐	☐	☐	☐	☐	☐
Reduced long term social loyalty	☐	☐	☐	☐	☐	☐
Increased fears of epidemic impact	☐	☐	☐	☐	☐	☐
Increased social conflict	☐	☐	☐	☐	☐	☐
Noticeable impact due to Hong Kong evacuation	☐	☐	☐	☐	☐	☐
Increased self organisation an self sufficiency and less dependency on institutions	☐	☐	☐	☐	☐	☐
Reduced solidarity	☐	☐	☐	☐	☐	☐

21.   Q3.6 Are there any other social drivers we may have missed? *

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22. Q3.7 Do you have any other comments on the other social drivers? *

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Technology Drivers	For the purposes of this study technological drivers are understood as those forces/trends that relate to, or are based on the application of scientific knowledge for practical purposes, especially in the industry including advances in computer technology, engineering applications, machinery and equipment developed from the application of scientific knowledge and/or invention

23. Q4.1 Key Technology Drivers - Impact *

The following technology drivers have been identified from the research carried by the study in an environmental sca of drivers that can impact employee engagement. Please rate to what extent you estimate the impact of each driver engagement, from strong negative to strong positive.

	Strongly Negative	Negative	Neutral	Positive	Strongly Positive	I don' know
Enhanced communication infrastructure	☐	☐	☐	☐	☐	☐
Increased used of analytics in decision making	☐	☐	☐	☐	☐	☐
Major security breaches	☐	☐	☐	☐	☐	☐
Increased censorship and citizen monitoring	☐	☐	☐	☐	☐	☐
Possibilities of new generations in IT	☐	☐	☐	☐	☐	☐

24. **Q4.2 Key Technology Drivers - Influence** *

Please rank the most influential key political driver (rank 1) to the least influential key driver (rank 5)

	1	2	3	4	5	I don't know
Enhanced communication infrastructure	☐	☐	☐	☐	☐	☐
Increased used of analytics in decision making	☐	☐	☐	☐	☐	☐
Major security breaches	☐	☐	☐	☐	☐	☐
Increased censorship and citizen monitoring	☐	☐	☐	☐	☐	☐
Possibilities of new generations in IT	☐	☐	☐	☐	☐	☐

25. **Q4.3 Are there any other key technology drivers we may have missed?** *

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26. **Q4.4 Do you have any further comments on the key technology drivers?** *

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27. Q4.5 Other Technology Drivers – Impact *

Please rate to what extent you estimate the impact of each driver on engagement, from strong negative to strong positive.

	Strongly Negative	Negative	Neutral	Positive	Strongly Positive	I don't know
Increased R&D expenditure	☐	☐	☐	☐	☐	☐
Increased technology incentives	☐	☐	☐	☐	☐	☐
Issuing of legislation concerning technology	☐	☐	☐	☐	☐	☐
Develop and maintain the smart city state	☐	☐	☐	☐	☐	☐
Rise of the internet of things IoT	☐	☐	☐	☐	☐	☐
Ability to predict human behaviour through data analysis	☐	☐	☐	☐	☐	☐
Increased rate of technological change	☐	☐	☐	☐	☐	☐
Use of chips in human body to monitor health	☐	☐	☐	☐	☐	☐
narrowing the gap between the chip and human	☐	☐	☐	☐	☐	☐
Potential security breaches	☐	☐	☐	☐	☐	☐
Increased risk of privacy and personal data security	☐	☐	☐	☐	☐	☐

Appendices

28.   Q4.6 Are there any other drivers we may have missed? *

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29.   Q4.7 Do you have any further comments on the other technology drivers? *

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Environmental Drivers

For the purposes of this study environmental drivers are understood as those forces/trends that relate to, or are based on the circumstances, objects, or conditions by which one is surrounded within the complex of physical, chemical, and biotic factors (such as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival

30. **Q5.1 Key Environmental Drivers - Impact** *

The following political drivers have been identified from the research carried by the study in an environmental scan (drivers that can impact employee engagement. Please rate to what extent you estimate the impact of each driver or engagement, from strong negative to strong positive.

	Strongly Negative	Negative	Neutral	Positive	Strongly Positive	I don' know
Widespread melting of the arctic and antarctic poles	☐	☐	☐	☐	☐	☐
Extreme rise in the sea level	☐	☐	☐	☐	☐	☐
Increased coast line erosion	☐	☐	☐	☐	☐	☐
Desalination of water to meet increased demand for drinking water	☐	☐	☐	☐	☐	☐
Mentality change to counter the effects of climate change	☐	☐	☐	☐	☐	☐

31. **Q5.2 Key Environmental Drivers - Influence** *

Please rank the most influential key political driver (rank 1) to the least influential key driver (rank 5)

	1	2	3	4	5	I don' know
Widespread melting of the arctic and antarctic poles	☐	☐	☐	☐	☐	☐
Extreme rise in the sea level	☐	☐	☐	☐	☐	☐
Increased coast line erosion	☐	☐	☐	☐	☐	☐
Desalination of water to meet increased demand for drinking water	☐	☐	☐	☐	☐	☐
Mentality change to counter the effects of climate change	☐	☐	☐	☐	☐	☐

32.   Q5.3 Are there any other key Envirnomental drivers we may have missed? *

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33.   Q5.4 Do you have any further comments on the key Environmental drivers? *

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34.   Q5.5 Other Environmental Drivers - Impact *
Please rate to what extent you estimate the impact of each driver on engagement, from strong negative to strong positive.

	Strongly Negative	Negative	Neutral	Positive	Strongly Positive	I don't know
Increased climate extremes	☐	☐	☐	☐	☐	☐
Increased air and water pollution	☐	☐	☐	☐	☐	☐
Increased risk on public health	☐	☐	☐	☐	☐	☐
Intensified rate of endangered species	☐	☐	☐	☐	☐	☐
Increased environmental threats	☐	☐	☐	☐	☐	☐
Reoccurrence of environmental disaster like earthquake and tsunami	☐	☐	☐	☐	☐	☐

Introducing enforced lawyer envorinemtal pollution	☐	☐	☐	☐	☐	☐
Greater awareness fo recycling and waster management	☐	☐	☐	☐	☐	☐
Increased interest in renewable energy	☐	☐	☐	☐	☐	☐
Mentally change to counter the effects of climate change	☐	☐	☐	☐	☐	☐
Application of aroclogy; combining architecture and ecology	☐	☐	☐	☐	☐	☐
Increased orientation towards Corporate Social Responsibilty	☐	☐	☐	☐	☐	☐
Increased efforts towards sustainability across the board	☐	☐	☐	☐	☐	☐

35. Q5.6 Are there any other environmental drivers we may have missed? *

36. Q5.7 Do you have any further comments on the other environmental drivers? *

38. Q6.2 Key Ethical Drivers - Influence *

Please rank the most influential key political driver (rank 1) to the least influential key driver (rank 5)

	1	2	3	4	5	I don't know
Perceived class and ethnic ethical variability in recruiting	☐	☐	☐	☐	☐	☐
Promoting social sustainability concerning human capital	☐	☐	☐	☐	☐	☐
Engaging employees in driving ethical behaviours initiatives	☐	☐	☐	☐	☐	☐
Ethical business leadership	☐	☐	☐	☐	☐	☐
Developing ethical grounds for protecting intellectual property	☐	☐	☐	☐	☐	☐

39. Q6.3 Are there any other key ethical drivers we may have missed? *

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40. Q6.4 Do you have any further comments on the key ethical drivers? *

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41   Q6.5 Other Ethical Drivers - Impact *

41.   Q6.6 Other Ethical Drivers - Impact

Please rate to what extent you estimate the impact of each driver on engagement, from strong negative to strong positive.

	Strongly Negative	Negative	Neutral	Positive	Strongly Positive	I don' know
Ethical recruiting practices and employment standards	☐	☐	☐	☐	☐	☐
Protection of human rigths	☐	☐	☐	☐	☐	☐
Freedom of association	☐	☐	☐	☐	☐	☐
The right to collective bargaining	☐	☐	☐	☐	☐	☐
Elimination of all forms of forces and compulsory labour	☐	☐	☐	☐	☐	☐
Elimination of discrimination in respect of employment and occupation	☐	☐	☐	☐	☐	☐
Acting forcefully to eradicate abusive behaviour	☐	☐	☐	☐	☐	☐
Enforce ethical marketing and sales practices	☐	☐	☐	☐	☐	☐
Comply with ethical accounting practices	☐	☐	☐	☐	☐	☐
Support a precautionary approach to environmental challenges	☐	☐	☐	☐	☐	☐
Comply to commerce ethics	☐	☐	☐	☐	☐	☐
Own product safety and liability	☐	☐	☐	☐	☐	☐
Demonstrate ethical leadership at the board and executive levels	☐	☐	☐	☐	☐	☐

Work against corruption in all its

forms, including extortion and bribery	☐	☐	☐	☐	☐	☐
Ensure corporate social responsibility	☐	☐	☐	☐	☐	☐
Secure private data	☐	☐	☐	☐	☐	☐
Demonstrate ethical stand on medical advnaces	☐	☐	☐	☐	☐	☐
Encourage the development and diffusion on environmental firefly technologies	☐	☐	☐	☐	☐	☐
Row 19	☐	☐	☐	☐	☐	☐

42. Q6.6 Are there any other ethical drivers we may have missed? *

_____
_____
_____
_____
_____

43. Q6.7 Do you have any further comments on the other ethical drivers? *

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_____
_____
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Legal Drivers	For the purposes of this study legal drivers are understood as those forces/trends that relate to, or are based on the law which has been promulgated (or "enacted") by a legislature or other governing body or the process of making it

44. Q7.1 Key Legal Drivers - Impact *

The following legal drivers have been identified from the research carried by the study in an environmental scan of drivers that can impact employee engagement. Please rate to what extent you estimate the impact of each driver or engagement, from strong negative to strong positive.

	Strongly Negative	Negative	Neutral	Positive	Strongly Positive	I don' know
Employment law	☐	☐	☐	☐	☐	☐
Work health and safety law	☐	☐	☐	☐	☐	☐
Privacy and data protection law	☐	☐	☐	☐	☐	☐
Anti discrimination law	☐	☐	☐	☐	☐	☐
Copyright, patents and intellectual property law	☐	☐	☐	☐	☐	☐

45. Key Legal Drivers - Influence *

Please rank the most influential key political driver (rank 1) to the least influential key driver (rank 5)

	1	2	3	4	5	I don' know
Employment law	☐	☐	☐	☐	☐	☐
Work health and safety law	☐	☐	☐	☐	☐	☐
Privacy and data protection law	☐	☐	☐	☐	☐	☐
Anti discrimination law	☐	☐	☐	☐	☐	☐
Copyright, patents and intellectual property law	☐	☐	☐	☐	☐	☐

46. Q7.3 Are there any other key legal drivers we may have missed? *

_____

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47. Q7.4 Do you have any further comments on the key legal drivers? *

_____

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48.　Q7.5 Please tick the relevant box to indicate the impact of the key Legal driver on employees *

Please rate to what extent you estimate the impact of each driver on engagement, from strong negative to strong positive.

	Strongly Negative	Negative	Neutral	Positive	Strongly Positive	I don't know
Industrial relations law	☐	☐	☐	☐	☐	☐
Anti-trust law	☐	☐	☐	☐	☐	☐
Row 3	☐	☐	☐	☐	☐	☐
Consumer protection law	☐	☐	☐	☐	☐	☐
E-commerece law	☐	☐	☐	☐	☐	☐
Taxation law	☐	☐	☐	☐	☐	☐
Environmental law	☐	☐	☐	☐	☐	☐
Education law	☐	☐	☐	☐	☐	☐

49.　Q7.6 Are there any other drivers we may have missed? *

_____

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_____

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_____

50.   Q7.7 Do you have any further comments on the key drivers? *

_____

_____

_____

_____

_____

Thank you for completing the round one   We look forward to see you in round two

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Appendix E

Delphi round one – frequency statistics

Political drivers – round one

Key Political drivers	Drivers achieving Consensus		Drivers achieving No Consensus	Degree of Influence
	Positive Impact	Negative Impact		
Changing global politics	✓			*4*
Loss of trust in national politics			✗	*1*
Tax policy	✓			*3*
Social welfare	✓			*2*
Ethnic tension			✗	*5*
Other Political drivers				
Regulation / deregulation	✓			
Trade control	✓			
Import restrictions			✗	
Healthcare services	✓			
Unemployment compensation	✓			
Housing assistance	✓			
Childcare assistance	✓			
Democratisation	✓			
Government stability/instability	✓			
Bureaucracy			✗	
Corruption level			✗	
Freedom of speech	✓			
Awareness of workers' rights	✓			
Hong Kong migration, business, and workers	✓			
Political coalition and shift in government	✓			
Major government scandal			✗	
Rise of illegitimate organised crime			✗	
Regional relations	✓			
China relations	✓			
USA relations	✓			
EU relations	✓			
Australia relations	✓			
US / China trade war			✗	
Risk of bioterrorism			✗	

Economic Drivers – round one

Key Economic drivers	Positive Impact	Negative Impact	No Consensus	Influence
National income at risk			✗	*2*
Risk of cyberattack endangering the system			✗	*3*
Risk of pandemic endangering the economy			✗	*1*
Inequity between poor and rich			✗	*5*
Changing global economy through digitisation	✓			*4*
Other Economic drivers				
Low employment rate	✓			
Economic growth upper limit	✓			
High inflation rate			✗	
High-interest rate			✗	
Forced monetary policies			✗	
Forced fiscal policies			✗	
Low productivity			✗	
Credit availability for business	✓			
Increased government grants	✓			
Increased government subsidies	✓			
Increased rental waivers	✓			
Cashflow injections by the government	✓			
Higher labour costs		✓		
Higher material costs		✓		
High disposable income	✓			
Higher cost of living			✗	
Less favourable exchange rates			✗	
Increased trade agreements	✓			
Stronger trade flows and patterns	✓			
Continuation of climate change			✗	
The experience economy as good become services	✓			
US$ loses its status of world reserve currency			✗	

Social Drivers – round one

Key Social drivers	Positive Impact	Negative Impact	No Consensus	Influence
Ageing population and generational conflict			✗	*4*
Casualisation of the workforce			✗	*5*
A more holistic approach to life, work, and retirement	✓			*1*
Reduction in the welfare state			✗	*3*
Rise of automation and the need to learn new skills	✓			*2*
Other Social drivers				
Upskilling of the older generation	✓			
Slow population growth rate		✓		
Increased immigration rates-	✓			
Increased life expectancy rate	✓			
Unbalanced gender demographics		✓		
Reduced social obedience		✓		
Increased health consciousness	✓			
Increased emphasis on education	✓			
Traditions shifting towards reduced standards			✗	
Higher emphasis on safety	✓			
Increased digital information leading to enriched reality	✓			
Aspiration towards Lifestyle	✓			
Increased interest in higher education	✓			
Positive attitudes toward imported goods and services	✓			
Higher inclinational towards quality product and service	✓			
Higher interests' savings and investing	✓			
Higher inclination towards ecological products	✓			
Increased sense of inequality and social classes			✗	
Increased identity theft and privacy violation		✓		
Increased attention to religion and beliefs	✓			
Reduced family size and structure	✓			
Reduced Long term social loyalty (minorities and citizens)			✗	
Increased fears of an epidemic		✓		
Increased social conflict		✓		
Impact due to Hong Kong evacuation-			✗	
Increase in mental health issues			✗	
Increased self-organisation less dependency on institutions	✓			

Technology Drivers – round one

Key Technology drivers	Positive Impact	Negative Impact	No Consensus	Influence
Enhanced communication infrastructure	✓			*1*
Increased use of analytics in decision making	✓			*2*
Major security breaches		✓		*5*
Increased censorship and citizen monitoring		✓		*4*
Possibilities of new generations in IT	✓			*3*
Other Technology drivers				
Increased R&D expenditure	✓			
Increased technology incentives	✓			
Issuing of legislation concerning technology	✓			
Develop and maintain the Smart city-state	✓			
Rise of the Internet of things IoT	✓			
Narrowing the gap between the chip and human	✓			
Ability to predict human behaviours through data analysis	✓			
Use of chips in the human body to monitor the health	✓			
Increased rate of technological change	✓			
Increased risk of privacy and personal data security		✓		

Environmental Drivers – round one

Key Environmental drivers	Positive Impact	Negative Impact	No Consensus	Influence
Widespread melting of the Arctic and Antarctic poles			✗	*3*
The extreme rise in the sea level			✗	*2*
Increased coastline erosion			✗	*1*
Desalination of water to meet increased demand			✗	*5*
Mentality changes to counter the effects of climate	✓			*4*
Other Environmental drivers				
Increased climate extremes		✓		
Increased air and water pollution		✓		
Increased risk on public health		✓		
Increased rate of endangered species		✓		
Increased environmental threats		✓		
Reoccurring of environmental disaster (e.g., tsunami)			✗	
Introducing enforced laws for environmental pollution	✓			
Greater awareness of recycling/waste management	✓			
Increased interest in renewable energy	✓			
Application of arcology combining architecture and ecology	✓			
Increased orientation towards corporate social responsibility CSR	✓			
Increased efforts towards sustainability	✓			

Ethical Drivers – round one

Key Ethical drivers	Drivers achieving Consensus		Drivers achieving No Consensus	Influence
	Positive Impact	**Negative Impact**		
Perceived class and ethnic ethical variability in recruiting			✕	*1*
Promoting social sustainability concerning human capital	✓			*3*
Engaging employees in driving ethical behaviours initiatives	✓			*4*
Ethical business leadership	✓			*2*
Developing ethical grounds for protecting intellectual property	✓			*5*
Other Ethical drivers				
Ethical recruiting practices and employment standards (e.g., not using children to produce goods)	✓			
Protecting human rights	✓			
Freedom of association	✓			
Acting forcefully to eradicate abusive behaviours	✓			
The right to collective bargaining	✓			
Elimination of all forms of forces and compulsory labour	✓			
Elimination of discrimination in respect of employment and occupation	✓			
Enforce ethical marketing and sales practices	✓			
Comply with ethical accounting practices	✓			
Comply with Commerce ethical practices	✓			
Support a precautionary approach to environmental	✓			
Own product safety and liability	✓			
Demonstrate ethical leadership at the board and executive levels	✓			
Work against corruption in all its forms	✓			
Ensure corporate social responsibility	✓			
Secure private data	✓			
Demonstrate ethical stand on medical advances	✓			
Encourage the advancement and diffusion on environmentally friendly technologies	✓			

Key Legal drivers	Positive Impact	Negative Impact	No Consensus	Influence
Employment law	✓			*2*
Work health and safety law	✓			*1*
Privacy and data protection law	✓			*4*
Anti-discrimination law	✓			*3*
Copyright, patents, and intellectual property law	✓			*5*
Other Legal drivers				
Industrial relationship law	✓			
Consumer protection and e-commerce	✓			
Privacy laws and data protection	✓			
E-commerce	✓			
Anti-trust law	✓			
Environmental law	✓			
Education law	✓			
Tax law	✓			

Appendix F

Delphi round one - comments

Drivers	Category	Comments
POL	Key	- Societal and environmental - top 5 global risks besides geopolitical - Freedom of speech or expression, availability of information - freedom of speech and the ability to speak without recourse/retribution - I think it's a balance between what's happening in a country to that of what is happening in a company being in a global MNC would give different perspective than working in a single market company and how local Government shapes policy and thinking - The current national pandemic response may be considered a political driver, but I would also classify it as "neutral". - Immigration Policy, Global Trade and Investment Environment - The government's trust in engaging foreign experts - Immigration and Foreign Talent - Income inequality - Singapore tax system is favourable and has a positive impact on engagement - Immigration policy drives wages down and increase cost of living - Leadership example to foster income equality - Immigration policy - New global order will set Singapore in a favourable position and will have a positive impact - Overall political drivers are not likely to be influential in employee engagement - communication technologies that result in swift exchange of information - Digital channels for information sharing - Leadership changes can have an impact - Generally, critical political drivers are concerned with the changes of leadership and political parties involved in these changes.
	Other	- the key to this is "so what does this do for me or how does this impact me" - Education opportunities - Migrant worker policy - Hard to know how these drivers impact on employee engagement versus employee satisfaction with government. - Digital empire for information sharing - Leadership changes
ECO	Key	- Values of the country...are they considered and aligned to economic drivers - I think this is purely dependent upon impact to me and nothing else - Deglobalisation (increased regionalisation); Decoupling of technology. - Trade protectionism - High disposable income - Trade control as mentioned in political - Technology driven economy - Lower cost of living - Ongoing continual learning/ skill acquisition of employees - Deglobalisation and regionalisation - Leadership changes
	Other	- I believe this will be very personal to each individual and their culture/values - technological advancement impacting employee engagement.
SOC	Key	- Generational as well as situational will have an impact together with migrant workforce specifically - Cultural norms and values - Minorities and social conflict - Standards of living - I think that this shows what do people see and experience now Singapore hasn't experienced some of the other trends/factors that the west has seen so would not be perceived as important now. - Social inequity - Social inequity and potential conflict - Maintaining high standards of living, education, health, safety ...etc. - cultural norms of the society
	Other	- Age and circumstances play a huge part in the perspective ... - increased liberal views (versus traditional views) of social norms
TEC	Key	- It's about here and now - not future planning - SMART city with ability to develop new technologies to overcome lack of natural resources - ubiquitous use of artificial intelligence

		- AI is everywhere in Singapore and become part of the smart city and had an impact on employees, but fear of privacy breaches is evident - Privacy of personal; data - Position Singapore as a multidiscipline technology hub
	Other	- The use of technology is an interesting one and the boundaries you set or push. generally, I would not see that Singaporeans see this as important - does it impact me and what I want and my wealth - ubiquitous presence of bots
ENV	*Key*	- Societal the perspective depends upon where your personal situation and values and how you perceive it " It doesn't affect me, I still have air con, my car - what can I do" do I really need to do anything as I'm not impacted - Mainly Government and corporations in the front - Corporate initiatives - environmental drivers need education of population on climate change - Corporate CSR towards environment
	Other	- Eliminate, reduce, reuse - really depends on where society is - it's not important to people here - Rate of land conversion for industrial use
LEG	*Key*	- Industrial relationships - Industrial laws - Labour union laws
ETH	*Key*	- Commonly accepted code of ethics in employment and human resources management - Ethical leadership - Leadership as an example - Ethics in human capital management - Leadership

Appendix G

Delphi Round two survey

DELPHI Round Two

DELPHI Round Two - Employee Engagement in Singapore

DELPHI Round Two - Employee Engagement in Singapore

The purpose of the study is to investigate the conceptual relationship between strategic leadership and workforce engagement in organisations in Singapore by 2030. The study adopts a futures research approach in conducting a scenario analysis method and an analysis of secondary quantitative data.

The study aims to consider the premised interaction between strategic leadership and staff engagement and how this can be enhanced given the possible futures of workforce engagement as outlined by possible scenarios for 2030. The study utilises the DELPHI method.

*First Name   *Last Name

*eMail:

DELPHI Round 2 The Possible Futures of Workforce Engagement in Singapore - Introduction

In round one, The participants in this study answered online questions covering the PESTELE method for environmental scanning (Political, Economic, Societal, Technological, Environmental, Legal and Ethical). For each element, the drivers were classified into two categories; key drivers and other drivers, we examined the impact of all drivers in relation to employee engagement.

Some of the round one responses may have resulted in disagreement due to the relatively medium-term horizon of the study. Please consider that the study does not include in its scope a longer-term horizon.

Please note that the majority disagreement occurred in the political, economic and social dimensions. The other dimensions will require less further input.

In this **second round**, we will cover two main areas:

1. We will seek your views in response to **the quantitative analysis of the cognitive abilities** of Leaders in Singapore, specifically about foresight and strategic thinking, and how it impacts employee engagement.

2. You will be asked to **review the results of round one and respond to the few incidents** where we did not reach consensus in your responses.

All questions will require written answers if you feel you don't have specific views on the topic, please type "no comments"

If you have any concerns about the study please contact the study principal supervisor Dr Luke Van Der Laan, Luke.VanDerLaan@usq.edu.au.

Thank you for your participation and support.

Cognitive Abilities of Leaders in Singpaore

This section represents the descriptive statistical data analysis of secondary data collected using the TripleV model survey of foresight and strategic thinking measures. The analysis includes advanced algorithmic modelling of a sample (n=330) that consists of profiles of strategy-level leaders in Singapore.

Cognitive Abilities (Foresight & Strategic Thinking) & Employee Engagement

This study of one sample (n=330) of strategy-level leaders in Singapore was analysed to assess the foresight capability (orientation to time; Past, Present, and Future, and foresight styles; Framer, Reactor, Adaptor and Tester) and strategic thinking capability (analytical, conceptual, Directive, and Participatory) as inputs to employee engagement (job and organisation engagement).
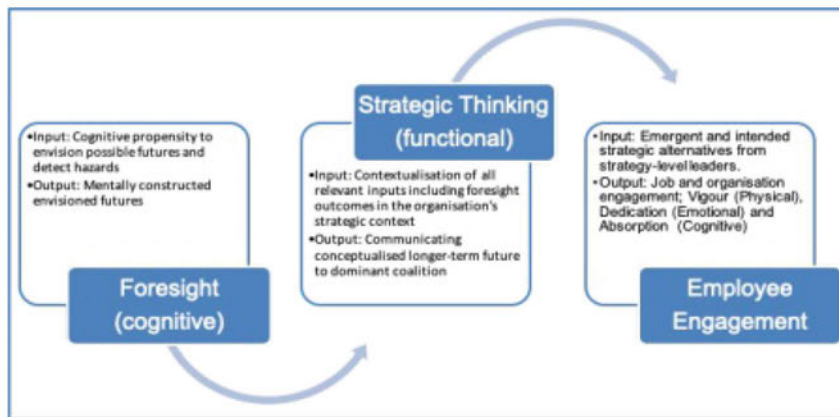
Where employee engagement is defined as a positive fulfilling work-related state of mind that is characterised by vigour, dedication and absorption'. Where vigour **(behavioural)** refers to high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties; dedication **(emotional)** refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge, and absorption **(cognitive)** refers to being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work (Schaufeli et al. 2002).

Foresight Capability

Foresight capability is a cognitive measure represents how leaders think as reflected in their orientation to time, and their Foresight Style.

*Orientation to time represent the leader thinking perspective, as the ability to engage in mental time travel:

- Past: dominantly risk reductive, contemplative thinking. accesses past experiences and knowledge.

- Present: dominantly orientated toward 'getting things done', organised thinking, and mentally 'stepping out of time'.

- Future: big picture thinking, imaginative thinking, ability to see gaps in knowledge, patterns and trends that diverge.

Question: This sample suggests that leaders are dominantly orientated to the present (score=76.6) and somewhat orientated to the future (score=69.2). The leaders seem less orientated towards the past (score=60.3).

To what extent do you agree that this represents a cross-section of the leadership in Singapore

◯ Strongly Agree   ◯ Agree   ◯ Neutral

◯ Disagree   ◯ Strongly Disagree   ◯ Don't know

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*If you strongly agreed or strongly disagreed, why?

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*Question: To what extent do you agree that the statements below may represent an outcome on employee engagement in Singapore based on the leader's orientation to time?

- This dominant "present" orientation to time suggests employee engagement is likely to be higher based on the behavioural aspect of engagement (e.g. being motivated to achieve short-term targets).
- The "present" orientation suggests that leaders and their organisations have 'stepped out of time' in that they do not consider the important dimensions of the past and futures to the same degree as their focus on the present.
- This suggests that the cognitive aspect (eg. being able to relate to and be immersed in the purpose and meaning of their work) and emotional aspect (eg. enthusiasm and motivation derived from a sense of purpose and direction) of engagement in Singapore are likely to be reduced.

To what extent do you agree that this represents employee engagement in Singapore

◯ Strongly Agree   ◯ Agree   ◯ Neutral

◯ Disagree   ◯ Strongly Disagree   ◯ Don't know

*If you strongly agreed or strongly disagreed, why?

*Foresight is driven by understanding and anticipating alternative future possibilities.

Foresight Styles represent a reflection of the style with which individuals cognitively responds to change and their envisioned prospects of the future, as follows:

- Framer: interested in long-term issues that define the future and envisions 'bigger picture' futures

- Adapter: adjusts to new situations as future demands, balances multiple challenges and choices, activates actions, flexible and influencer, and helps others adapt.

- Tester: Adopts new trends, a diffuser of innovation, and opportunistic

- Reactor: preserves own position, mitigates and resists change, links to past successes

Question: This sample suggests that the leaders' dominant foresight style is Adapter (score= 65.67) and somewhat less dominant as Framer (score=62.11), Tester (score=56.45) and Reactor (score=42.77)

To what extent do you agree that this represents a cross-section of the leadership foresight styles in Singapore

◯ Strongly Agree   ◯ Agree   ◯ Neutral

◯ Disagree   ◯ Strongly Disagree   ◯ Don't know

*If you strongly agreed or strongly disagreed, why?

*__Question: To what extent do you agree that the statements below may represent an outcome on employee engagement in Singapore based on the leader's foresight style?__

- **This dominant foresight style "Adapter" suggests employee engagement is likely to be higher based on the behavioural aspect of engagement (e.g. being focused on adjusting to new situations and multiple challenges).**
- **The "Adapter" style suggests that leaders and their organisations have maintained their focus on the current situation and they drive actions accordingly and try to help and influence others to adapt.**
- **This suggests that the cognitive aspect (eg. being able to have the space to think creatively) and emotional aspect (eg. excitement derived from a sense of innovation and growth) of engagement in   Singapore are likely to be reduced.**

○ Strongly Agree   ○ Agree   ○ Neutral

○ Disagree   ○ Strongly Disagree ○ Don't know

---

*If you strongly agreed or strongly disagreed, why?

Strategic Thinking

Strategic Thinking is a cognitive measure of the leader functional thinking leading to decision making.

*Strategic Thinking is concerned with the deriving intent as to the future of the organisation, combining generative and rational thought processes to bridge the gap between the status quo and the intention.

The cognitive nature of strategic thinking suggests that the evaluation of decision-making styles serves as an indicator of the strategic thinking propensity of leaders, as follows:

- Conceptual: Future / long term oriented, Creative / Generates multiple ideas, Tolerance for ambiguity

- Analytical: Problem solver, use considerable data, careful analysis, systems thinking, hypothesis-driven

- Participatory: supportive, empathetic, communicates easily, persuasive

- Directive: autocratic, use rules, task-focused, driven

Question: This sample suggests that the leaders' dominant strategic thinking style is Analytical (score=81.76), and somewhat less dominant as Participatory (score=75.68) and Directive (score=75). The leaders seem much less dominant as Conceptual (score=67.53).

To what extent do you agree that this represents a cross-section of strategy-level leadership in Singapore

◯ Strongly Agree   ◯ Agree   ◯ Neutral

◯ Disagree   ◯ Strongly Disagree   ◯ Don't know

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*If you strongly agreed or strongly disagreed, why?

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DELPHI Round Two - Political Drivers

This section covers a review of the political drivers' responses from round one.

Key Political Drivers

In round one, you have rated the following key political drivers that can impact employee engagement. Your collective responses resulted in the following rating, we highlighted in red responses that did not achieve 70% consensus:

1. Changing global politics - 75% agreed to a positive impact
2. Loss of trust in national politics - 60% agreed to a positive impact
3. Tax Policy - 100% agreed to a positive impact
4. Social welfare - 100% agreed to a positive impact
5. Ethnic tension agreed - 50% agreed to a positive impact

You also ranked the degree of influence for each driver, in order from highest to lowest degree of influence, as follows:

1. Loss of trust in national politics
2. Changing global politics
3. Tax Policy
4. Ethnic tension agreed
5. Social welfare

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*"Loss of trust in national politics" was rated 60% positive and 40% negative). Despite the disagreement, it is given the highest level of influence if it should occur. How it impacts engagement, either way?

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*"Ethnic tension" was rated 50% positive and 50% negative. How it impacts engagement, either way?

Other Political Drivers

In round one, you have rated the following other political drivers that can impact employee engagement. Your collective responses resulted in the following rating, we highlighted in red responses that did not achieve 70% consensus:

1. Regulation - 75% agreed to the positive impact
2. Trade control - 77.8% agreed to the positive impact
3. Import restrictions - 54.5% agreed to the positive impact
4. Healthcare services - 100% agreed to the positive impact
5. Unemployment - 75% agreed to the positive impact
6. Employee compensation - 100% agreed to the positive impact
7. Housing assistance - 85.7% agreed to the positive impact
8. Childcare assistance - 100% agreed to the positive impact
9. Democratisation - 100% agreed to the positive impact
10. Government stability - 100% agreed to the positive impact
11. Bureaucracy - 61.5% agreed to the positive impact
12. Corruption level - 53.3% agreed to the positive impact
13. Freedom of speech - 87.5% agreed to the positive impact
14. Awareness of workers rights - 100% agreed to the positive impact
15. Hong Kong migration, business and workers - 75% agreed to the positive impact
16. Political coalition and shift in government - 70% agreed to the positive impact
17. Major government scandal - 53.8% agreed to the negative impact
18. Rise of organised crime - 55.5% agreed to the negative impact
19. Regional relations - 100% agreed to the positive impact
20. China relations - 92.9% agreed to the positive impact
21. USA relations - 83.3% agreed to the positive impact
22. EU relations - 85.7% agreed to the positive impact
23. Australia relations - 88.9% agreed to the positive impact
24. US/China trade war - 66.7% agreed to the positive impact
25. Risk of bioterrorism - 58.3% agreed to the negative impact

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* "Import restrictions" was rated 54.5% positive and 45.5% negative. How it impacts engagement, either way?

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* "Bureaucracy" was rated 61.5% positive and 38.5% negative. Why do you believe it impacts engagement, either way?

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* "Corruption" was rated 53.3% positive and 46.7% negative. knowing that Singapore has a very good anti-corruption record, why do you believe it impacts engagement, either way?

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* "Major government scandal" was rated 46.2% positive and 53.8% negative. Is this becuase it is not likely a systemic problem? Does it take into account antisocial behavours (e.g. drugs, abuse, sexual, etc.)? Why do you believe it impacts engagement, either way?

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*Question: To what extent od you agree that the statements below may represent an outcome on employee engagement in Singapore based on the leaders' strategic thinking style?

- **This dominant strategic thinking style "Analytical" suggests employee engagement is likely to be higher based on the behavioural aspect of engagement (e.g. being focused on problem-solving and data analysis).**
- **The "Analytical" style suggests that leaders and their organisations have maintained their focus on analysing the current problems and assuming hypotheses approach towards solutions.**
- **This suggests that the cognitive aspect (eg. being able to envision the future and participate in its creation) and emotional aspect (eg. inspiration derived from a vision) of engagement in   Singapore are likely to be reduced.**

◯ Strongly Agree   ◯ Agree   ◯ Neutral

◯ Disagree   ◯ Strongly Disagree   ◯ Don't know

*If you strongly agreed or strongly disagreed, why?

*Do you have any further insights or comments you would like to bring to the attention of the study as it relates to the link between the political environment by 2030 and workforce engagement?

* "Rise of organised crime", this is internationally recognised as a key driver and increasingly sophisticated, often it is organised under "legitimate business". It was rated 45.5% positive and 54.5% negative. Is this disagreement suggesting that Singapore is immune? Why do you believe it impacts engagement, either way?

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* "US/China trade war" was rated 66.7% positive and 33.3% negative. Is it presumed by those who disagree that the trade issues will not affect Singapore? Why do you believe it impacts engagement, either way?

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* "Risk of bioterrorism" was rated 41.7% positive and 58.3% negative. Is there a risk in Singapore? Why do you believe it impacts engagement, either way?

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DELPHI Round Two - Economic Drivers

This section covers a review of the Economic drivers' responses from round one.

Key Economic Drivers

In round one, you have rated the following key economic drivers that can impact employee engagement.
Your collective responses resulted in the following rating, we highlighted in red responses that did not achieve 70% consensus:

1. National income at risk - 46.2% agreed to the positive impact
2. Risk of cyberterrorism endangering the system - 46.2% agreed to the positive impact
3. Risk of pandemic endangering the economy - 56.3% agreed to the positive impact
4. Inequality between poor and rich - 60% agreed to the positive impact
5. Changing the global economy through digitisation and robotisation - 84.6% agreed to the positive impact

You also ranked the degree of influence for each driver, in order from highest to lowest degree of influence, as follows:

1. Risk of pandemic endangering the economy
2. National income at risk
3. Risk of cyberterrorism endangering the system
4. Changing the global economy through digitisation and robotisation
5. Inequality between poor and rich

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* "National income at risk" was rated 46.2% positive and 53.8% negative. Despite the disagreement, it is

given the 2nd highest level of influence if it should occur. How it impacts engagement, either way?

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* "Risk of cyberterrorism endangering the system" was rated 46.2% positive and 53.8% negative. This question includes all forms of cyberattacks. By "endangering the system" the study means to include;
1.
financial systems (e.g. banking), 2. public service systems (e.g. energy infrastructure), 3. health systems
(e.g. medical records), 4. Transport systems (e.g. flight and shipping tracking), and 5. other critical infrastructures. Despite the disagreement, it is given the 3rd highest level of influence if it should occur.
Why you rated either way?

* "Risk of pandemic endangering the economy" was rated 56.3% positive and 43.8% negative. Despite the disagreement, it is given the highest level of influence if it should occur. How it impacts engagement, either way?

* "Inequity between poor and rich" was rated 60% positive and 40% negative. Despite the disagreement, it is given the 2nd lowest level of influence if it should occur. How it impacts engagement, either way?

Other Economic Drivers

In round one, you have rated the following other economic drivers that can impact employee engagement. Your collective responses resulted in the following rating, we highlighted in red responses that did not achieve 70% consensus (allowing for few exceptions):

1. Low employment rate - 66.7% agreed to a positive impact
2. Economic growth upper limit - 75% agreed to a positive impact
3. High inflation rate - 46.2% agreed to a positive impact
4. High-interest rate - 30% agreed to a positive impact
5. Less favourable exchange rate - 27.3 agreed to a positive impact
6. Forced monetary policy - 44.4% agreed to a positive impact
7. Forced fiscal policy - 44.4% agreed to a positive impact
8. Low productivity - 35.7% agreed to a positive impact
9. Credit availability for business - 91.7% agreed to a positive impact
10. Increased government grants - 100% agreed to a positive impact
11. Increased government subsidies - 100% agreed to a positive impact
12. Increased rental waivers - 100% agreed to a positive impact
13. Higher labour cost - 35.7% agreed to a positive impact
14. Higher material cost - 35.7% agreed to a positive impact
15. High disposable income - 100% agreed to a positive impact
16. Higher cost of living - 46.7% agreed to a positive impact
17. Increased trade agreements - 88.8% agreed to a positive impact
18. Stronger trade flows and patterns - 90.9% agreed to a positive impact
19. Continuation of climate change - 40% agreed to a positive impact
20. The experience economy, as goods become services - 92.3%
21. Dollar loses the status of world reserve value - 50% agreed to a positive impact
22. Cash flow injections by the government - 100% agreed to a positive impact

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* Economic drivers: High inflation rate, forced monetary policies, forced fiscal policies and higher cost of living were rated with near even split between positive and negative. Financial awards are not conclusively associated with engagement. Engagement may include a financial dimension but is generally not governed by it alone. Is this disagreement associated with the question: Low disposable income / higher financial pressure may decrease/increase engagement? Why?

DELPHI Round Two - Social Drivers

This section covers a review of the social drivers' responses from round one.

Key Social Drivers

In round one, you have rated the following key social drivers that can impact employee engagement.
Your collective responses resulted in the following rating, we highlighted in red responses that did not achieve 70% consensus (while allowing for few exceptions):

1. The ageing population and generational conflict - 57.1% agreed to the positive impact
2. Casualisation of the workforce - 50% agreed to the positive impact
3. A more holistic approach to life, work, leisure, career and retirement- 92.3% agreed to the positive impact
4. Reduction in the welfare state - 58.3% agreed to the positive impact
5. Rise of automation and the need for a human to learn new skills - 69.2% agreed to the positive impact

You also ranked the degree of influence for each driver, in order from highest to lowest degree of influence, as follows:

1. A more holistic approach to life, work, leisure, career and retirement
2. Reduction in the welfare state
3. The ageing population and generational conflict
4. Casualisation of the workforce
5. Rise of automation and the need for a human to learn new skills

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* "Ageing population and generational conflict" was rated 57.1% positive and 42.9% negative. Do you see this as increasing or decreasing in Singapore? and how it impacts engagement?

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* "Low productivity" was rated 35.7% positive and 64.3% negative. Is the disagreement due to the possible relationship between engagement and productivity? i.e. do you agree that as engagement decreases so will productivity?

[ ]

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* "Continuation of climate change" was rated 40% positive and 60% negative. Why do you believe it impacts engagement, either way?

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* "Dollar loses the status of world reserve value" was rated 50% positive and 50% negative. Why do you believe it impacts engagement, either way?

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* Do you have any further insights or comments you would like to bring to the attention of the study as it relates to the link between the economic environment by 2030 and workforce engagement?

[ ]

* "Casualisation of the workforce" 50% positive and 50% negative. Research suggests that casualisation (not start-ups) decreases engagement. Singapore is illustrating increasing levels of casualisation. How would this affect general levels of engagement?

* "Reduction in the welfare state" was rated 58.3% positive and 41.7% negative. Would a reduction/increase in welfare (eg. unemployment or disability have a positive or negative effect on engagement?

Other Social Drivers

In round one, you have rated the following other social drivers that can impact employee engagement. Your collective responses resulted in the following rating, we highlighted in red responses that did not achieve 70% consensus (while allowing for few exceptions):

1. Up-skilling of older generations - 86.7% agreed to the positive impact
2. Slow population growth rate - 77.8% agreed to the positive impact
3. Increased immigration rate - 69.2 agreed to the positive impact
4. Increased life expectancy rate - 84.6% agreed to the positive impact
5. Unbalanced gender demographics - 33.3% agreed to the positive impact
6. Reduced social obedience - 14.3% agreed to the positive impact
7. Increased health consciousness - 100% agreed to the positive impact
8. Increased emphasis on education - 100% agreed to the positive impact
9. Traditions shifting towards reduced standards - 36.4% agreed to the positive impact
10. Higher emphasis on safety - 100% agreed to the positive impact
11. Increased digital information leading to enriched reality - 100% agreed to the positive impact
12. Increase in mental health issues- 40%% agreed to the positive impact
13. Increased identity theft and privacy violation - 31.3% agreed to the positive impact
14. The aspiration towards lifestyle - 100% agreed to the positive impact
15. Increased interest in higher education - 100% agreed to the positive impact
16. Positive attitudes towards imported goods and services - 100% agreed to the positive impact
17. Higher inclination towards quality products and better services - 100%% agreed to the positive impact
18. Higher interest in savings and investing - 100% agreed to a positive impact
19. Higher inclination towards ecological products - 92.3% agreed to a positive impact
20. Increase attention to religion and beliefs- 66.7% agreed to a positive impact
21. Increase sense of inequality and social classes
22. Reduces family size and structure
23. Reduced long term social loyalty
24. Increased fears of the epidemic impact
25. Increased social conflict
26. Noticeable impact due to Hong Kong evacuation
27. Increased self-organisation, self-sufficiency and less dependency on institutions
28. Reduced solidarity

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* "Traditions shifting towards reduced standards" was rated 36.4% positive and 63.6.5% negative. What effect it will have on engagement, either way?

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*"Increase in mental health issues" was rated 40% positive and 60% negative. The global trends indicate that mental health issues are exponentially increasing and that engagement is associated with this (perceived benefits of work). Why the disagreement? and is this a key driver?

*"Increased sense of inequality and social classes" was rated 46.2% positive and 53.8% negative. Is there social inequality in Singapore? Is this increasing or decreasing? how it affects engagement

*"Reduced long term social loyalty" was rated 44.4% positive and 55.6% negative. Is good citizenship increasing or decreasing in Singapore? Would national pride increase or decrease engagement?

DELPHI Round Two - Technology Drivers

This section covers a review of the Technology drivers' responses from round one.

Key Technology Drivers

In round one, you have rated the following key technology drivers that can impact employee engagement. Your collective responses resulted in the following rating, we highlighted in red responses that did not achieve 70% consensus:

1. Enhanced communication infrastructure - 100% agreed to a positive impact
2. Increased use of analytics in decision making - 92% agreed to a positive impact
3. Major security breaches - 28.6% agreed to a positive impact
4. Increased censorship and citizen monitoring - 21.4% agreed to a positive impact
5. Possibilities of new generations in IT - 100% agreed to a positive impact

You also ranked the degree of influence for each driver, in order from highest to lowest degree of influence, as follows:

1. Enhanced communication infrastructure
2. Increased use of analytics in decision making
3. Increased censorship and citizen monitoring
4. Possibilities of new generations in IT
5. Major security breaches

Message

There are no questions for this section, we have reached a consensus, thank you.

Please go to the next section.

* "Noticeable impact due to Hong Kong evacuation", t was rated 50% positive and 50% negative. This is a transitional issue and clarity has not been established. If there was to be significant Hong Kong migration and investment, what would be the impact on engagement?

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* Do you have any further insights or comments you would like to bring to the attention of the study as it relates to the link between the social environment by 2030 and workforce engagement?

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Other Technology Drivers

In round one, you have rated the following other technology drivers that can impact employee engagement. Your collective responses resulted in the following rating, we highlighted in red responses that did not achieve 70% consensus (while allowing for few exceptions, on a ten-year horizon it was deemed that certain drivers were unlikely and required no further discussion):

1. Increased R&D expenditure - 92.3% agreed to a positive impact
2. Increased technology incentives - 100% agreed to a positive impact
3. Issuing of legislation concerning technology - 90% agreed to a positive impact
4. Develop and maintain the smart city-state - 93.3% agreed to a positive impact
5. Rise of the internet of things IoT - 92.3% agreed to a positive impact
6. Ability to predict human behaviour through data analysis - 76.9% agreed to a positive impact
7. Increased rate of technological change - 84.6% agreed to a positive impact
8. Use of chips in the human body to monitor the health - 60% agreed to a positive impact
9. Narrowing the gap between the chip and human - 70% agreed to a positive impact
10. Potential security breaches - 28.6% agreed to a positive impact
11. Increased risk of privacy and personal data security - 33.3% agreed to a positive impact

* Do you have any further insights or comments you would like to bring to the attention of the study as it relates to the link between technological advancement by 2030 and workforce engagement?

* "Desalination of water to meet the increased demand for drinking water" was rated 63.6% positive and 36.4% negative. Why may there be disagreement that water availability and cost would not affect engagement? since it is priced and taxed for the full cost recovery, including research and development of new sources.

Other Environmental Drivers

In round one, you have rated the following other environmental drivers that can impact employee engagement. Your collective responses resulted in the following rating, we highlighted in red responses that did not achieve 70% consensus (while allowing for few exceptions, on a ten-year horizon it was deemed that certain drivers were unlikely and required no further discussion):

1. Increased climate factors - 46.7% agreed to a positive impact
2. Increased air and water pollution - 30.8% agreed to a positive impact
3. Increased risk for public health - 35.6% agreed to a positive impact
4. Intensified rate of endangered species - 27.3% agreed to a positive impact
5. Increased environmental threats - 33.3% agreed to a positive impact
6. Reoccurrence of environmental disasters like earthquake and tsunami - 38.5% agreed to a positive impact
7. Introducing enforced law for environmental pollution - 62.5% agreed to a positive impact
8. Greater awareness fo recycling and waster management - 92.3% agreed to a positive impact
9. Increased interest in renewable energy - 92.9%agreed to a positive impact
10. Application of aroclogy; combining architecture and ecology - 90% agreed to a positive impact
11. Increased orientation towards Corporate Social Responsibility - 93.3% agreed to a positive impact
12. Increased efforts towards sustainability across the board - 93.8% agreed to a positive impact

* "Reoccurrence of environmental disasters like earthquake and tsunami" was rated 38.5% positive and 61.5% negative. The frequency of natural disasters has increased, why do you believe it impacts engagement, either way?

DELPHI Round Two - Environmental Drivers

This section covers a review of the Environmental drivers' responses from round one.

Key Environmental Drivers

In round one, you have rated the following key environmental drivers that can impact employee engagement. Your collective responses resulted in the following rating, we highlighted in red responses that did not achieve 70% consensus:

1. Widespread melting of the arctic and antarctic poles - 40% agreed to a positive impact
2. The extreme rise in the sea level - % 41agreed to a positive impact
3. Increased coastline erosion - 41% agreed to a positive impact
4. Desalination of water to meet the increased demand for drinking water - 63.6% agreed to a positive impact
5. Mentality change to counter the effects of climate change - 91.7% agreed to a positive impact

You also ranked the degree of influence for each driver, in order from highest to lowest degree of influence, as follows:

1. Widespread melting of the arctic and antarctic poles
2. Mentality change to counter the effects of climate change
3. The extreme rise in the sea level - 63.6% agreed to a positive impact
4. Desalination of water to meet the increased demand for drinking water - 63.6% agreed to a positive impact
5. Increased coastline erosion

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* "Widespread melting of the arctic and antarctic poles", "Extreme rise in the sea level", and "Increased coastline erosion" were rated around 60% / 40% mark. There is disagreement about the possibility of sea-level changes as a threat. By 2030 (the time span for this research) this threat may not be a present threat to Singapore. As such is it unlikely to influence engagement. Do you agree?

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* Do you have any further insights or comments you would like to bring to the attention of the study as it relates to the link between the environmental parameters by 2030 and workforce engagement?

DELPHI Round Two - Legal Drivers

This section covers a review of the Legal' responses from round one.

Key Legal Drivers

In round one, you have rated the following key legal drivers that can impact employee engagement.
Your collective responses resulted in the following rating, we highlighted in red responses that did not achieve 70% consensus:

1. Employment law - 100 agreed to the positive impact
2. Work health and safety law - 100% agreed to the positive impact
3. Privacy and data protection law - 100% agreed to the positive impact
4. Anti-discrimination law - 100% agreed to the positive impact
5. Copyright, patents and intellectual property law - 92.3% agreed to the positive impact

You also ranked the degree of influence for each driver, in order from highest to lowest degree of influence, as follows:

1. Employment law
2. Work health and safety law
3. Anti-discrimination law
4. Privacy and data protection law
5. Copyright, patents and intellectual property law

Other Legal Drivers

In round one, you have rated the following other legal drivers that can impact employee engagement. Your collective responses resulted in the following rating:

1. Industrial relations law - 92.3% agreed to a positive impact
2. Anti-trust law - 85.7% agreed to a positive impact
3. Consumer protection law - 93.3% agreed to a positive impact
4. E-commerce law - 100% agreed to a positive impact
5. Taxation law - 92.3% agreed to a positive impact
6. Environmental law - 100% agreed to a positive impact
7. Education law - 100% agreed to a positive impact

* Do you have any further insights or comments you would like to bring to the attention of study as it relates to the link between the legal environment by 2030 and workforce engagement?

Other Ethical Drivers

In round one, you have rated the following other ethical drivers that can impact employee engagement. Your collective responses resulted in the following rating, we highlighted in red responses that did not achieve 70% consensus:

1. Ethical recruiting practices and employment standards - 100% agreed to a positive impact
2. Protection of human rights - 100% agreed to a positive impact
3. Freedom of association - 100% agreed to a positive impact
4. The right to collective bargaining - 100% agreed to a positive impact
5. Elimination of all forms of forces and compulsory labour - 100% agreed to a positive impact
6. Elimination of discrimination in respect of employment and occupation - 100% agreed to a positive impact
7. Acting forcefully to eradicate abusive behaviour - 84.6% agreed to a positive impact
8. Enforce ethical marketing and sales practices - 100% agreed to a positive impact
9. Comply with ethical accounting practices - 100% agreed to a positive impact
10. Support a precautionary approach to environmental challenges - 84.6% agreed to a positive impact
11. Comply with commerce ethics - 100% agreed to a positive impact
12. Own product safety and liability - 100% agreed to a positive impact
13. Demonstrate ethical leadership at the board and executive levels - 100% agreed to a positive impact
14. Work against corruption in all its forms, including extortion and bribery - 100% agreed to a positive impact
15. Ensure corporate social responsibility - 93.8% agreed to a positive impact
16. Secure private data - 100% agreed to a positive impact
17. Demonstrate ethical stand on medical advances - 100% agreed to a positive impact
18. Encourage the development and diffusion on environmental fire-friendly technologies - 100% agreed to a positive impact

* Do you have any further insights or comments you would like to bring to the attention of study as it relates to the link between the ethical environment by 2030 and workforce engagement?

Thank you!

I would like to extend my gratitude for your valuable contribution to my research, I highly appreciate your time and efforts to support this study.

I look forward to seeing you in round 3, the final cut!

Thank you

DELPHI Round Two - Ethical Drivers

This section covers a review of the Ethical drivers' responses from round one.

Key Ethical Drivers

In round one, you have rated the following key ethical drivers that can impact employee engagement.
Your collective responses resulted in the following rating, we highlighted in red responses that did not achieve 70% consensus:

1. Perceived class and ethnic ethical variability in recruiting - 50% agreed to a positive impact
2. Promoting social sustainability concerning human capital - 100% agreed to a positive impact
3. Engaging employees in driving ethical behaviours initiatives - 93.3% agreed to a positive impact
4. Ethical business leadership - 100% agreed to a positive impact
5. Developing ethical grounds for protecting intellectual property - 92.3% agreed to a positive impact

You also ranked the degree of influence for each driver, in order from highest to lowest degree of influence, as follows:

1. Perceived class and ethnic ethical variability in recruiting
2. Ethical business leadership
3. Promoting social sustainability concerning human capital
4. Engaging employees in driving ethical behaviours initiatives
5. Developing ethical grounds for protecting intellectual property

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* "Perceived class and ethnic ethical variability in recruiting" was rated 50% positive and 50% negative.

Despite the disagreement, it is given the highest level of influence if it should occur. Why we have such a split?

Appendix H

Delphi round two – comments

Leader's profile – Round two

Cognitive Abilities		Comments related to profiles
Foresight Capability	**Orientation to time**	- only less than 3% of leaders are progressive and framing. the new normal necessitates but the weight of management who are mainly adapters or adopters drag the momentum. they may say they are framing in words but are A and A mostly in actions and mindset. Also, may not focus on root causes - Long term plans may exist, as a product of consulting firms, but it is all about now -I see that leaders are only in the moment - they do not think beyond the present and what is happening. They do not proactively look beyond their current horizon - only react to when something disturbs the situation and then react. - Emphasising that they are planning for and worrying about the future - but always reference the past with actions using the past as guide - there is some evidence among other sections of leaders in Singapore who are future oriented and engaged in future scenario planning. It is common to see schools, service sectors engage in visioning and futures planning, and setting stretch goals. - Singapore does have a longer planning time horizon than many other developed economies, driven by consulting firms. However, given the presence of MNCs who have different goals, and often some constraints regarding their tenure in Singapore and this can impact on time horizons. Reward structures are usually short term.
	Foresight style	- agree with the options - would agree - very much adapts (but the question is when he/she adapts and at what point in the process/situation status) I would agree that there's not a propensity to test things - but only would do something when KRA's are adversely affected and there is material impact - Not applicable. Although I haven't strongly disagreed, I wanted to add that I have disagreed with the statement due to the potential response bias you presented. A representation of what Singapore leaders are prepared to admit to, rather than actual foresight style. - Fear of the unknown and failures, hence adapt to changes needed, but nothing major or transformational - The dominant Adapter style of leaders in Singapore could be attributed to the possibly primary preoccupation with Profit & Loss (P&L). as well as the role of dominant global influence. Hence, it is harder for employers to be shakers and movers and envision alternative versions of possible futures. - Strong compliance framework and short-term reward structures
Strategic Thinking Capability	**Strategic Thinking Style**	- agree but strategic thinking capability is parse and fragmented - Leaders in Singapore, or for that matter in South East Asia tends not to be the "first" in implementing or trying new ideas especially when the leaders are mainly tied to the financial health of their organisation. - I have seen both examples - MNC orientated and family run businesses/ state run but ,in a MNC - the training and propensity is far more Participatory and this training and culture is pervasive . in the family run business this is not the norm and the leader's middle managers don't know how to do this -it's not part of the culture of how things are done - Family owned tended to directed by the founders who have been successful and continue to drive their business. Leaders are taught not to trust intuition but rely on data and get consensus to move forward. - This conclusion can be easily supported by anecdotal examples of top-down strategy formulation of family-owned businesses,
Leadership Delivery	**Leadership Delivery Style**	- There appears to be a strong compliance culture evident. The Government directives are often quite restrictive and this impacts on generative/creative approaches. Strong regulatory and cultural frameworks. Public entities tend to have more rigid governance frameworks. Culturally there is also an expectation of top-down management. - Top-down culture and obedience to hierarchy is expected every where

Cognitive Abilities		Comments related to engagement
Foresight Capability	Orientation to time	- in reality, it is less than what the options suggest, people react to pressure - good question: I think some of the statements re correct - there's an element of not being immersed in the meaning or purpose - but I think it's more about being task orientated and process driven, not sense of purpose, people do what they asked - Measurements of current and ST outcomes - Generally most employees are engaged to achieve short-term goals (and not necessarily a function of the causal relationship of the leader's orientation to time). - Most organisational reward systems are short term which encourages a short term focus. Reward structures are usually short term. - May be easier just to do what they asked and don't think much about it
	Foresight style	- the Reactor which is absolutely vital in the New Normal because of the "Massive" Disruptions may resist in both behaviours and mindsets. This may drag out momentum which is vital in this time - I have not seen much evidence of aspiration or excitement - Agreed. Assuming the outcomes are true representations of style. Otherwise, employee engagement may not relate as expected - Constant adjustments to meet the KPIs - Not only managers, employees also adapt - People work hard in response to management directives - Depending on the profile of the employees, the emotional aspect of engagement may feature a lot more in the millennia, esp the Gen Z that have stepped into the workplace. - Given the current circumstances resulting from the pandemic employment engagement may be impacted regardless of the leader's foresight style. Strong regulatory frameworks. - It is notable that sense of ownership may be absent - Culture and political agenda drive people to adapt not think
Strategic Thinking Capability	Strategic Thinking Style	- conceptual is usually intuitive because of past exposure and experience Analytical - more common particularly with employees who are science based trained. Employees having both capabilities – few - very task orientated - it's about here and now, people are not trained in this type of approach - Employee Engagement score is a KPI number, hence easiest to meet is to adapt rather than do a conceptual approach to problem solve the matters at hand - Employee engagement in Singapore is evidently focused on problem-solving and data analysis. There is great comfort in dealing with numbers rather future visioning as a vehicle or engagement. - Reliance on management to think instead of being innovative - Education system promoting analysis no creativity - Risk avoidance
Leadership Delivery	Leadership Delivery Style	- I agree with the statements, but the situation has changed I presume since the analysis was done. We are not in predictable times nor dealing with BAU problems. This may mean that leaders focus has become more short term. Creative thinking is not encouraged as there is a strong compliance culture. - Again, the culture and the political agenda inform the directive tendencies - Employees

Political drivers – Round two

Key Political drivers – No Consensus	Comments
Loss of trust in national politics	1. Crowdsourcing wisdom is key to the new digital economy. More participation from diverse population 2. agree. as seen in GE2020 - young strawberry generation are vocal and wants national politics a key focus 3. The current pandemic has demonstrated that the politicians tend to focus more on social welfare of their people but have neglected the health welfare of foreign workers which resulted in the entire country's business coming to a halt. Singaporeans expect more from the elected leader to have a more in-depth outlook of the challenges faced by the number of companies engaged in using foreign workers 4. I don't think that this has a baring on employee engagement 5. Without trust in institutions, it is difficult for businesses to transact with third parties as there is no confidence in a remedy to institutions to force the third party to deliver on their commitment. 6. Trust, generally, has a relationship with engagement and other org outcomes including culture, org citizenship behaviour, etc. It would therefore seem that with a loss of trust (at any level of influence on an org, including national political) a loss of engagement could result. 7. There are different issues in national politics that could either positively (equal opportunity) or negatively (labour law) influence staff engagement. 8. Trust at the highest level is needed to have the feel-good factor on a forward basis. Hence, a decline may imply that issues may not be resolved for the good of all, but for a select few. 9. it may undermine confidence in policies affecting businesses and hence leading to insecurity and poor engagement. 10. How can there be loss of trust in national politics when one party has such a dominant long-term mandate? There is no 'protest' vote apparent. 11. Trust is an important factor in employee engagement. Without trust, employees are less motivated and tend to drag their feet to work. 12. Its influence, when in it is low, potentially impacts workplace engagement and leadership qualities. 13. If there is a loss if trust in national politics, then employees potentially also lose trust in organisations. 14. Loss of trust in national politics can impact business confidence and therefore engagement 15. Leads to loss of confidence in the business sector and in the society. People become more self-focused.
Ethnic tension	1. To maintain balance, the government may have to take into account the fear of the minority and acts to compensate. 2. in Singapore - less vital 3. possible impact given cultural norms of the ethnicity norm 4. Greater ethnic tension reduces ability to promote creativity in decision making arising from diversity. 5. As part of psychological safety, ethnic tensions in the workplace would have a negative influence on engagement. More broad ethnic tensions can also affect feelings of inclusion, safety, wellbeing etc that may transgress to the workplace. 6. Ethnic tension could either positively (Diversity) or negatively (difference in culture) influence engagement. 7. Need to show equity and fairness in dealings that is not based on race, religion, social status... 8. Ethnic tension - if not managed can cause doubts in company policies, such as promotion or remuneration. This can lead to wider consequences and partisan politics and may even lead to local unrest and business disruptions. 9. Ethnic tension is not likely to manifest itself in the workplace as there are so many measures in place to avoid it. Given minorities are such a small proportion of the population, ethnic tension is not likely to affect engagement of the majority.

	10. Ethnic tension is rated 50-50 because most people tend to have the middle-path syndrome, staying in neutral position when it comes to ethnic matters. 11. If there is ethnic tension in the workplace, it can have a negative impact on engagement. 12. It is building up, slowly but surely and will impact employee engagement 13. We are seeing evidence on the global stage of how ethnic tensions are rising and this can make workplaces unsafe and increase discriminatory actions which will impact employee engagement for some at least 14. Ethnic tensions are rising globally, causes division and distrust which can negatively impact engagement 15. The rise in ethnic tension globally impacts on acceptance at work - creates divisions
Other Political drivers – No Consensus	
Import restrictions	1. Open to alternative sources of supply. 2. in New Normal context - import restrictions may increase as an economic factor 3. this would have an impact engagement but if only people understood what it meant 4. For trading companies, import restrictions would positively influence engagement. For non-trading companies, import restrictions would not impact on engagement. 5. Control and hence inability to get, lower satisfaction but not necessarily engagement 6. this possibly may have implications on their productivity. If restrictions boost their sales, the engagement may be higher but not a key factor. 7. Import restrictions can affect business and so employee engagement in either direction (positively for local manufacturing, negatively for import businesses), depending on the nature of the business. 8. "Import restrictions" impact employee empowerment and hence, to a certain extent, employee engagement but not key. 9. It could adversely affect business and thus workplace engagement. 10. I don't think import restrictions have a big impact on employee engagement. 11. I don't think it impacts engagement 12. I don't think it impacts
Bureaucracy	1. Top-down will beginning to have a little bottom up. 2. it is negative - may slow down implementation 3. agreed - because it has a direct correlation to people's work 4. Slows ability to execute decisions, particularly those that those that do not adhere to the historic norm. 5. I would hypothesise that too much bureaucracy would negatively impact engagement. The ability for vigour, dedication, and absorption, possibly stifled as a result. 6. Bureaucracy would positively influence organisation that are traditionally organised with clear reporting lines. On the other hand, Bureaucracy in organisation with a flat structure would has less influence on engagement. 7. Rules and more rules, inflexibility in the system 8. Bureaucracy can lead to quality standards and parity, consequently this can contribute to reliability and trust and greater engagement, however if excessive, it can also lead to disillusionment and disengagement. 9. Bureaucracy provides a known framework that can be comforting to employees, knowing that everyone is treated fairly. It can be negative if overdone, creating frustrating rules and regulations. 10. "Bureaucracy" impact engagement in that it creates unnecessary red tapes that impedes engagement. 11. What we see in recruitment practices and selection outcomes can be considered corruption or non-ethical 12. If it becomes too restrictive and controlling within a team environment, it could negatively impact engagement. 13. Too much bureaucracy stifles innovation and creativity and staff ability to contribute in a positive way to organisational outcomes. 14. Bureaucracy reduces employee contribution and therefore engagement 15. It reduces and creativity and hence engagement
Corruption level	1. Reputation and branding will allow Singapore to be OHQ of many companies facing import and other restrictions. 2. very important - trust is becoming more vital 3. Agreed - because there's a pride in the country and this was one of the key tenants of society (through education and instilled via constant reinforcement) 4. Singapore still embeds corruption within its 'network' of favouritism among those of similar ethnic background leading to less robust capabilities.

	5.	Corruption would perhaps affect trust. Lowered trust is related to many engagement indicators.
	6.	Corruption affects company which operates in Asia and South East Asia, thus would influence engagement. For companies with less exposure to Asia and South East Asia is less influenced by Corruption.
	7.	Corruption may happen in other ways - favours, favouritism, connections ...
	8.	an assurance of corruption free environment will result in greater confidence and engagement, especially knowing that possession of resources does not necessarily results in greater advantage.
	9.	Corruption undermines trust in the organisation and so has a negative effect on engagement.
	10.	"Corruption" is negative work culture and it definitely impact employee engagement.
	11.	If corruption is evident then staff wanting to do the right thing are impacted and won't feel the same attachment to the organisation
	12.	Most people don't want to work for corrupt leaders.
	13.	People generally do not want to work for corrupt organisations or individuals. they may need to through necessity to survive but are not engaged
Major government scandal	1.	Less trust will mean that more disagreement and more confrontation.
	2.	doesn't impact engagement because its rare, it's not a common problem
	3.	As per other responses. For me it would be related to trust, integrity, safety etc which are optimal conditions associated with positive employee behaviours.
	4.	It's less of a systemic problem. Being a small country, if there are major government scandal, it might either positively (those who works in the private sector) or negatively (those who work in the government-related agencies) influence engagement.
	5.	The increasing number of failures without seniors taking responsibilities, or saying sorry, are beginning to undermine confidence
	6.	major govt scandal can be connected to drug abuse and others. However, this is viewed as occasional, tied to individuals, rather than widespread issue. Hence, its impact on engagement may not be significant.
	7.	A major government scandal would undermine trust in the system, which could trickle down to lack of trust generally in organisations.
	8.	"Major government scandal" often fabricated in Singapore rather than exist. It impacts engagement and hence, employee confidence.
	9.	Not sure here either. It indeed isn't a systemic problem.
	10.	It can impact engagement because those expected to behave appropriately don't and it therefore calls the system into question
	11.	It impacts business and society confidence in leadership. people lose trust and become less engaged
	12.	Leads to loss of confidence in the business sector and in the society. People become more self-focused.
Rise of illegitimate organised crime	1.	Virtual crime needs more education and destroys trust. More virtual regulation will be imposed, and more resources will be spent in educating the population while finding alternative decentralised solutions by distributing trust.
	2.	Agree. Misconduct is a big issue
	3.	I don't think it suggests that Singapore is immune - it's not n the psyche and its not systemic. punishment is harsh.
	4.	Yes, SG more immune as predominately collective, conformist society with little tolerance for outsiders/crime.
	5.	Singapore is definitely not immune in my opinion. I'm surprised that this was such a mixed response. I reflected on crime as a negative indicator for most factors related to engagement.
	6.	There is no evidence that I'm aware of related to organised crime that is affecting Singapore in staff engagement.
	7.	Singapore is not, but the government wants to project that the situation is well managed or controlled given our banking wealth management centre businesses.
	8.	Generally, law and order is respected and organised crime is not a key concern here. Thus, if it takes place, it is likely viewed as anomaly and not likely to significantly impact engagement.
	9.	Undermines societal trust and so has negative effect on engagement with organisations that are part of that society.
	10.	"Rise of organized crime", known or unknown impacts employee engagement as it creates unnecessary angst at workplaces.
	11.	Yes, I'd say so. I can't imagine that the concept of organized crime is a much of a factor in workplace engagement in Singapore.

	12. It can be hard to recognise when its organised under legitimate businesses. Employees may not be aware. I don't think it suggests Singapore is immune but perhaps naive thinking that there are adequate controls 13. Singapore is not immune. Given the increasing levels of sophistication people may not be aware and therefore it doesn't impact engagement 14. Singapore is not immune. People generally do not want to work in organised crime, but they may need to through necessity to survive but are not engaged
US / China trade war	1. More business will be channelled through and take place in Singapore. So more incentives and more acceptance of foreign organisations and immigrants. 2. This is part of Geopolitical Risk. 3. Big issue 4. I think it does impact because of the very close trade ties with China not only Singapore but across the APAC region but also the % of trade that flows through Singapore from China and the west. 5. SG's GDP is highly dependent upon trade and FDI. 6. There are companies that are exposed to international trade that would be impacted by US/China trade war. However, there are companies that are not impacted by international trade. 7. It's the fear of having to choose a side. China is Singapore's biggest trading partner, USA the biggest supplier of weapons..... Hobson's choice.... 8. Clarity of national policy of us not taking sides, esp in US / China trade war., hence while this has impact on our trade, it is likely not to affect engagement significantly. 9. US/China trade war could mean move of manufacturing away from China and Singapore could benefit. On the other hand, Singapore would suffer from instability. Overall likely to have a negative impact, which could be reflected in loss of confidence and so reduced engagement. 10. "US/China trade war" will affect Singapore as an economy, hence, it will impact employee engagement. 11. Its global impact is potentially a threat to engagement. 12. Trade wars will affect Singapore both directly and indirectly. However, the impact at the organisation level may not be felt in the same way if they are not solely reliant on trade for example, from China. then employee engagement potentially remains high 13. Singapore will be affected both directly and indirectly. Can impact business confidence which impacts engagement 14. Trade issues will have a direct and indirect impact on Singapore. I don't think they will have a major impact on engagement.
Risk of bioterrorism	1. Food supply chain and self-sufficiency will be of great focus and in citizens' involvement. 2. May rise 3. no, I don't think it will impact engagement and is a risk to Singapore. it's not part of society 4. Risk adverse nature of Singaporeans makes them highly sensitive to bioterrorism. 5. Again, I believe the risk exists, although it may not be as prominent as other countries. I don't recall my response, but on thinking now perhaps bioterrorism is further from my mind and/or the link to engagement. 6. There are some sectors that could be more susceptible to risk of bioterrorism and some sectors are less impacted. 7. Possible but not probable.... Again, it's the fear factor 8. This is a recognized risk but because of confidence in local security, it is not likely viewed it impact engagement significantly. 9. Risk is low for Singapore, but not negligible. Bioterrorism would undermine confidence and could negatively impact employee engagement. 10. "Risk of bioterrorism" is everywhere and hence it is also a risk in Singapore to a certain extent. If it occurs, it will impact employee engagement. 11. I think it's quite low risk, thus engagement is hardly impacted. 12. Yes, there is a risk. However, it is not a sufficiently high probability event to impact engagement 13. Yes, there is a risk, low probability - high impact event. because there is no imminent threat engagement not impacted 14. Yes, there is a risk, low probability -high impact event. I don't think it impacts engagement
Other Comments	1. It has been a norm from the people on the streets that the government "knows best" what is good for Singaporeans. However recent events such as human rights, Covid19, the emphasis to elect a safe party somehow impact the workforce in a way that leaders may tend to follow the "safe rules" in engaging in young vibrant workers which might impede any discussions on untested new ideas brought up by the young workers

	2.	I think thatfor emplotyee enagement to increase there shoud be a proactive action for people to make the link between the topics and show how this personally impacts the employees
	3.	Anti-foreigner sentiment that has become visible during COVID-19 has always exists but is never permitted to be discussed, thus, continues to fester even if not acknowledge. However, to promote creativity and adaptability to changes in the external environment requires diversity and variability.
	4.	The recent General Election results indicate the mood of the people. As more and more economies are looking inward, and should the government continues with the same way of governing, there may be a reduction of the support for the ruling party, and we cannot rule out a change of government. No democracy has survived under the same party for more than 70 years. The recent events show this phenomenon - Japan, Taiwan, Malaysia, Mexico... With a change in government, we need to figure out the role of NTUC and the unions, the tripartite arrangement of government business and workers aka unions.
	5.	By 2030, Singaporeans will largely be more educated and cognizant of the worldviews and economic impacts. This will change the whole landscape in employee engagement.
	6.	The pandemic the world is going through currently will shape workforce engagement inevitably in some known (and unknown ways) in the years to come.
	7.	The impact of the pandemic may have long lasting impacts in terms of global politics and cooperation which may impact workforce engagement
	8.	The impact of the pandemic has the potential to change global political relationships. this may have flow-on impacts on engagement
	9.	The impact of the pandemic may lead to the breakdown of alliances and the formation of new ones across political boundaries. Depending on the outcomes engagement may be negatively impacted

<p style="text-align: center;">Economic drivers – Round two</p>

Key Economic drivers	Comments
National income at risk	1. It forces the government to focus on creating jobs and opportunities in the digital economy. 2. NI - 18 to 24 months to recover, 3. Very big 4. I believe it impacts employee engagement as its personal and will impact the individual - and income and wealth is super important to Singaporeans 5. Fear of losing jobs in economic downturn can be a strong motivator to engage at work. 6. National income could positively affect staff engagement if the wealth of the country is enjoyed by employee through income increases. On the other hand, if the increase in national income does not translate to higher earning for employee in a fair proportion, there would be negative impact on engagement. Less national income means you are getting poorer per capita. What we need to look at is the distribution. The mean and the median are too far apart showing an issue of distribution 7. National income is a statement of the economic standing of the country and its robustness will translate to earnings of the employee. Thus, this will impact the engagement of employee. 8. If the nation is less wealthy, services will decrease or taxes increase. Less satisfaction at the national level is likely to negatively impact employee engagement. 9. "National income at risk" generally impact employee engagement when it hits the bread-and-butter issues. 10. A recession and fears of job losses can certainly impact workforce engagement. 11. Would impact business and societal confidence. Employees would seek safe options regardless of their level of engagement 12. Loss of business and consumer confidence. Employees look for safe options - less focus on engagement and more focus on survival.
Risk of cyberattack endangering the system	1. Singapore can be a leader in developing system and processes to counter cyberterrorism. It has the branning, recourses and ability to attract talents into the sector. 2. Big issue 3. I don't think it's important to the employees because it's not seen, or people have not experienced the impact to themselves or people they know. equally in Singapore its not visible and s probably kept beneath the sheets - don't want to alarm people. if the government then talk about it - it must be serous - too alarmist. it's about managing the message 4. Can disrupt work processes being a disruptor to engagement 5. Cyber terrorism and related security is high on many agendas at the moment. The risk creates uncertainty and for many this increases demands that may affect engagement. However, an interest in working against the threat might provide purpose, vigour, dedication etc. Hence the split result? 6. The risk of cyberterrorism would positively impact sectors that are highly digitalised. There is huge segment of Singapore SMEs that are less digitalised that would not be impacted by cyberterrorism. 7. Fear and confidence in the government of not being able to manage this risk. 8. the risk will have implications on financial gains/ losses of the company. Unless this is addressed and measures are in place, the sense of the risk level will affect employee engagement or even sense of confidence. 9. Loss of confidence in data security is likely to negatively affect employee engagement.

	10. "Risk of cyberterrorism endangering the system" is real especially during the COVID-2019 pandemic. It will become a great stumbling-block moving forward in employee engagement if it is not controlled properly. 11. It is a current and future concern across the globe. Singapore's general approach to cyber security seems positive, and citizens have confidence in it. Nonetheless, it is always an important and current topic. 12. Would impact business and societal confidence. Trust is system integrity damaged. Loss of control to an unknown source breeding fear. 13. Loss of trust in major systems and infrastructure would impact on confidence
Risk of pandemic endangering the economy	1. Contactless connection will be future. 2. Agree 3. it will impact engagement - people can see it, its spoken openly and can watch the news - its real to people and its impacting peoples work and lives and d family 4. Cannot work with colleagues to address work issues. 5. As above? 6. The risk of pandemic has huge impact on some sectors (tourism), but less on others. 7. The country is small, and densely populated. We rely on the world for supplies. Should there be a pandemic, and food chains are cut, it will be problematic. The experience with PPEs such as no masks being available even though you have monies during the February / March months highlight this risk. Again, the fear factor 8. this is a current risk, and the economic loss is clearly felt. The presence of the pandemic can cripple established businesses. Hence it impacts engagement. 9. We are seeing this scenario play out now. Because many employees are not at the workplace and can feel unsafe if they are, engagement is likely to suffer. 10. 1As mentioned earlier, "risk of pandemic endangering the economy" is real and imminent. If not properly controlled, it will definitely impact employee engagement. 11. I think between now and the first phase of this survey people have become increasingly more concerned about Covid-19's impact on the local, as well as the global economy. It's the single most important concern now. 12. staff engagement lowers because they see hard working colleagues lose their jobs. Employees become protective of their specialist knowledge; more conservative approaches adopted. 13. Less engagement, people are seen to be retrenched, businesses close - survival mode thinking
Inequity between poor and rich	1. There will be more subsidies and job creation cater to the needy. 2. increased but the focus is on the other drivers. the Great Divide may increase as per past 3. it will impact engagement - there's a belief that people are entitled, and I want "more now ". there's an undercurrent between the two even in the tolerant society. 4. SG is already a highly inequitable society according to Gini Coefficient with workers appearing to accept their lot in life and perform for the collective. 5. Singapore has a huge percentage of workers who are middle income earners. The engagement level for some sector could be more affected by the inequity, but some don't. 6. The poor remains poor, the rich getting richer, and the middle being squeezed. It's a global issue but in a small compact country like Singapore, the impact is very apparent, and options are few. 7. Singapore has a 'middle bulge' - relatively large group of middle-income earners. While there is a concern about the growing divide between the rich and poor, it is still not that intensely felt as a fatal failure of the system, as the problem is seen to be actively attended to.

	8. There is current inequity but because of the social safety net, the impact on employee's engagement does not seem to be an important factor.
	9. "Inequity between poor and rich" it's global problem for all developed nations. And Singapore is not spared from this, it will certainly impact employee engagement.
	10. I think the pandemic also shapes some thinking about inequity, especially for those who cannot continue their business in a work-from-home environment, or lose their livelihoods, because Covid-19 halts their business. I think it's also an important factor to consider Covid-19's devastating effect on foreign workers who are building the City State's infrastructure and the very difficult situation they find themselves in residing in the dormitories with highly serious Covid-19 infection spread.
	11. those at the lower socio-economic levels have little choice about where they can seek employment and often little opportunity to contribute their skills and knowledge resulting in less engagement
	12. Poor have increasingly less choice - often in roles that are tightly controlled with little room for innovation, creativity, self-expression.
Other Economic drivers	
High inflation rate High interest rate Forced monetary policies Forced fiscal policies Higher cost of living Less favourable exchange rates	1. This is psychological as Singapore can last a generation without many working. But the fact that it is not giving hope that inequality will be treated seriously, the fear and anxiety will always be there, and distrust will continue. Engagement will eventually have to increase to regain trust.
	2. High
	3. I think what's important is the conversation and discussing the issues not whether its A or B
	4. Generally, the workforce in Singapore generally enjoyed reasonable level of earned income. There are other factors that could be equally important to improve staff engagement such as work life balance.
	5. Low disposable income means that the people will be worried about economic well-being and affordability for items needed to live. This leads to higher financial pressures. Hence staff engagement scores are likely to be affected in a negative manner
	6. Financial rewards are extrinsic motivation for engagement. there is recognition that intrinsic motivation is also important for engagement.
	7. Could be due to confusion about the meaning of the question. 'Positive' taken as having any impact (for better or worse) or taken as being only an adverse impact. Hard to see how many of these unfavourable changes can be seen as positive in the sense of increasing employee engagement.
	8. Yes, low disposable income/higher financial pressure may decrease engagement because people's focus will be more on their physiological needs rather than on the high-level needs such as security and self-esteem.
	9. I think so. The pressure and stress - sometimes demotivation of employees could adversely impact workplace engagement.
	10. people have fewer choices; engagement is less important than survival
	11. Less choice, greater pressure to just survive
Low productivity	1. In a decentralised world, distribution of income rather than productivity is more important. Also, cyber security will require low productivity as security entails inefficiency. Engagement will increase while productivity will decrease in the short term during digital transformation.
	2. not as bad- employees are coping with telecommuting

	3. Agreed - low productivity and engagement are related. leadership engagement (of all types) which is regular and meaningful will improve productivity 4. SG already has low productivity - people just work harder. 5. Yes. I believe there is a link between the two. 6. Productivity would decrease with low engagement. 7. Yes because of management pressure on staff to bring up productivity. Without process improvements, technology investments .. workers will be expected to work harder with few people ..., leading to negative engagement scores 8. Yes... when engagement decreases, so will productivity. 9. As above. Hard to see how 'low productivity' can increase employee engagement. 10. Higher engagement will increase productivity. Hence, productivity is proportionate to engagement level. 11. Yes, fundamentally, that's what happens. 12. Not always. People may still be productive but will work to existing patterns, expectations and not provide anything extra 13. Not always. if someone's job is under threat, they may be highly productive but not engaged
Continuation of climate change	1. It will stimulate more engagement as the real impact affects day to day living. 2. will increase 3. I don't think it does in Singapore because the subject is not real to them and it doesn't concern them - there's not enough emphasis to then and therefore not important. There is no or minimum policy and conversation on the topic. 4. NO WIFM 5. For the young generation who are more concerned about climate change, engagement would be positively influence by efforts of company in stopping climate change. However, for the bulk of the workforce in Singapore, climate change considerations are hugely lacking. 6. This is a longer-term issue - except when you have haze given the estate or forest clearing fires. Staff are probably less bothered but if companies take climate change seriously, this goes down well with the socially conscious, especially the young 7. increasing influence of idea that engagement in work that contributes to worsening environment is not worth pursuing. Climatic concerns are increasing in traction among employees who would rather work in companies that contribute to a sustainable environment. 8. As above. Hard to see how climate change with associated concerns can be favourable to employee engagement. 9. "Continuation of climate change" is impacting employee engagement as it impacts everyone's daily life. 10. Yes, maybe not directly as much as financial pressure, low disposable income, low productively ... but it's a factor since it is real. 11. Many are looking for their organisation to show leadership in this area, if they done engagement falls 12. People want to see their government and their organisations doing something about climate change. If they don't see it reduces their engagement
US$ loses its status of world reserve currency	1. It promotes financial inclusion and invite untraded goods, services, and people back to the economic and financial system. 2. not as bad 3. people don't understand or it hasn't been explained to people - there's no conversation and what it really means 4. SG economy performs more strongly in stable economic environments due to its high trade and FDI engagement with the world - thus, needs stable currency.

	5. Singapore's trading companies are highly susceptible to dollar loses. However, with the emergence of China, companies are less affected by the valuation of the USD.
	6. The store of wealth especially for the more well-heeled who may have dollar assets. So, it's a question of how you measure your wealth and buying power
	7. not sure if this statement refers to USD or dollar as a generic term. Generally, Singapore is susceptible to global financial influences.
	8. Depends on whether it impacts on inflation, cost of imports and the national economy. Personally, I could not predict.
	9. "Dollar loses the status of world reserve value" impacts employee engagement in that it also naturally decreases the people's wealth.
	10. Maybe because people see that kind of change as potentially unstable.
	11. Loss of business confidence
	12. I don't think it impacts

Key Social drivers	Comments
Ageing population and generational conflict	1. It will increase as older generation will get a higher payout. Also, more workers will be in their old age that requires a lot more benefits and care 2. Diversity and inclusiveness - with ageing population this conflict will increase 3. I would see this as decreasing as the ageing population 4. hugely impactful - different ages have different belief and value systems. there are so many factors here on how each generation operates and how it is engaged. over time I see the generations will change (as is natural) and engagement approaches will adapt. 5. SG will have one of the region's oldest populations -- how to support it? 6. Ageing population is positively affecting some sectors, but less for other sector. 7. Population of the locals getting older. Many new citizens are younger. Need of integration given different cultures and upbringing. Engagement styles and habits may be different 8. with an aging population, inter-generational conflict is likely to become more pervasive and an area of concern. 9. It is likely to affect the economy adversely and if it undermines confidence could adversely affect employee engagement. 10. "Ageing population and generational conflict" definitely impact engagement as communication breaks down often and becomes more and more challenging. 11. Probably increasing slightly. 12. Neutral staying about the same. if older generations aren't willing to change at work, younger generations will become less engaged
Casualisation of the workforce	1. IT is a small country and there will be more demand for their welfare. 2. Neutral 3. agreed engagement will go down because of casualization - there's a transaction gong on not a connection to the mission or values of the organization 4. Job stability would be a key concern for middle-aged workers. On the other hand, the younger workers are less affected by short contracts due to differences in expectation and culture. 5. Spot on. No employee loyalty. Every engagement is treated as a transaction 6. casualisation suggests work that is seasonal and not bound by commitment, and possibly engagement. However, it could also be work that come from a much-loved hobby - hence greater engagement. of work is also possible. 7. Casual employees are usually less likely to be engaged. 8. "Casualization of the workforce" will impact engagement as start-ups create pressure to perform and making engagement very tough. 9. In principle, I'd agree that casualisation decreases engagement (little time to form business bonds, moving to the next, etc.). However, if casualisation becomes a norm, due to economic recession, it may have the opposite effect and increase engagement. 10. Casual workers can feel high levels of engagement but won't invest their energies for the long term because of the uncertainty of their employment
Reduction in the welfare state	1. Given the small population, there will be more engagement as unemployment and disability increases. 2. negative impact 3. not in company setting but this depends upon your politics and what you value. 4. Less welfare = sink/swim = motivated to work to stay afloat. 5. The idea of a welfare state is more relevant for the elderly, but less relevant for the younger workforce.

	6. If the benefits are brought in, engagement may be positive. Singapore government believes in Workfare, not welfare. You need to help yourself, and benefits if any is at the fringe. 7. Singapore emphasizes a lot on 'workfare' rather than 'welfare. Generally, this is well accepted and taken in full measure, can lead to greater motivation and engagement. 8. Reduction in the welfare state could make a job more valuable and increase engagement. 9. "Reduction in the welfare state" will have a negative impact on engagement. This is because the quality of work life and work life balance impact engagement. 10. That would depend on what types of work opportunities might present themselves, e.g., casualisation. 11. a negative impact on those impacted
Other Social drivers	
Traditions shifting towards reduced standards	1. Retraining will be the key and therefore more engagement. 2. do not agree 3. this question I believe pivots around what does this mean to me , I honestly believe that Singaporeans can see this as negative because of the personal impact and long term damage to them or their family. 4. easier to trade with standardisation 5. There are changes in traditions that are affecting the older workers than the younger ones. 6. With traditions being eroded, new practices are in place. These impact the way the staff looks at engagement depending on how the previewed what's right, or more valuable ..... 7. It could adversely affect loyalty to an organisation. 8. "Traditions shifting towards reduced standards" will impact engagement negatively. 9. People may become less "proud" of their companies and their companies' products. That, certainly, could lead to decreased engagement. 10. Reduces engagement as there is less pride in the outcomes
Increased sense of inequality and social classes	1. There is increasing social inequality and there will be more engagement to address the issue as it affects morale and therefore output. 2. definitely and an agenda for government 3. I think this is increasing - there's a growing debate about this and the disparity is clear (but it's an underground debate) . 4. SG has high social inequality according to Gini co-efficient but with high power distances and strong collective affinity, populace accept their lot and need to work hard. 5. The social inequality is increasing a concern for the younger generation. There are less issues for the older work force. 6. Social inequality is increasing given the widening income and wealth GAP. This GAP impacts engagement negatively 7. Social inequality is present in all societies. However, Singapore generally has a larger middle incomes group. Hence there is the perceived absence of abject poverty among masses that can potentially cripple an economy. 8. There is a high level of social inequality in Singapore, but the social safety net tempers any resulting disharmony. Workers may feel less engaged if they feel they are treated unfairly in terms of recompense for their labour. 9. Yes, I think it is increasing. Work and life are more vulnerable, the focus becomes increasingly on survival and this can lead to dis-engagement with many of the social structures. 10. "Increased sense of inequality and social classes" impact engagement as it will create negative sentiment about social mobility and upgrading. 11. There is, but it's not so visible unless you really look for it. Then, of course, you find it. It potentially effects engagement if certain social or ethnic groups somehow don't feel included.

Reduced Long term social loyalty (minorities and citizens)	1. Language, lifestyle, new immigrants, and long period away from Singapore will decrease national pride if the multiracial and language is skewed towards just English. There will be more engagement as national pride is decreasing. 2. Increase 3. I think good citizenship is decreasing - it's a society about me and what can I get out of it and be seen to have the social trappings. national pride would increase engagement - needs to be carefully managed given the unwritten or unsaid undercurrent 4. COVID-19 has increased SG nationalism. 5. Good citizenship is increasingly challenging with difference in expectation on how the society should progress. 6. Think the national pride factor is decreasing given the Hugh increase in new citizens round the world. The new citizens are not grounded in local traditions and values, nor do they have a sense of history 7. national pride will logically increase engagement which would boost the national income and standing of the country. 8. There is a high level of citizenship and national loyalty in Singapore. a reduction would undermine confidence in institutions and could adversely affect employee engagement. 9. "Reduced long term social loyalty" definitely impact engagement as it erodes trust and creates gaps between people. 10. No, I think good citizenship is stable here, and engagement isn't affected much. 11. National pride increases engagement
Impact due to Hong Kong evacuation-	1. There will be more Hong Kong immigrants as well as wealth. The inequality may trigger a lot more engagement in trying to explain corporate with national policies. 2. yes - more tension 3. The engagement would have positive impact at the national level, with increase workforce and GDP. However, this could negatively affect the engagement of local workforce with perceived reduction in opportunities. 4. The move here is not obvious. And for good reasons, not to be publicised 5. This is still not clear - as it can still work both ways. The presence of more foreigners who belongs to mega-rich may not necessarily increase in engagement, as it can also lead to great dissent over a widening income-gap, brought about the rich Hongkongers and their investments. 6. It depends on whether the economy expanded to accommodate the level of migration. If not, there could be adverse effects on employee engagement. 7. "Noticeable impact due to Hong Kong evacuation" will impact employee engagement as more investors will pressurize the locals to put effort in their own businesses, thus creating unnecessary competition. 8. Hard to say. There are many cultural and business similarities between Singapore and Hong Kong that could be seen as a positive. 9. It could result in a rise in ethnic tensions especially if there are job losses in Singapore and it is perceived that people from Hong Kong are taking jobs
Increase in mental health issues	1. agree - stress is increasing with more conflicts and pressure 2. I think this depends upon experiences and what you see, some people can see this - others can't because you can't see mental health issues, or don't want to talk about it - it's a taboo subject 3. Perhaps the disagreement relates to both the positive and negative aspects. Poor MH can lead to a disengagement in a lot of different activities including work. Likewise, engagement in positive activities can improve MH. 4. Singapore younger workers are more aware of mental health issues. However, the older workers in Singapore are largely not exposed to this topic. 5. Increase in mental health issues will impact engagement in a negative manner.

	6.	perhaps this can be attributed to greater awareness of the issue of mental health, only in recent times. This may be recognized as a key driver in time to come.
	7.	Employees with mental health issues may be less engaged due to other concerns. On the other hand, work is an important tonic for mental health and so engagement could be enhanced.
	8.	"Increase in mental health issues" will negatively impact engagement as mental health causes challenges to communication.
	9.	Maybe because I don't see that so prevalent in Singapore work life, but maybe it's still there.
	10.	Increased understanding is needed of the breadth of issues covered by mental health and what adjustments need to be made in workplaces to make them more accommodating.
Other comments	1.	needs to be carefully balanced - mixing political ideology, cultural ideology and the current perception of wealth and trapping of wealth, not made for happy bed fellows
	2.	The inflows of foreigners need to slow down as new jobs become scarce given Covid 19, the trade war between USA and China, the increasing nationalistic streak in most countries....
	3.	Social factor impacts engagement in many ways. In order to improve engagement, social factors must be well-managed.

Environmental drivers – Round two

Key Environmental drivers	Comments
Widespread melting of the Arctic and Antarctic poles Extreme rise in the sea level Increased coastline erosion	1. disagree - Climate change and rising sea level is an issue 2. agreed - the perception is it's not happening here therefore I not affecting me, it's not real for people and no impact to me (personally) so why bother 3. The timeframe and focus may be too soon. 4. There is a group of younger workforces that cares about climate change issues, however, there is also a huge group of workforces that do not display interest in climate change. 5. The government is pushing hard on this matter. It has a 100-year plan. Hence will always be in the mind of the people given that much monies will be earmarked for the project to protect Singapore from raising sea. 6. Agree. 7. simplistically - yes. The only provision is the unintended consequences that this may have on Singapore - such as increase in migration to Singapore and greater competition for opportunities which may lead to disengagement. 8. Singapore has the ability to protect itself from most of these changes and so the level of threat to Singapore is probably perceived as low and not very likely to affect employee engagement. 9. I disagree as the threat will still exist by 2030. 10. Yes. 11. Agree 12. For all environment related factors, education and corporate contributions are the first actions
Desalination of water to meet increased demand for drinking water	1. It adds to business cost and therefore cost of living. 2. Water prices have not been an issue that is considered a topic discussed on staff engagement. 3. Believe clean water is key to survival. Hence availability is more important than cost. Unless cost is so prohibitive so expensive, we will pay for it. 4. This issue is closely tied to a long-term concern of Singapore - drinking water. There is also the occasional potential to disruptive political relations with neighbouring countries - and it can lead to both engagement / disengagements. 5. Water is not expensive in Singapore and so an increase in cost may not be perceived as having much impact. 6. The implementation of such water desalination technology will definitely increase the cost of living and hence impact engagement. 7. It's probably similar to the sea-level rising issue and its direct impact on engagement. 8. Because it is seen as essential to Singapore's water independence."
Other Environmental drivers	
Reoccurring of environmental disaster (earthquake, tsunami)	1. The fear has to be addressed to have a good workforce. 2. Yes 3. because its not impacting me and my life that's why there's no impact on engagement 4. There is a group of younger workforces that cares about climate change issues, however, there is also a huge group of workforces that do not display interest in climate change 5. Again, it's the fear factor. Singapore has been blessed and sheltered from all these. But if our neighbours are affected, there can be consequences to Singapore

	6. by comparison, Singapore has relatively fewer environmental disasters, but the neighbouring countries have. Hence, it is more of consequential impact on the work here rather than a direct consequence. 7. These are not perceived threats to Singapore compared with its neighbours. 8. With increasing recurrence of natural disasters, it creates fear and uncertainty thus making engagement is huge challenge. 9. Singapore has largely been spared - due to its geographic location - from impact of environmental disasters unlike neighbouring Indonesia, as well as other countries in Southeast Asia. 10. I don't think it impacts
Other Comments	1. WIFM and how to do anything create a burning ambition or platform 2. Again ESG will be a focal issue for the government.We need to do good, and be seen to be doing good given our stature, and high wealth per capita

Ethical drivers – Round two

Key Ethical drivers	
Perceived class and ethnic ethical variability in recruiting	1. It is more about personal experiences and encounters. It is likely that there is not enough awareness at this moment for some to form an opinion. 2. due to rising awareness of diversity and inclusiveness agenda 3. Singapore or to some countries in South East Asia continues to perceive leaders as having good ethics. However, this has proven to be untrue due to a number of white-collar crimes involving top corporate leaders which indirectly impacted the economy and reputation of that country. 4. There are business sectors that are less impacted by the perceived class and ethnic ethical variability in recruiting such as the public sector. But there are observations that the private sector faced greater challenges in this topic. 5. Regardless of race, language or religion is what the country believes in in education, employment, health care.... unfortunately, many of the touch points are manned by people who may have bias, especially new citizens. If this is not managed, we may have problems in harmony in society 6. Racial tension has always been a historical concern and the country is concerned that such issues should not feature in recruitment. Rather access to jobs and promotions should be based on meritocracy rather than racial affiliation. 7. Agree it does affect engagement 8. It could be a matter of impact vs likelihood. 9. The issue is that it is "perceived" rather than "established" factual difference. 10. Yes it does affect engagement 11. I'm not so sure why the split occurred, as such, but I do agree it's an important factor concerning engagement. 12. Greater diversity leads to improved decision making but we have a tendency to want to be with people who are just like us and that affect engagement
Other Comments	
	1. no impact to me .. as in all these things if you want to have an impact need to show the relevance 2. The size of population, and composition and demographics of new citizens and permanent residents may have social impact given their culture, religious beliefs, and practices ...

Legal drivers – Round two

Other Legal	Comments
Other Comments	1. Independence and competency of the legal apparatus will be key to position Singapore for business such as banking, wealth management, Data Centres, Trust business...

Appendix I

Delphi Round three survey

DELPHI Round Three

DELPHI Round Three - Strategic Leadership & Employee Engagement in Singapore

DELPHI Round Three - Strategic Leadership & Employee Engagement in Singapore

The purpose of the study is to investigate the conceptual relationship between strategic leadership and workforce engagement in organisations in Singapore by 2030. The study adopts a futures research approach in conducting a scenario analysis method and an analysis of secondary quantitative data.

The study aims to consider the premised interaction between strategic leadership and employee engagement and how this can be enhanced given the possible futures of workforce engagement as outlined by possible scenarios for 2030. The study utilises the DELPHI method.

*First Name

*Last Name

*eMail:

Overview

In round two, the participants in this study answered online questions covering **the quantitative analysis of the cognitive abilities** of Leaders in Singapore, specifically about their foresight and strategic thinking, and how it may impact employee engagement. In addition, the participants reviewed **the results of round one (PESTEEL) and responded to the few incidents** where consensus was not reached in the responses.

The PESTEEL is a method for environmental scanning to determine drivers for change (Political, Economic, Societal, Technological, Environmental, Legal and Ethical dimensions). For each dimension, the drivers were classified into two categories; key drivers and other drivers, we examined the impact of all drivers in relation to employee engagement and the degree of influence of the key drivers.

I would like to inform the participants that the collective responses have positively verified the quantitive analysis of the cognitive abilities of Leaders in Singapore (Orientation to time, Foresight Styles and Strategic Thinking Styles), as proposed by this study. In addition, we have reached consensus on the few incidents concerning some of the PESTEEL drivers, where the agreement was not reached in round one. We are now ready to articulate the possible scenarios of workforce engagement in Singapore.

Figure "1" represents an illustration of the conceptual relationship between strategic leadership (foresight and strategic leadership) and employee engagement. The study focuses on the relationship between the cognitive abilities of strategy-level leaders in Singapore and the degree of employee engagement as a result of the cognitive abilities of the leaders being operationalised in the different possible scenarios and shaped by the PESTEEL forces for change.

Figure "1"
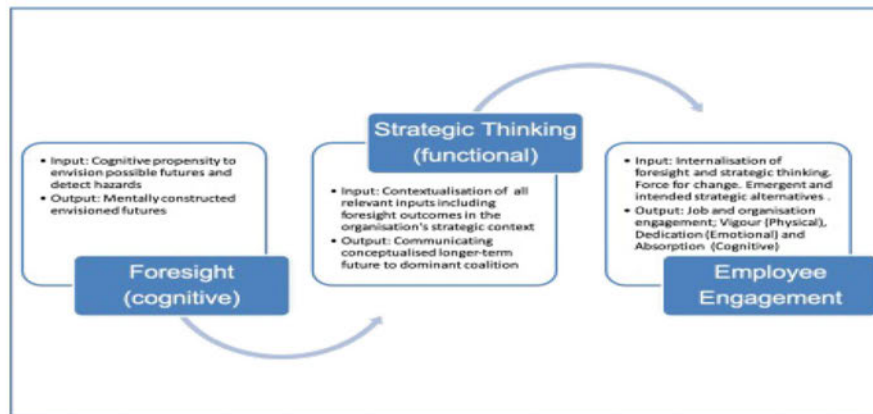
In this third and final round, the study presents four possible scenarios of the future of employee engagement in Singapore, in relation to the strategic leadership abilities of the leaders, where the study seek your input and comments.

All questions will require written answers and your comments will inform the research for accuracy and future directions.

If you have any concerns about the study please contact the study principal investigator Wade Azmy (wade@wadeazmy.com) or principal supervisor Dr Luke Van Der Laan, Luke.VanDerLaan@usq.edu.au.

Thank you for your participation and support.

Summary of round two findings: PESTEEl drivers

Dimension	Drivers of change	
Political Drivers	1. Changing global politics 2. Tax policy 3. Social welfare 4. Freedom of expression 5. Freedom of information 6. Immigration policies	7. Leadership change 8. Loss of trust in national politics 9. Ethnic tension 10. Bureaucracy 11. Corruption controls 12. US / China trade war
Economic Drivers	1. Changing global economy through digitisation 2. Globalisation, regionalisation and deglobalisation 3. Technological advancement and acquisition of new skills 4. Trade protectionism 5. Cost of living	6. High disposable income 7. National income at risk 8. Risk of pandemic endangering the economy 9. Inequity between poor and rich 10. Low productivity
Social Drivers	1. A more holistic approach to life, work, and retirement 2. Rise of automation and the need to learn new skills 3. Cultural norms and values 4. Increased liberal views of social norms 5. Standards of living 6. Social conflict	7. Social inequity 8. Ageing population and generational conflict 9. Casualisation of the workforce 10. Traditions shifting towards reduced standards 11. Increased sense of inequality and social classes 12. Increase in mental health issues
Technology Drivers	1. Enhanced communication infrastructure 2. Increased use of analytics in decision making 3. Major security breaches	4. Increased censorship and citizen monitoring 5. Possibilities of new generations in IT 6. Use of artificial intelligence 7. Technology and science advances
Environmental Drivers	1. Mentality changes to counter the effects of climate	2. Corporate ESG and CSR towards environment and society
Ethical Drivers	1. Perceived class and ethnic ethical variability in recruiting 2. Promoting social sustainability concerning human capital 3. Engaging employees in driving ethical behaviours initiatives 4. Ethical business leadership	5. Developing ethical grounds for protecting intellectual property 6. Ethical human resources management 7. Ethical leadership
Legal Drivers	1. Employment law 2. Work health and safety law 3. Privacy and data protection law	4. Anti-discrimination law 5. Copyright, patents, and intellectual property law 6. Industrial relationships law

DELPHI Round Three: Summary of Key Definitions

This section covers a summary of all the definitions under the different elements which we covered in the previous section.

Note: no questions to answer in this section, just background information.

Key Descriptions

1. Cognitive Competence

Orientation to time:
- *Past:* dominantly risk reductive, contemplative thinking. accesses past experiences and knowledge.
- *Present:* dominantly orientated toward 'getting things done', organised thinking, and mentally 'stepping
  out of time'.
- *Future:* big picture thinking, imaginative thinking, ability to see gaps in knowledge, patterns and trends
  that diverge.

Foresights styles:
- *Framer:* interested in long-term issues that define the future and envisions 'bigger picture' futures
  - *Adapter:* adjusts to new situations as future demands, balances multiple challenges and choices, activates actions, flexible and influencer, and helps others adapt.
  - *Tester:* Adopts new trends, a diffuser of innovation, and opportunistic.
  - *Reactor:* preserves own position, mitigates and resists change, links to past successes.

Strategic Thinking styles:
- *Conceptual:* Future / long term oriented, Creative / Generates multiple ideas, Tolerance for ambiguity
  - *Analytical:* Problem solver, use considerable data, careful analysis, systems thinking, hypothesis-driven
  - *Participatory:* supportive, empathetic, communicates easily, persuasive (delivery style)
  - *Directive:* autocratic, use rules, task-focused, driven (delivery style)
  (Van Der Laan 2010)

2. Forces for Change (PESTEEL)

Political drivers; forces/trends that relate to or are concerned with a system of government
Economic drivers; forces/trends that relate to, or are based on the production, distribution, and consumption of goods and services forming the system and conditions of economic life in a country, region and globally
Social drivers; forces/trends that relate to or are based on human society, the interaction of the individual and the group, or the welfare of human beings as members of society
Technology drivers; forces/trends that relate to, or are based on the application of scientific knowledge for practical purposes, especially in the industry including advances in computer technology, engineering applications, machinery and equipment developed from the application of scientific knowledge and/or invention
Environmental drivers; forces/trends that relate to, or are based on the circumstances, objects, or conditions by which one is surrounded within the complex of physical, chemical, and biotic factors (such as climate, soil, and living things)
Ethical drivers; forces/trends that relate to or are based on the range of social values which shape business behaviour. The values provide a basis for what is right and what is not.
Legal Drivers; forces/trends that relate to, or are based on the law which has been promulgated (or "enacted") by a legislature or other governing body or the process of making it.

3. Employee Engagement

Employee engagement is defined as a positive fulfilling work-related state of

mind that is characterised by vigour, dedication and absorption'.
Vigour (behavioural) refers to high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties;
Dedication (emotional) refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge,
Absorption (cognitive) refers to being fully concentrated and happily engrossed in one's work, whereby   time passes quickly and one has difficulties with detaching oneself from work
(Schaufeli et al. 2002).

4. Individual Outcomes:

A review of the engagement literature indicates a variety of engagement outcomes, defined at the individual level, as follows:
- Job satisfaction
- Organisational commitment
- Intention to quit
- Organisational citizenship behaviour
- Task performance
- Extra-role performance
- Health and well-being
- Stress and strains
- Burnout
Leadership has been identified as a primary antecedent for most outcomes and for other antecedents that lead to all outcomes
(Saks 2006. 2019)

5. Organisational Outcomes:

A review of the engagement literature indicates a variety of engagement outcomes, defined at the organisation level, as follows:
- Team performance
- Organisational performance
- Finacial returns (short and long terms)
- Competitive advantage
- Growth and development
(Albrecht et al 2015)

QUESTION #1 - Individual and Organisational Outcomes

Foresight & Strategic thinking as triggers for engagement, individual and organisational outcomes.

Note: This section has one question.

Individual and Organisational Outcomes

The cognitive abilities of orientation to time, foresight styles and strategic thinking styles constitute how leaders respond to the forces of change, and trigger the antecedents for engagement that drive individual outcomes and organizational outcomes (Figure 3)

Figure 3

Foresight & Strategic Thinking:
Triggers for Engagement and Outcomes

Developed for the purpose of this study based on literature review (Boal 2001, Van Der Laan 2010, Albrecht 2015 and Saks 2019)

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*Q1: Do you have any further insights or comments you would like to bring to the attention of the study as it
relates to the individual and organisational outcomes as a result of employee engagement?

Four Possible Future Scenarios of Employee Engagement

This section provides an overview of the four possible scenarios for employee engagement in Singapore by 2030.

Note: no questions to answer in this section, just background information.

Four Futures Possible Scenarios

What we have, what we shield, what we fear and what we desire: possible scenarios for the future of employee engagement in Singapore, by 2030

The study proposes four scenarios of employee engagement by 2030. Each scenario provides a narrative of a possible future state. The purpose of the scenarios is NOT to predict the future. The purpose of the scenarios is to: a) Expand the scope of possibility beyond that which seems probable, and b) to describe possible futures in a way that is memorable and allows the reader to picture these possible futures. in the case of the study, scenarios describe ways in which engagement in Singpaore may evolve. Four scenarios are illustrated below and named: Smart City, Ivory Tower, Lost City and Smart Nation (Figure 2).

Figure 2

The rationale for the names of each scenario comes from the state it will probably deliver.

In developing future engagement scenarios, the study addressed the following key elements:

1. Cognitive Competence (Orientation to time, Foresight Styles and Strategic Thinking Styles)

2. Forces of change - PESTEEL Analysis (As covered in DELPHI round 1&2)

3. Employee Engagement (Vigour, Dedication Absorption)

4. Individual Outcomes

5. Organisation Outcomes

Questions 2 & 3 - Smart City Scenario

This section covers a review of the second scenario

Note: This section has two question.

Smart City Scenario

Elements		Description
Overview	Theme	Overconfidence view that development and growth continue unabated
	Goal	Maintain what we "Have"
	Logic	Favourable drivers of change, less balanced cognitive capabilities of leaders
	Abstract	The smart city scenario is the easiest to imagine and probably one that resides in the living memory, this is the current de facto position of Singapore, most of the citizens identify with the city status in terms of wealth, technological advancement and its competitive ranking based on the competitive index measures of institutions, performing public sector, social services, and financial hub status. An authoritarian political system, it combines effective governance with a semi-democratic rule while enforcing the rule of law and regulations, focusing on providing core social services but not addressing the welfare of the majority and exercising a degree of control on the freedom of speech and the public world view. Driving a highly developed economy and living standards, while maintaining ownership of key corporations and real estate assets across the city-state. This scenario ensures economic growth and its protection, by maintaining the integrity of the financial and trade systems and ensure necessary legislation to protect its longevity, with less focus on equality, equity, and sustainability. The overall strategic leadership delivery style is directive in nature, the vision, objectives, and tasks are top-down driven, with minimum engagement from the workforce.
Leaders' cognitive abilities	Orientation to time	Dominant Present: orientated toward getting things done
	Foresight Style	Dominant Adapter: adjusts to situations as future demands, and balances multiple challenges
	Strategic thinking Style	Analytical: problem solver, use considerable data, careful analysis, assess options
	Leadership Delivery Style	Directive: top-down management
	Predetermined Drivers (Trends & Megatrends)	- Political: Global politics, corruption control - Economic: Pandemic, inequality between poor and rich, low productivity - Social: Ageing population, casualisation, cultural norms, rise of automation - Technology: Increased censorship, Enhanced communication, AI - Environment: Corporate ESG and CSR - Ethical: Perceived class and ethnic variability - Legal: Copyright, patents, and IP law, work health and safety
	Wild Cards	- Globalisation, regionalisation and deglobalisation - Immigration policies
Work engagement	Vigour	The behavioural aspect of engagement (e.g., being motivated to achieve short-term targets) is likely to be higher.
	Absorption	The cognitive aspect (e.g., being able to relate to and be immersed in the purpose and meaning of their work) is likely to be reduced.
	Dedication	The emotional aspect (e.g., Enthusiasm and motivation derived from a sense of purpose and direction) of engagement in Singapore are likely to be reduced.
Outcomes	Individual	low job satisfaction, task performance, Intention to leave
	Organisational	- Team-task performance, short term financials

*Q2: Is this a viable engagement scenario by 2030? what do you agree/disagree with, about this scenario?

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*Q3: Do you have any further insights or comments you would like to bring to the attention of the study as it
relates to the scenario and its elements?

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Questions 4 & 5 - Ivory Tower Scenario

This section covers a review of the second scenario

Note: This section has two questions.

Ivory Tower Scenario

	Elements	Description
Overview	Theme	Refusal to accept the limits of growth, apply an iron grip to preserve the past
	Goal	"Defend" what we had
	Logic	Unfavourable drivers of change, less balanced cognitive capabilities of leaders
	Abstract	The ivory tower scenario is based on the potential for the global economy to stall and leaders refuse to accept limits of growth, and apply an iron grip to preserve the past, defend the wealth and family traditions, and to shield the past success against the forces of change. A dystopian outlook of the future. An ultra-authoritative government with short term horizon trying to maintain a competitive status, combine strict control and expansive bureaucracy while enforcing the full rule of law and regulations, focusing on providing minimum social services but not addressing the welfare of the people and exercising a control on freedom and human rights, and featuring government instability. This scenario assumes uncertainty in global politics and power which introduce a level of complexity and negative implications on the global trade, it can also be a result of post pandemic. The overall strategic leadership delivery style is directive in nature, the vision, objectives, and tasks are top-down driven, with minimum engagement from the workforce
Leaders' cognitive abilities	Orientation to time	Dominant Past: risk reductive, accesses past experiences and knowledge
	Foresight Style	Dominant Reactor: preserves own position, mitigates, and resists change, links to past successes
	Strategic thinking Style	Analytical: use considerable data, a careful analysis that may lead to paralysis
	Leadership Delivery Style	Directive: top-down management and no engagement
	Predetermined Drivers (Trends & Megatrends)	- Political: Tax policy, US/China trade war, bureaucracy - Economic: low productivity, cost of living - Social: Ageing population, Mental health, social inequity, and inequality - Technology: Increased censorship - Environment: not a priority - Ethical: not a priority - Legal: not a priority
	Wild Cards	- Trade protectionism - Major security breaches - National income at risk
Work engagement	Vigour	The behavioural aspect of engagement (e.g., being motivated to achieve targets) is likely to high.
	Absorption	The cognitive aspect (e.g., being able to relate to and be immersed in the purpose and meaning of their work) is likely to be very low.
	Dedication	The emotional aspect (e.g., dedication to the organisation and tradition) maybe low.
Outcomes	Individual	- Organisation commitment - low job satisfaction - Burnout, intention to leave - Task performance
	Organisational	- Entropy increases, things lose the order - Teams left to their own devices - Performance will become less structured - Silos, disintegrated workforce - Low productivity & poor financials

*Q4: Is this a viable engagement scenario by 2030? what do you agree/disagree with, about this scenario?

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*Q5: Do you have any further insights or comments you would like to bring to the attention of the study as it
relates to the scenario and its elements?

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Questions 6 & 7 -   Shangri-La

This section covers a review of the third scenario

Note: This section has two questions.

Shangri-La Scenario

Elements		Description
Overview	Theme	Naively hopeful, where leaders experiment and wish for the best
	Goal	"Dream" that tomorrow will be better
	Logic	Unfavourable drivers of change, more balanced cognitive capabilities of leaders
	Abstract	Utopian outlook being hopeful but without results, an illusion of activity and productivity muddled together without a clear vision or goals, in response to a long cycle of prosperity with less emphasis on human rights, employee rights and democracy. The Shangri-La scenario is a fictional one described in the 1933 novel Lost Horizon. It describes Shangri-La as a mystical, harmonious place, a permanently happy land, isolated from the world. Leaders are primarily focused on people, open for ideas and maintain a high level of optimism in their decision-making approach. A semi-democratic political system, which provides equity and equality to its citizens, where leaders highly are focused on creating the right environment employee to engage but not necessarily focused on outcomes, except for the welfare of the workforce. The participatory; bottom-up driven ideas/initiatives and the increased engagement, supported by long-term waiting for engagement to occupy the stage and sense of complacency on the leadership end to guide a clear vision, may lead to an engaged workforce, highly active and but not productive.
Leaders' cognitive abilities	Orientation to time	Dominant Future: orientated toward 'big picture and imaginative thinking
	Foresight Style	Dominant Tester: adopts new trends and focus on innovation creativity
	Strategic thinking Style	Conceptual: Future long term oriented, multiple ideas and choices
	Leadership Delivery Style	Participatory: encourage engagement and participation, bottom-up ideas
	Predetermined Drivers (Trends & Megatrends)	- Political: social welfare - Economic: Technological advancement / new skills needed - Social: Ageing population, increased liberal views, standards of living, traditions shifting towards reduced standards - Technology: Technology and science advances - Environment: not a priority - Ethical: Ethical HR practices, ethical business leadership - Legal: Anti-discrimination, employment, privacy and protection laws
	Wild Cards	- Industrial relations - Ethnic tension - Social conflict - Loss of trust in national politics - Leadership change
Work engagement	Vigour	The behavioural aspect of engagement (e.g., being motivated to achieve targets) is likely to be high.
	Absorption	The cognitive aspect (e.g., being able to relate to and be immersed in interesting work) is likely to be high.
	Dedication	The emotional aspect (e.g., enthusiasm and motivation derived from a sense of excitement about the future) is likely to be high.
Outcomes	Individual	- Job engagement / Job satisfaction but lacking a sense of purpose - Organisation engagement - Organisation commitment - Organisation citizenship - Health and wellbeing
	Organisational	- Team innovation - Low financial returns

Shangri-La

*Q6: Is this a viable engagement scenario by 2030? what do you agree/disagree with, about this
scenario?

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*Q7: you have any further insights or comments you would like to bring to the attention of the study as it
relates to the scenario and its elements?

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Questions 8 & 9 - Smart Nation Scenario

This section covers a review of the fourth scenario

Note: This section has two questions.

Smart Nation Scenario

	Elements	Description
Overview	Theme	Explore the not-here and the not-yet, the desirable images of futures worth having, the realisation of possibilities that are presently obscured.
	Goal	What we "Desire" to be
	Logic	Favourable drivers of change, balanced cognitive capabilities of leaders
	Abstract	The smart nation scenario represents the other end of the continuum starting with the smart city scenario, but it is not a physical identity. It is an identity where all the participants in the nation, all coming together under a unified and shared vision that they all subscribe to, based on a level of equity and equality that is widely accepted. A democratic rule while enforcing the rule of law and regulations, focusing on providing core social services and addressing the welfare of the majority and exercising high degree freedom of speech and rights of association. This scenario ensures economic growth and its protection, by maintaining the integrity of the financial and trade systems and ensure necessary legislation to protect its longevity, with more focus on equality, equity, and sustainability. In this scenario, work engagement antecedents take the centre stage, driven by the key cognitive capability of foresight and strategic thinking, and leading to desired outcomes at the individual and organisational levels. The participatory; bottom-up driven ideas/initiatives and the increased engagement, supported by shared vision and engaging leadership, which result in collective organisational engagement.
Leaders' cognitive abilities	Orientation to time	Balanced: between past learning, present needs, and future aspirations
	Foresight Style	Framer / Tester: define the future vision and adopts new trends, focus on innovation and address long term issues
	Strategic thinking Style	Balanced Conceptual / Analytical: Future long term oriented, tolerance for ambiguity, while solving problems and apply system thinking and data analysis to reach decisions
	Leadership Delivery Style	Participatory: top-down and bottom-up vision and initiatives and enhanced engagement
	Predetermined Drivers (Trends & Megatrends)	- Political: Freedom of speech, Freedom of information - Economic: High disposable income, change global economy/digitisation - Social: Ageing population, more holistic approach to life - Technology: Use of artificial intelligence, use of analytics - Environment: Corporate ESG/CSR - Ethical: Ethical leadership, Ethics of IP protection, engaging employees in driving ethical behaviours - Legal: Anti-discrimination, employment law, privacy and data protection.
	Wild Cards	- Mentality change to counter climate change - Promoting social sustainability
Work engagement	Vigour	The behavioural aspect of engagement (e.g., being motivated to achieve targets) is likely to be high.
	Absorption	The cognitive aspect (e.g., being able to relate to and be immersed in the purpose and the meaning of their work) is likely to be high.
	Dedication	The emotional aspect (e.g., enthusiasm and motivation derived from a sense of purpose and direction, being able to envision the future and participate in its creation) is likely to be high.
Outcomes	Individual	- Job engagement / Job satisfaction - Organisation engagement - Organisation commitment - Organisation citizenship - Task performance / Extra role performance - Health and wellbeing - Growth and development
	Organisational	- Team performance - Team innovation - Financial returns - Organisational performance - Growth and development - Learning organisation

*Q8: Is this a viable engagement scenario by 2030? what do you agree/disagree with, about this scenario?

*Q9: Do you have any further insights or comments you would like to bring to the attention of the study as it
relates to the scenario and its elements?

Appendices

Appendix J

Delphi round three – comments

Individual and organisational outcomes

Engagement outcomes	Comments
Individual and Organisational outcomes	1. There can be elements of different categories in cognitive abilities, although one characteristic may be dominant. One change coinciding with the COVID-19 pandemic has been a more inward-looking community and to some extent political stance, targeting international workers. This stance represents a Dominant Past orientation to time.
	2. This looks like a useful overview and collation of literature. I notice there is a lot on positive outcomes, such as organisational citizenship and commitment, which works with your focus on engagement. But there is little in the way of negative outcomes at the individual/organisational level, such as counterproductive workplace behaviour, and related disengagement (I note there is intention to leave, and stress, strain, and burnout). This might balance the perspective or at least be a limitation to discuss and maybe address one day in the future.
	3. employees place intangible value on loyalty, respect, and sense of belonging. This does not necessarily translate to job satisfaction. It is a personal emotive factor particularly with senior people in the organisation. I hope the study segment the different tiers in the organisation. I hope this is NOT a One Size Fit All framework.
	4. There is a missing piece in "national outcomes" but this may not be the scope of the research.
	5. I agree with the individual and organisational outcomes, I also consider diversity, work life balance in the workplace that leads to wider engagement and reduce turnover
	6. Singapore is highly directive, very much task orientated, with a tendency to link to the past (be it thinking, education, approach) Not visionary or big picture thinker. Education has played a big part to play in how people think act and do. Follow the task and linear approach, with little focus on work life balance
	7. No. This is quite comprehensive.
	8. Defensive pessimism and strategic optimism are 2 basic types of sentiment that leaders can use to navigate the future and both sentiments are fundamentally adaptive lenses on the future. Defensive pessimism is primarily concerned with preventing bad outcomes, e.g., identifying problems, managing risks, countering threats, and preventing disruptions and disadvantages. Strategic optimism is primarily concerned with achieving desired outcomes, e.g., identifying opportunities and advantages, and creating shared goals, strategies, plans, and visions. Good leaders employ and balance both preventable and preferred futures, as individuals and on their teams, which are critical to adaptiveness. They can begin with the preventable by identifying what they do not want. What remains, after employing defensive thinking, gets them closer to a conversation about what they do want.
	9. Comprehensive list of cognitive abilities, impact on employee engagement, with individual outcomes articulated and the outcomes for organisations. One possible insight is outcomes must be looked upon on short term (6months or less), mid-term (6 months to 24 months) and long-term basis (greater than 24 months). Different employee engagement styles may be relevant or suitable for the prevailing environment – financial impact will only be seen midterm or long term.
	10. I would have expected to see positive organisational culture listed as an organisational outcome when engagement is high. Where does diversity fit?

	Can employees be highly engaged but narrow in their viewpoint which impacts organisational outcomes?
	11. In any Singaporean organization, when employer-employee has strong engagement, the strategic outcomes are better than those that don't have strong employer-employee engagement. Organizations that are adaptable and demonstrates resilient build strong communities with strong staying power for employees. Some of these are rated as "Good Place to Work."
	12. Under Cognitive abilities: The attributes of Orientation to Time and Foresight Style is comprehensive. Out of the three aspects of Cognitive abilities, 3 were attributed to styles. Would the different aspects of cognitive abilities be better attributed to 'dimensions' rather than 'styles? For Strategic Thinking Style: analytical, conceptual, and balanced were used to describe the strategic thinking style. Is the use of 'balanced' intended to capture both analytical and conceptual? If so – should not a balance be considered for all the dimensions used? In using the cognitive abilities, would one expect to be able to move across the aspects considered? For instance, to be able to travel from the dominant past to the present and to the future may be an important cognitive ability. Similarly, to be able to be both analytical and conceptual and hence arrive at a balance is inherent in all the dimensions stated. Why is there a need to be explicit about 'Balance' For strategic Thinking style and not the others? In addition, besides being analytical and conceptual, is generative also a key aspect of strategic thinking? In considering employee engagement, is being generative also critical since the ability to be able to generate measures appropriate for engagement would be an essential cognitive ability too? For Delivery Style, in the current 21 century context, besides being directive and participatory, is the attribute of 'influencing' important? Considering that 'influencers' today have been very effective in introducing new ideas and new mindsets?
Conclusion	

Smart City Scenario

Smart City	Comments
Is this a viable engagement scenario?	1. The scenario is potentially viable, although perhaps not to the extent described. I don't think the cognitive and emotional engagement of the workforce will be affected as much as predicted because employee concern about these issues may be over-rated. 2. This seems a viable scenario given it is akin to the current position of Singapore and changing the status quo can be hard. I am interested in the individual outcomes - does the current status support job engagement but low job satisfaction? I reviewed a survey recently that suggested Singapore had growing levels of engagement but that there is a tendency to focus on group outcomes and achievements rather than individual accomplishments. 3. I agree the forces fir change. 4. Agree 5. Based on the current scenario in Singapore today and looking back the past 30 years, it is very likely that Singapore's Smart City's scenario will be similar, that is, that there will very little changes in how the leaders will behave as the past and present method of governing and management leadership shows minimal changes. 6. The challenge in this environment is that you are competing for time. Ahead of employment engagements are disrupted by many few forces at unprecedented rates including: 1. 4th IR 2. Post Pandemic and many other shocks 3. Physical-Virtual era 4. Evolving Employment Models in Future of Work 5. Multi-disciplinary skills Hence the context is constantly changing. While this may be covered in PESTEEL, it also may not. 7. Agree 8. Yes I agree. I personally believe this would play out - why change this ? For many there's no need it plays to the historical and cultural predominance cultures and beliefs that are core within their identity. 9. Yes, and I agree fundamentally. I would add some analysis/study on Singapore's resilience and focus as a nation city-state during Covid-19 and how that impacts business (both in positive and - potentially- negative ways). 10. "Intention to leave" for individuals and "Shot term financials" for organisations under such a scenario may not be accurate. 11. Agree. The constant changes, pressure to perform at a highest level possible, minimal resource utilization to achieve such goals.... will create much stress, low job satisfaction as having much monies cannot be the only factor in life... 12. Yes I think this is viable. There is a movement towards greater control by governments of all aspects of society. It does potentially provides efficiency but at an increasing cost to the individual. 13. Singapore organizations in general have aimed towards this Smart City Scenario. In fact, the Government has a Singapore Smart City 2015 goal. By 2030, more organizations should be able to achieve this scenario. 14. have concerns about: Orientation to time: current orientation has a relative dominant future (while not a public rhetoric, the outcomes are evident of a future-oriented thinking) as well as Forces Out of Focus: Consider Singapore's preparations in the health sector to be adequately equipped for a epidemic, and is use of tech. "The authority that moves large numbers of people to cohesive action is not the coercive power of the state as much as the authority of the specialists and the credibility that they command." Ref: https://knowledge.wharton.upenn.edu/article/singapore-south korea-taiwan-used-technology-combat-covid-19/ 15. Employee Engagement - quite clearly pointed to low engagement (referring to cognitive and emotional aspects - is likely to be reduced.) In the consideration

	of 'dedication, vigour and absorption", how does one point to the fact that the increasing presence of the millennials in the workforce and the lack of engagement for this group by employers in Singapore contribute to the low engagement? Ref: https://www.hcamag.com/asia/news/general/singapore-employees-least-engaged-in-asia/152010 In interpreting the forces in play, the ethnographic understanding of the context, culture and mindset of the economy and its citizens seemed to be critical for a sharper and more accurate understanding.
Other insights	1. Some of the 'forces out of focus' may not be affected in the way described, such as ethnic tension, social sustainability, ethnic tension. 2. Based on past conversations with some of the industry leaders, the notion of how these leaders' converses demonstrate their thought process, where the important thing about how businesses and staff are being managed is tied to the economic improvements and betterment of the country. A simple conversation with a General Manager of a sports company and a robotic automation company has similar statements like "In Singapore, we approach this issue..." or "We Singaporeans usually undertake this ...". 3. Scenarios - there are unknown unknown scenarios or combinations of the above 4. I think some of the "forces out of focus "will have the light shown onto them - from either a larger global agenda and Singapore being Singapore will then address it , e.g. sustainability and the environment. Others e.g., ethical will not be addressed unless there is enough of a public groundswell that creates a shift in policy makers thinking and action 5. These three may be forces out of focus under this scenario (and not the rest): - Political: democratisation, ethnic tension, freedom of speech, bureaucracy - Economic: transparency, classes inequity - Ethical: social sustainability, recruiting, discrimination, human rights 6. the education system - focus on flexibility, ability to join the dots, make decisions and execute in a world of incomplete and imperfect information, disinformation, and scarce resource - this has impact on outcomes 7. With the current worldwide COVID-19 pandemic, it may stretch the Smart City scenario goal a little longer.

Ivory Tower Scenario

Ivory Tower	Comments
Is this a viable engagement scenario?	1. I do not think this is a viable scenario. Leadership is not likely to take such a draconian approach. The younger generation will have more influence over the next ten years and will likely prevent this outcome. 2. This may be a viable scenario should there be a significant shift in political power and leadership approach and therefore change in culture. The current trajectory doesn't seem to be in the direction of this scenario with engagement growing, management practices more future and development focused, etc. 3. I disagree with the forces for change. 4. Disagree, government's focus is likely to continue to focus on long term. 5. Agree with the above scenario 6. One of the biggest issues is about the Openness of Society to foreign talent. This is part of the Globalisation 4.0 reset 7. Yes. Agree 8. Could be a scenario that plays out. I agree with the attributes of the scenario. 9. An iron grip over the past may not prevail in a stalling global economy, as the younger generation of Singaporean thought leaders continue to challenge the status quo. 10. "Job engagements but low satisfaction" and "productivity and poor financials" may not be true under this scenario. 11. Possible and probable scenario - may lead to political change though as no ruling party in a democratic society last more than 70 years in power. you can already sense the undercurrents of the need to change - focusing on past successes, unwilling to change creates the desires to change at the political levels. I have opined that we are where the world was in the 1800's - revolutions... because of the social divide, income wealth divide... and government desire for the status quo. 12. Less viable scenario. Whilst some elements could be realised the economic risks are high given the population base, increased risks of fragmentation of society leading to civil unrest. Increased security concerns arising from internal focus. 13. This is Singapore's constant strategy to defend against any unforeseen global negative economic impact. Hence, it is an ongoing initiative. 14. Based on the selection of the types of cognitive abilities exhibited by the leaders, I am not sure if it will translate to the forces in focus: e.g., political (import restrictions: Singapore's past success has been marked by entrepot trade and not restrictions of import; Economic: employment restrictions for foreigners (as it is apparent even now that the economy needs foreigners. It is too small an economy to rely on its home-grown talents).
Other insights	1. I think what's interesting in looking above all of the scenarios is asking the question "would be the overall net outcome of this scenario and each of 4 quadrant scenarios ". Where does the country or organisation be and what Elemis does it want to modify or change and what therefore is the impact of this change 2. To be sustainable, this DEFEND strategy should be in place all the time.

Shagari-La Scenario

Shangri-La	Comments
Is this a viable engagement scenario?	1. I do not think this scenario is viable by 2030. Leadership is not likely to lose focus on outcomes or relinquish control to the extent described. 2. This does not appear a viable engagement scenario. While there are some niceties and human focused positive outcomes there is a level of imbalance and the shift from current state likely hard to achieve in ten years. Low levels of productivity and performance could result in competitive neighbours in Southeast Asia taking advantage of the opportunity. Making it unrealistic to operate in isolation. 3. Forces for change. 4. Disagree, Singapore tends to focus on results. 5. Disagree as the young generation who has just joined the workforce will already have been "convinced" / "Brainwashed" to be risk averse and by 2030, their behaviour may not be much different from the current batch of how business and staff are been managed. 6. Tomorrow's 20 plus is today's 15-year-olds who now experience massive changes today and will shape their future views. Are they that hopeful? 7. Yes. Agree 8. Yes viable. I think elements are true but not all. I think elements will exist (forces in focus) but with different flavours 9. I don't think that a Shangri-La scenario is sustainable. Singapore will have to adapt to a changing world in order to continue to be a prosperous nation city-state it has grown to be accustomed to. 10. An engagement workforce which is active but not productive sounded contradictory. 11. Not likely scenario as the government is a prudent one. I expect more social handouts and safety nets, especially with adverse impact from the Covid 19 pandemic. The future of work is uncertain.... and there will be pressure for every government to go local for employment... 12. Yes, this is viable and likely as the decline would be slow and may not be noticed until a tipping point is reached. Leadership may become risk adverse; everything appears to be going well so increasing reluctance to 'rock the boat' with new ideas and change. 13. This will be a long-term strategic objective. Is it possible by 2030, it depends on how the world cope with the current COVID-19 pandemic? 14. Clear explanation and viability with the various forces in play.
Other insights	1. Please interview some of these stakeholder groups who will grow up and inform your future 2. Low financial returns" for organisations may not be true. 3. Impact from education systems need to look at so that people can think, be flexible, adaptable... 4. To achieve the DREAM scenario, organizations must maintain strong employer-employee engagement. Be adaptable to economic rollercoaster challenges and apply DEFEND scenario to provide sustainable business model.

Smart Nation	Comments
Is this a viable engagement scenario?	1. I think this scenario is a viable possibility by 2030. It is perhaps overly optimistic in areas such as freedom of the press and bottom-up vision and initiatives. 2. Yes, viable, the question for me is how long it takes to change a country's culture, the expectations of its leaders, and acceptance by its people. As this is the extension of current state it would seem that this is a viable engagement scenario, at a stretch. It is harnessing and building on current positive practices and outcomes while also looking to the future. However, the requirement for ALL to come together and subscribe seems unrealistic. 3. Viable, equity and equality is a tough one. 4. Neither agree or disagree. While the population desires to have the word "Smart Nation" tagged to their country, it requires a number of experts usually from different countries to help shape and convinced the general society into what is deemed as Smart Nation. While this may be one of the paths where the country is able to afford overseas practitioners, who are experts in this area, there is no stopping the government from defining their version of "Smart Nation" and with it comes a set of modified authoritarian rules. 5. Yes, viable there might be more dominant forces and others in this scenario. What might they be? 6. Yes. Agree. 7. Yes, I think this is an option. But by 2030, Too much to change, Singapore takes little steps and measures cause and effect. Also culture of people to see this and act 8. Mainly agree. Some issues (technology: chips in humans) could be too extreme. 9. "Environment: Desalination of water" will remain a focus due to the strategic importance of water of Singapore. 10. Yes, The government is working to try to achieve this scenario. Believe there will be more pressure to improve the wage and living and working condition of the lower income workers. Covid 19 has shown that most times the lower paid and unappreciated workers are critical to keep the economy open. Machines and technologies are invaluable but cannot replace these workers... Need to have human work with smart machines. and not just machines 11. Yes its viable and desirable given the balance between forward looking and respect for the past. Although the scenario paints the picture of shared vision and values. That may apply to the majority, but unrest may be masked for those who don't gain the benefits. 12. It is possible to achieve the DESIRE scenario by 2030 as the current COVID-19 pandemic is forcing every organization to stay resilient and enhanced the employee stability. 13. Agree. Forces in focus: Not sure if "freedom of the press' - is considered as force in focus (cos with freedom of the press comes responsibility - hence not sure if this deep-seated intent to aggressively identify fake news and the spread of inaccurate narratives (from the leaders view) will be accepted as 'freedom of the press' (be western counterparts) Technology: probably could include the use of 'artificial intelligence'. Forces Out of Focus: Technology: Use of chips in human for health reasons, predict human behaviour, narrowing the gap between human and chip - the use of the medical RFID chip in humans has a lot more implications on privacy and autonomy, Hence this is both Technological and Ethical. Environment - desalination of Water - not quite sure why this is placed under forces out of focus. Singapore's solution has been through both NEW water and desalination (Ref: https://www.pub.gov.sg/watersupply/singaporewaterstory).
Other insights	1. How easy is it to straddle the different cognitive abilities in order to achieve the Smart Nation Scenario? And are there percentages to understand the rates

| | of expected cognitive competence of leaders in Singapore or even more generally from past research? My thinking as I write is that any of these scenarios is only viable if there are enough leaders that operate/think/strategise in the way required to achieve the engagement and other outcomes. |
| | 2. My only comment for the DESIRE scenario will be that it needs to be cascaded down the management hierarchy and get constant alignment and feedback - both Top-Down and Bottom-Up approaches |