Future Trends Report
Based on Analysis of the Team's Chosen Community / Organisation in Mid-Term and Final Evaluation

Community / Organisation Studied: Miles N Molanders

STEP 1. Identify Challenges

Read the Future Scene carefully and generate ideas for challenges, concerns, and possible related problems. Choose the 5 most important challenges and write them in the space provided. Include applicable research with appropriate in-text citations.

Challenge #1:

The disruption from the Fourth Industrial Revolution involves the company more heavily relying on technology to operate, as mentioned in the interview.

This makes the company much more vulnerable to cyberattacks, which will severely affect operations and profit.

Almost all organisations and businesses polled in a new survey have suffered close to four cyber attacks in the last year. Only 10 of 250 companies said their organisations were not attacked.

Challenge #2:

With the introduction of more advanced technology, more gig economies may rise due to our job scopes becoming increasingly flexible.

As a result, the company may be understaffed and unable to carry out operations efficiently due to more people choosing to work for gig economies instead.

According to a study, above one-third (36%) of the population work in jobs in the gig economy. According to another study, gig economies will become more and more common as part of the evolution of job flexibility, and in the future, people may have several jobs for a number of companies rather than working for one big corporation.

Challenge #3:

The disruption brought about by Industry 4.0 will bring about an increased use of technology, in this case automated vehicles and its related software.

Such technology is extremely expensive to purchase and maintain.

According to an article by The Straits Times, sensors, processors and software for such driverless cars cost about S$76,000. An expert mentioned that for such

technology to be practical for use in businesses, there must be quantum leaps in lidar technology for its cost to go down.

Challenge #4:

The Fourth Industrial Revolution will result in the company relying much more heavily on software to function.

However, should the technology fail or breakdown, workers may be at a loss on what to do.

According to an article by The Telegraph, more than half of the population are unable to memorise their spouse's handphone number, and more than 70% do not know their best friend's number by heart. The article also goes on to state that this over-reliance on technology could bring about bad repercussions should the technology suddenly cease functioning.

Challenge #5:

The disruption brought about by Industry 4.0 will bring about much automation in the delivery sector, such as drones and driverless vehicles.

This may render current employees' job scopes obsolete and cause them to be retrenched and unemployed.

According to an article by The Independent, five driverless cars have been making their way around London as part of a test of a service for autonomous vehicles. The company hopes to begin passenger trials by 2020.

STEP 2. Craft the Underlying Problem

Using the challenges listed in Step 1, identify a problem of major importance to the chosen community / organization in the future. Write your Underlying Problem making sure your question clearly explains the action that will be taken and the desired results/goal of that action.

Incorporating Challenge(s) # __1, 3, 5_____

Underlying Problem:

Given that the disruption brought about by Industry 4.0 involves the mass use of technology, it appears that Miles n Molanders will have to invest a lot of funds into new devices and software to stay relevant. How then might we ensure that it has access to affordable and secure technology for their operations, so that it will be able to thrive despite the rapid changes brought about by Industry 4.0 in the years 2030 and beyond in Singapore?

STEP 3. Produce Solution Ideas

Generate solution ideas to the Underlying Problem in Step 2. Choose the 5 most effective solutions and write the elaborated ideas in the space provided. Include applicable research with appropriate in-text citations.

Solution #1:

We will work with the Ministry of Education to encourage students to learn more about design and technology. This way, they will be able to help out in the Research and Development sector of the company, reducing expenditure on new technology.

Solution #2:

We will work with the Ministry of Manpower to reskill current employees in order to better fit the kind of skills required of them in the future. This way, should the company no longer have any need for drivers, the workers can still switch their job scopes effectively, and thus remain relevant and useful to the company.

Solution #3:

We will work with citizens and workers to learn past skills that technology has also made obsolete. This way, should technology suddenly fail, people will be able to know what to do. This way, the company will be able to mitigate the negative impacts of technology breaking down.

Solution #4:

We will work with white hat hackers to teach workers how best to identify and deal with cyber attacks. This way, should there be a cyber attack launched against the company, it's employees will have the necessary skills to repel it, and thus reduce the damage that may be done. We can also hire localised white hat hackers for the company should the need arise.

Solution #5:

We will create an online portal that allows hardware companies to display their products on. When a delivery company has the need for a certain type of hardware, this portal can be visited, and a holographic demonstration of the selected hardware would be displayed for the company to see if it suits their needs. This allows companies to easily find the type of hardware they need.

STEP 4a. Select Criteria

Generate criteria to determine which solution idea does the best job of solving your Underlying Problem and/or addressing the Future Scene situation. Select the 5 most important criteria for measuring solution ideas and write them in the spaces provided.

Criteria #1: Cost
- We will assess each solution based on how much they will cost to implement.
- A higher score will mean that the solution is cheaper.

Criteria #2: Manpower
- We will assess each solution based on how much manpower is required.
- A higher score will mean that the solution requires less manpower.

Criteria #3: Feasibility
- We will assess each solution based on how feasible it is to implement in the future.
- A higher score will mean that the solution is more feasible.

Criteria #4: Long-term effectiveness
- We will assess each solution based on how effective it will be in the long run.
- A higher score will mean that the solution is more effective in the long term.

Criteria #5: Efficiency
- We will assess each solution based on how efficient it is solving the underlying problem.
- A higher score will mean that the solution is more efficient.

STEP 4b. Apply Criteria

List the solution ideas from Step 3 on the grid. Use each criterion to rank the solutions on a scale from 1 (poorest) to 5 (best). The weighting for one important criterion may be doubled if necessary.

	Solution Idea	**Criteria**					**Total**
		1	**2**	**3**	**4**	**5**	
		Cost	Manpower	Feasibility	Long-term	Efficiency	
#1	Encourage students to learn more about design and technology	4	1	1	5	3	14
#2	Reskill current employees in new skills	3	2	2	3	5	15
#3	Teach employees what to do without technology	5	4	4	1	1	15
#4	Work with white hat hackers	1	3	5	2	4	15
#5	Holographic testing	2	5	3	4	2	16

STEP 5. Develop an Action Plan and Evaluate its Feasibility

Develop your top-scoring solution idea into an Action Plan. Thoroughly explain how the Underlying Problem is solved, how the plan will be implemented, and how the community / organisation will be affected. Explain how this Action Plan is feasible with secondary research consulted, preferably also with primary research (feedback from chosen community / organization)

Action Plan:

We will create an online portal, PrimeConstruct Portal, that allows companies to not only buy, but also sell their hardware in a safe and secure manner. When a delivery company has the need for a certain type of hardware, they can visit this portal and search online for a suitable item.

The PrimeConstruct Portal will be coded by programmers at government agencies. It will be mandatory for all hardware companies to join this portal, and include all their different products on it. Receiving companies will have access to a holographic simulator where they can see and get a feel of all the different items available.

Engineers from these companies can then use this simulation to put these items together and create prototypes of devices/technology, after which they can test out these creations. They can then order the real hardware from the respective companies, and proceed to build the real model. Blueprints can also be bought from other users at a price.

Benefits of having such an app include allowing companies to try building new models of technology to aid their development without having to fear the risk of losing money from developing and testing the model in real life, saving an immense amount of resources initially needed for research and development. Different companies can also help each other by providing each other with ideas.

A possible obstacle includes companies discouraging the use of the portal, as they may prefer to keep to their old methods and not use this portal as it might bring about inconvenience to them, especially in uploading in all of their products there, as well as being afraid of losing out to competitors. We can convince the companies opposing the portal that letting the employers have an open mindset to receiving these more reliable technologies online is beneficial to their causes. Doing so enables companies to make wiser and safer choices in their purchasing of technologies, reducing resource wastage and boosting the economy.

Another problem would be the possibility of data leaks. Such a widespread network will definitely be susceptible to attacks by hackers, and companies' data may be stolen by hackers. We can train and employ localised white hat hackers to install firewalls for this portal and act as a safety net should such incidents occur, enabling companies to feel safer when entrusting their data to this portal and preventing data leaks from occurring.

Bibliography

Cite the resources you consulted using the APA format.

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