

## Digitising innovation management.

*By Suraya Sulaiman and Azim Pawanchik*

News on digital disruption, digital economy, platform economy, and digital transformation is ubiquitous in the media today, much more than ever before. There is plenty of hype and debate on how Blockchain technologies, algorithms, Artificial Intelligence (AI), and the Internet of things (IOT) would transform industries and create new growth opportunities. In Southeast Asia, the digital wave is dominated by technology start-ups such as Lazada, Traveloka, Tokopedia, Grab, and Gojek, where the latter two have morphed from ride-hailing companies to ‘super apps’ that offer everything from food, transport, delivery, payment, and insurance services in a single experience.<sup>1</sup> These start-ups have provided income opportunities for many individuals and businesses and have delivered value to millions of customers. They were able to come this far by fully embracing the digital and platform economy, coupled with their customers’ readiness and ecosystem infrastructure and support. They derive their competitive edge from customer data, algorithms, network of partners, brand, and—at the core—innovation. The fact that business media brand Fast Company crowned Grab as the second most innovative company in the world in 2019 is testament to this.<sup>2</sup>

While much of the spotlight appears to be on the arena of start-ups and purely digital companies, many large corporates and traditional industries are also harnessing the benefits of digital operating models, where digital transformation appears to be eclipsing innovation as a corporate agenda. Many companies have created digital teams, hired Chief Digital Officers, developed digital labs, and initiated hackathons to explore new technologies, businesses, or operating models. The latest Altimeter report also showed that digital transformation is becoming more pervasive, evolving beyond IT and becoming an enterprise-wide movement.<sup>3</sup>

This journey, however, does not appear to be the same for all industries. Consulting firm Capgemini reported that the insurance and utilities industries are digital conservatives, due to a strong mix of low digital governance capabilities, regulatory concerns, and a risk-averse culture.<sup>4</sup> At the other end of the spectrum lie the retail and high technology industries that are digitally mature and have revolutionised customer experiences and relationships as they leverage on data, analytics, and mobile accessibility.

# CORPORATE INNOVATION

‘Going digital’ and adopting the same operating model and approach as start-ups may seem extremely attractive for many organisations as the success of many tech start-ups are glorified. However, corporates embarking on this journey should proceed with caution as the goals, operating models, mindsets, investment levels, and expectations on returns can be drastically different. Grab and Gojek, for instance, had raised a total of US\$3 billion and US\$1.5 billion respectively, whilst many other smaller start-ups could easily attain funding of between US\$10 million and US\$200 million.<sup>5</sup> This pales in comparison with the funding allocated to internal innovation projects of many corporates.

Compounding this, not all technologies have reached the level of maturity that can provide a clear long-term value proposition. Singapore’s DBS Bank, recognised as the world’s best bank for its digital innovation and transformation efforts, has recently rolled out Digibank, a mobile-only bank in India, which offers its services entirely via digital channels. It serves its customers via a conversational AI platform, which handles 82 percent of customer requests and helps 1.8 million customers manage money, track expenses, analyse spending, and improve overall financial literacy.<sup>6</sup> On the other hand, AI in the autonomous vehicle arena of self-driving cars and trucks is still under development as the technology and ecosystem maturity are not aligned with the hype generated so far.

Today, most AI systems tend to augment instead of automate. For example, while intelligent diagnostic systems can read x-ray images, radiologists are still required to define the imaging to be performed, and correlate imaging results with symptoms, previous medical records, and other test results.<sup>7</sup> This opens up vast new opportunities for collaborations between humans and machines. There will be a need for human-machine symbiosis so that this new generation of intelligent machines can be leveraged to augment the innate remarkable capabilities of humans in ways that enhance business and organisational capabilities for both adaptation and productivity.<sup>8</sup>

As much as it is important to implement technologies to stay ahead of the game, technological relevancy and execution capability must be carefully considered. Digital transformation efforts by corporates need to start with a clear purpose and an embedded strategic agenda to obtain the full-fledged competitive advantage. Therefore, digital transformation efforts should not be viewed as an endeavour on their own; they should be integrated with the corporate innovation agenda.

### Impediments in corporate innovation

There are many approaches and techniques to innovation, such as design thinking, lean start-up, business model canvas, and stage gate. Regardless of the approach, every innovation effort should focus on the following four key outcomes:

1. Uncovering and determining what and where to innovate
2. Generating fresh ideas or solutions that can be prototyped and piloted
3. Providing resources to convert prototypes and pilots into full-scale solutions
4. Ensuring there is adoption of new solutions that simultaneously generate value for end-users and the company

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Generating these outcomes in large organisations is different from doing it in start-ups. This is because a range of functions and stakeholders need to be involved at different stages of the innovation process to ensure alignment with the company’s strategic direction and risk appetite. Secondly, for almost all large organisations, innovation is not a full-time focus but one of many competing priorities for employees. A recent survey highlighted key obstacles for innovation, which included lack of trust and empowerment, and lack of clear direction from management.<sup>9</sup> These barriers stem from human factors relating to bureaucracy, silos and cognitive biases.

Bureaucracy refers to the complex and multi-layered systems and processes within an organisation. While these systems and procedures are designed to maintain uniformity and control within an organisation, it fuels power distance, which ultimately leads to an authority gap and delays decision making. Asian countries like Malaysia, the Philippines, Indonesia, and Singapore show significant power distance as opposed to New Zealand, Denmark, and Norway.<sup>10</sup> An executive coach who works largely in Southeast Asia reported, “Senior-level people get no information, and believe that they have nothing to improve upon, and junior-level people do not bring ideas forward. It’s hard to innovate under these conditions.”<sup>11</sup> Moreover, management styles and deference to hierarchy remain deeply rooted in the cultural psyche of most Asian organisations. This leads to the loss of a trove of potential ideas from across the organisation.

Adding salt to this wound are business unit silos, which present themselves in conflicting agendas, limited leadership, lack of collaboration, and an enhanced overconfidence gap. In the face of digital transformation, organisational

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silos were rated as the biggest barrier, with 73 percent of votes from HR leaders, and 54 percent from IT leaders.<sup>12</sup>

Cognitive biases further compound the issue as individuals, unable to process all the information around them objectively, resort to mental shortcuts when making decisions. These biases occur unconsciously and may result in irrational and ineffective decision-

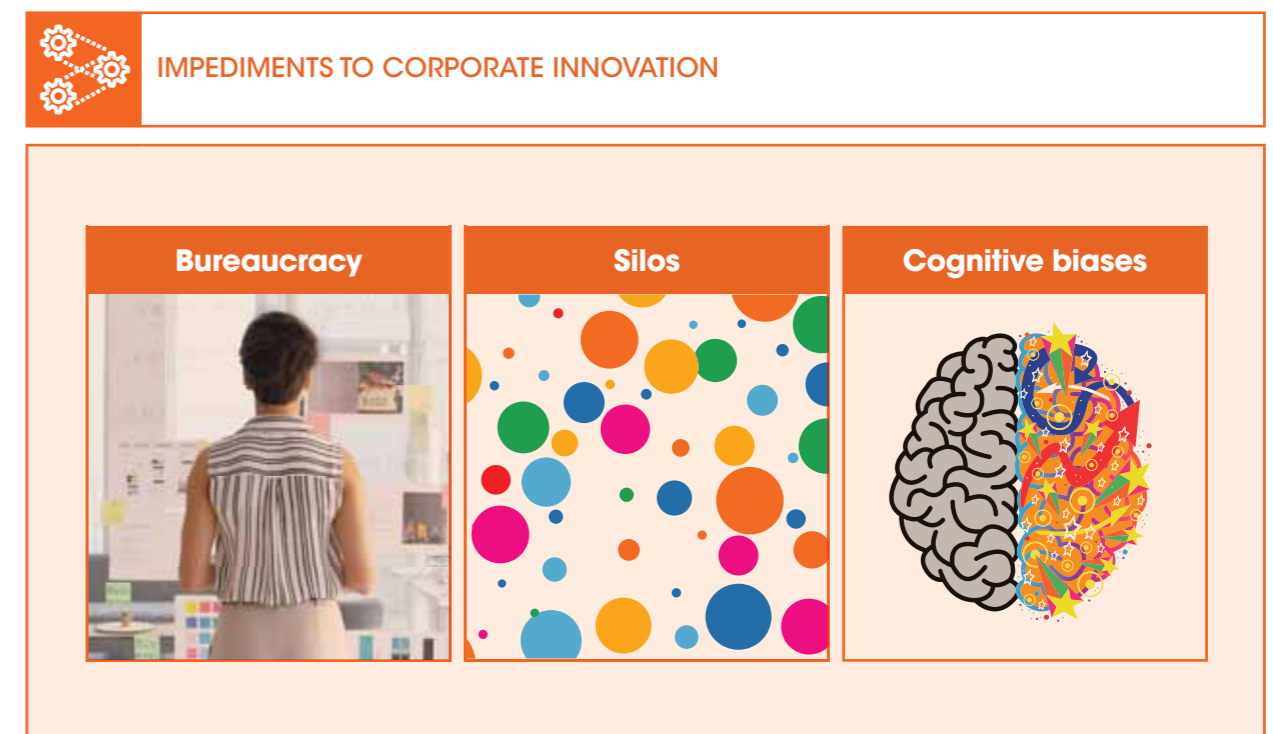


FIGURE 1

Source: Alpha Catalyst

making, as the brain, in an effort to instinctively reduce uncertainty, chooses a default ‘safe and well-trodden path’. While there is a list of over 100 biases, there are three that most critically affect decision making for innovation projects: inertia, risk and loss aversion, and myopia (refer to Figure 2).<sup>13</sup>

| KEY COGNITIVE BIASES          |   |  |
|-------------------------------|---|--|
|                               | Description   | Potential impact on innovation projects  |
| <b>Inertia</b>                | <ul style="list-style-type: none"> <li>- Inclined to rely on familiar assumptions with a reluctance to change even with supporting evidence</li> </ul>                            | <ul style="list-style-type: none"> <li>- Reluctance to look at how to capitalise on new trends, opportunities or new markets</li> <li>- Ignoring emerging competition</li> </ul> |
| <b>Risk and loss aversion</b> | <ul style="list-style-type: none"> <li>- Sensitive to negative events, would prefer to avoid losses than to achieve gains</li> <li>- Fearful of losses, so avoids them</li> </ul> | <ul style="list-style-type: none"> <li>- Companies do not invest in projects that have uncertain returns or success</li> </ul>   |
| <b>Myopia</b>                 | <ul style="list-style-type: none"> <li>- Tendency to overweight the present or near future and underweight the distant future</li> </ul>  | <ul style="list-style-type: none"> <li>- Unwilling to take risks on projects that are not directly applicable or relevant at the present time</li> </ul>                         |

FIGURE 2

While not everyone experiences biases in the same way or to the same extent, a combination of several biases may potentially disrupt optimal decision-making, and critical and creative thinking. They may also lead to one’s reluctance to engage with innovation, which takes considerable time to adopt and convert. Companies need to adopt new methods to determine the areas to innovate in, or identify ideas to prototype or pilot, monitor and communicate project progress, and capture the value generated, in order to account for the challenges presented by bureaucracy, silos and cognitive biases.

### Digitising innovation management

Rapidly changing markets and sectors call for new tools, attitudes, and mindsets towards innovation and transformation, so as to create a sustainable process and culture within organisations. While digital transformation initiatives are predominantly focused on customer experience or operational efficiency, there has not been much change in the way innovation itself is managed within organisations.

The convergence between digital transformation and innovation management thus presents an opportunity to revolutionise what is still largely managed in a traditional manner: through emails, instant messages, spreadsheets, presentations, post-its, and an endless schedule of meetings.

Digitising the innovation endeavour through the use of platforms provides for safe storage in the cloud, increased efficiency, reduced operational costs, and eases data analysis. Additionally, a digital platform provides scalability, structure, and repeatability for the innovation process. This allows organisations to carefully plan, manage, and monitor their innovation efforts in real time whilst tracking the process and aligning it with intended goals and objectives. More importantly, digital platforms can help overcome the many barriers to innovation stated earlier.

### INTERNAL COLLABORATION

In an attempt to combat hierarchy, bureaucracy and silos, digital tools can convert the organisational chart from a linear to a network structure (refer to Figure 3). These digital platforms create inter-organisational networks that increase channels of communication among siloed functions, promote continuous collaboration on ideas among organisational layers, and democratise the ideation process. They allow ideas from every corner of the organisation to surface. When implemented correctly, the internal tools help organisations circumvent cultural barriers by offering equal airtime to employees regardless of rank. Employees also gain a new sense of ownership and motivation towards self-selected projects, increasing the likelihood of follow-through of ideas from the prototype to launch stages.

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Digital platforms lend themselves to a heightened level of transparency and visibility, making delays in decision-making a thing of the past. Digital governance also addresses biases in decision-making; as transparency encourages more diligence and quality to action.

Magnus Karlsson, former Director of New Business Development & Innovation at Ericsson, expounds the virtues of internal collaboration in his report, ‘Collaborative Idea Management’. While at Ericsson, he helped design IdeaBoxes, an internal innovation space devoid of hierarchy that facilitates collaboration on employee-generated ideas. The platform has allowed for the creation of over 60,000 ideas since its inception in 2008.<sup>14</sup> Karlsson explains that such innovation platforms allow companies to utilise the collective creativity of its employees, as well as ensure that the right ideas meet the company’s innovation needs. Idea management thus becomes embedded within the innovation tools.

Another example of successful internal collaboration can be found at the Kuala Lumpur office of Nestlé, the multinational food and beverage company. In 2016, the company held its inaugural Innovation Awards, aimed at promoting idea generation amongst its employees. The results were momentous—6,000 participating employees generated 50,000 fresh ideas, which in turn translated into a 10 percent increase in sales revenue in that same year.<sup>15</sup>

The increased pace in all digital domains has resulted in a situation where innovation needs to be continuous, relentless, and fast. Collaboration has become essential to enabling this, and innovation platforms are able to create the ecosystem that allows continuous and collaborative innovation within organisations. Digitising innovation management then provides a powerful channel that leverages digital affordances while harnessing and enhancing the human potential.

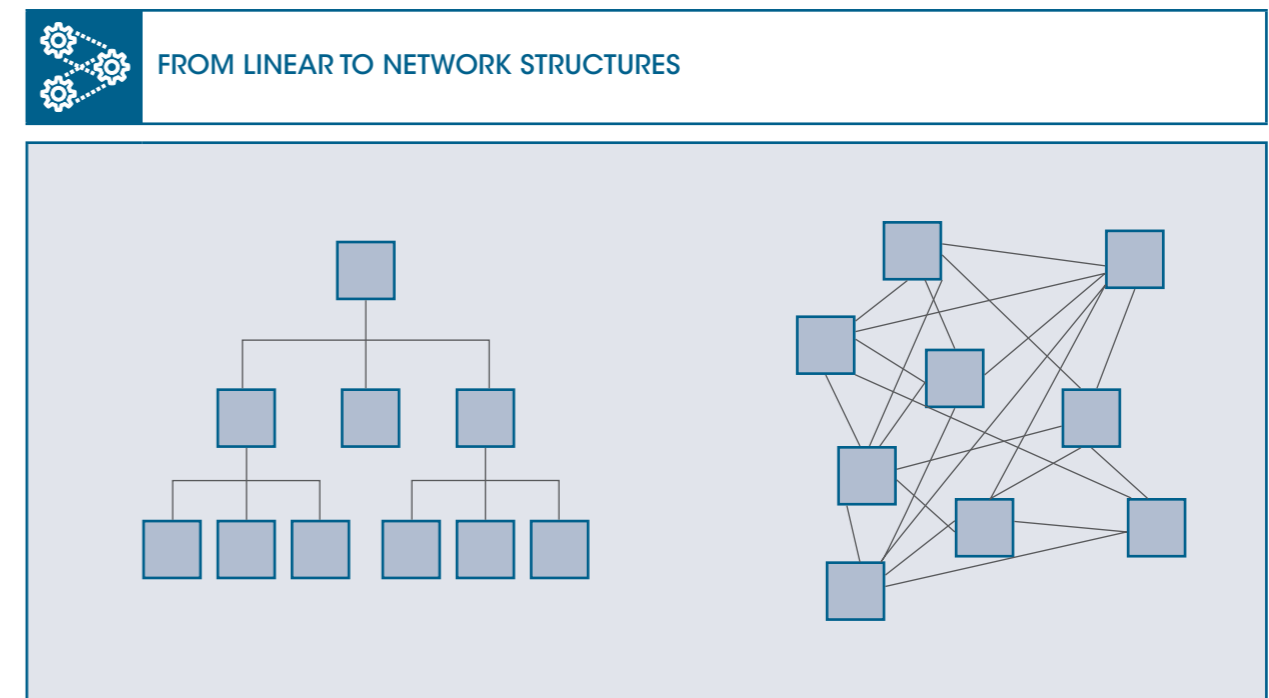


FIGURE 3

Source: Alpha Catalyst

## EXTERNAL COLLABORATION

Building upon the idea of harnessing internal collective creativity, a similar approach can be undertaken by external stakeholders via co-creation or open innovation, allowing for collaboration with customers, suppliers, start-ups, and a wider network of partners. There are many approaches to how this can be done on a variable scale. Crowdsourcing harnesses the power of collective intelligence from external parties. For example, what do hazelnut macchiatos, little green splash sticks, and free Wi-Fi have in common? All three were ideas suggested by customers to Starbucks via its portal, My Starbucks Idea. The website gathered more than 150,000 ideas over five years since its launch, with over 2 million votes cast. My Starbucks Idea served three strategic goals for the coffee giant. First, it helped crowdsource innovation ideas for free. Second, it involved its customers much earlier in their journey with the brand. And finally, the platform's voting functionalities validated and tested the proposed ideas by customers in real time.

Crowdsourcing is not limited to simple consumer products or services, as attested by the Malaysian housing developer giant, Sime Darby Property Sdn Bhd. It launched an online platform, dto, with the goal of co-creating the end product with potential buyers. The platform allows potential customers to vote for their preferred development concept, design, and amenities of a future property, while simultaneously engaging, empowering, and educating potential buyers.

At a larger scale, Haier, a consumer electronic company from China, created a global network of 400,000 institutions and technical experts to collaborate on the company's R&D efforts via its platform, HOPE (Haier Open Partnership Ecosystem). When it needed help designing blades for a new air conditioner, the platform helped to solicit numerous proposals, all within the span of one week. Eventually, a total of 33 institutions contributed to the design and development of Haier's air conditioner, which became an instant hit after its launch in 2013.

Haier's openness to crowdsourcing was also seen from product feedback and the defrayment of development costs. When it developed Air Cube, a creative and novel combination of a humidifier and air purifier, more than 800,000 online 'fans' offered their feedback. Once the prototype was ready, it was made available on a popular crowdfunding site, through which the company garnered more than 7,500 customers. Haier used the feedback to further refine the Air Cube before its formal launch. The

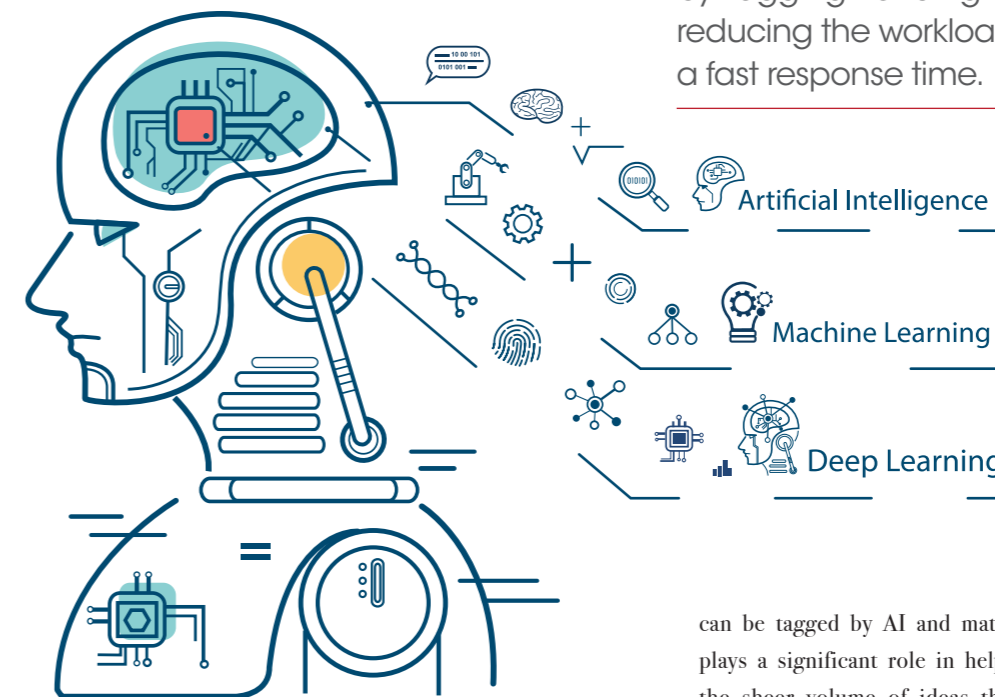
online product development process reduced the time from concept to market by 70 percent. Tan Lixia, Haier's Chief Financial Officer, commented on the company's open innovation processes, "The border of the company is not important. If you can help create value for users, it shouldn't matter whether you're an employee or not."<sup>16</sup>

Companies, however, don't necessarily need their own digital platform to collaborate. There are several open innovation platforms that can be tapped upon globally. Singapore's Infocomm Media Development Authority, for example, launched the Open Innovation Platform in 2018, which acts as a neutral, government-driven intermediary that matches business challenges that problem owners face to a pool of problem solvers.<sup>17</sup> So far, 68 challenges have been hosted, with over 3,800 solvers on board. The prize money is determined by the problem owner, as the platform prioritises churning out proofs of concept and prototypes.

Another example of collaborative innovation is where a single organisation acts as an anchor and collaborates with other organisations to offer a truly unique product. This is illustrated quintessentially by the app launched by Prudential insurance company called Pulse. This first-of-its-kind app in Southeast Asia offers holistic health management to consumers, powered by AI and real-time information. Pulse integrates offerings from multiple providers—U.K.-based Babylon (symptom checker and health assessment) and Tictac (personal wellness services), Malaysia's DoctorOnCall (online consultation) and AIME (dengue outbreak predictor), Singapore's MyDoc (video consultation with a doctor), and Indonesia's Halodoc (digital healthcare).<sup>18</sup> These are complemented by payment portals like Boost (in Malaysia) and OVO (in Indonesia). Pulse was created as an evolving platform where Prudential will be adding new partners, tools, and value-added services in phases.<sup>19</sup> Initially launched in Malaysia with plans to expand into 10 other markets in Asia, Pulse is a great example of how large companies can collaborate with start-ups to ride the fast-paced innovation scene. All partners bring their unique cutting-edge technology, which would have required extensive resources if developed in-house. Instead, Prudential, with its 15 million customers globally, acted as the platform on which others can interface to provide consumers with an exceptional product.

## ALGORITHMS AND AI

The previous examples illustrate how companies can harvest the collective intelligence and assets of internal employees or external partners through the adoption of digital mechanisms. This data serves as a means to accelerate both internal



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collaboration and external innovation efforts. Altimeter's 2018 report highlights the numerous potential applications of AI within organisations, especially in analysing the areas of business intelligence, customer relationship management, market research, and web analytics in a more integrated manner.<sup>20</sup> AI is used as a predictive tool by the world's largest trend database, Trend Hunter, to refine insights on consumer behaviour. It can crunch and analyse three billion views and 300,000 ideas as individual data points, subsequently churning out automated reports and accurate forecasts for innovators to identify opportunities for innovation.

Applying the deeper extension of AI, Machine Learning is able to accelerate the process of generating and testing new molecules and materials. This aspect of AI, applied to the rigour of testing all molecular combinations possible, can expedite the process of finding new drugs or inventing new materials for clean technology. The result is a dramatic reduction in cost of R&D, while also shortening the time to market.

AI also takes on a noteworthy role in re-conceptualising how innovation is managed within organisations. Aggregated issues and opportunities generated by the internal crowd

can be tagged by AI and matched to existing solutions. AI plays a significant role in helping innovation teams manage the sheer volume of ideas that come through by flagging trending activities, thereby reducing the workload and ensuring a quick response time. People analytics is another area where AI takes the lead. The technology can analyse strengths, interest and performance of individuals, which can subsequently be used as recommendations for them to be part of a team or as a technical evaluator of a project. AI partakes in recommending specific challenges to particular individuals, based on their area of expertise or past interest and actions. This reduces cognitive overload for the individual.

## Next step: Creating the right mindset

As we move towards a digital business paradigm, machine and human decision-making increasingly coalesce. Blending technology-enabled insights with a thorough understanding of human judgement, reasoning, and choice will allow organisations to create and sustain a competitive edge in this increasingly complex world. The precursor for this is not the technology itself, but the current digital behaviour of employees and management that need to embrace the digital and platform economy. Many are used to engaging in digital experiences in their daily lives but it may not be that easy to apply the same to their work. In planning this journey, organisations should consider the following roadmap:

## 1. ASSESSING INNOVATION AND DIGITAL READINESS

It is important to begin with an understanding of the current level of readiness to enable the organisation to identify potential obstacles and advantage points to maximise efforts. The organisation should consider the strategy, process, capability and culture, and the funding to innovate. It also needs to assess its digital readiness from technological, digital literacy, and cultural perspectives.

## 2. DESIGNING A ROADMAP AND PROCESS

Communicating a clear approach and process would allow the digitisation process within the organisation to be deployed in a systematic manner. This includes providing guidelines for:

- Individual/leadership roles to drive adoption of the new innovation management approach
- Internal and external collaboration
- Data access, sharing, security, and privacy
- Experimenting and prototyping with new collaboration partners and digital tools
- Investment in digital tools, platforms, and capability building
- Expected impact or value

## 3. CREATING THE CAPABILITY AND MINDSET FOR DIGITAL AND INNOVATION

To digitise innovation management successfully, innovators need to have a digital and innovative mindset. This would include developing:

- The ability to generate and accept fresh ideas and insights
- Collaboration skills to build trust and relationships with a willingness to share information
- The ability to collaborate virtually on innovation projects
- The willingness to learn and experiment, and have guidelines to manage failure
- Technical collaboration skills, which include managing data safety and security, privacy policies and IP management
- Technical skills relating to data analytics and visualisation, as well as creating algorithms to manage and predict innovation

In conclusion, the digitisation of innovation management allows organisations to spend less time managing innovation and more time on things that really matter—like uncovering insights and opportunities, working on prototypes and pilots and most importantly, creating value for customers and the company.

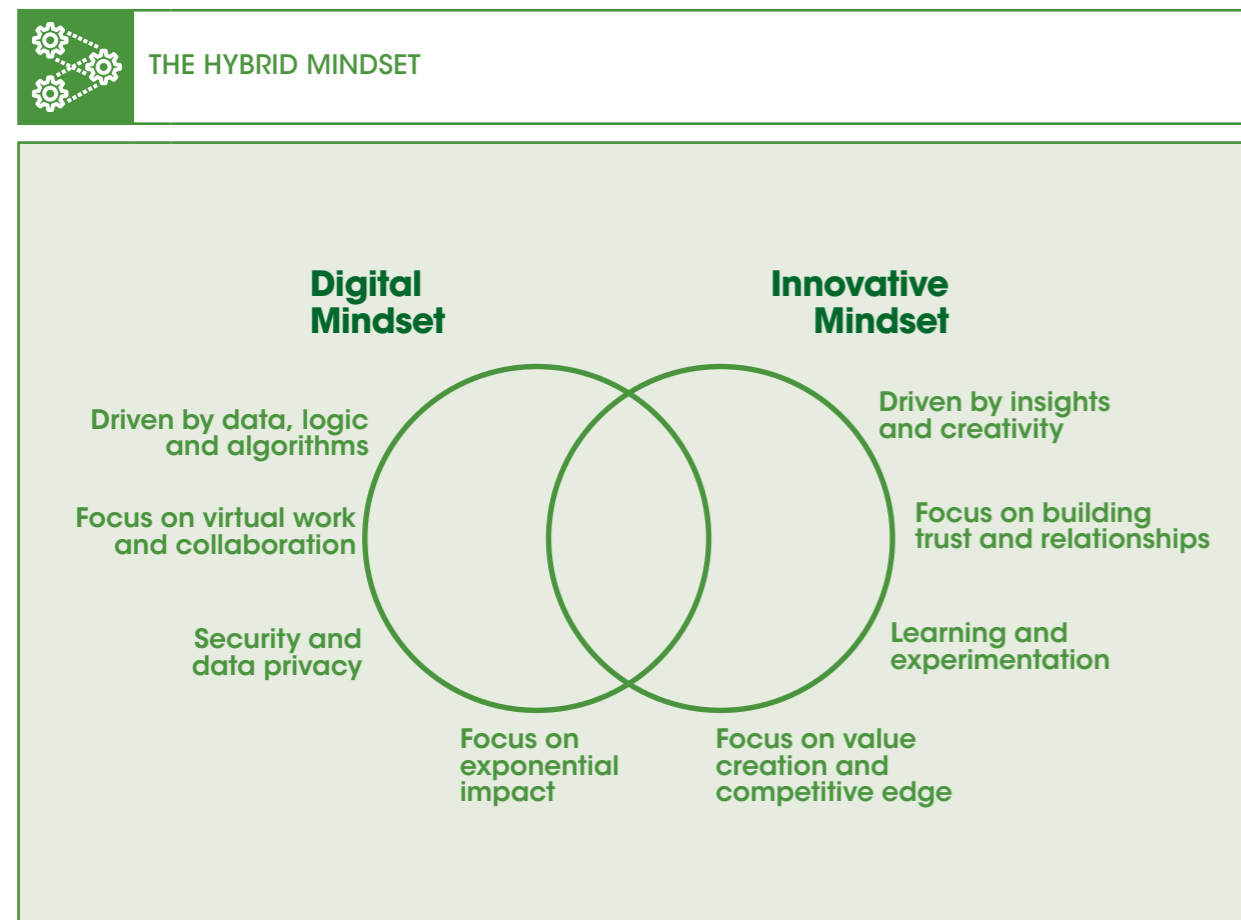


FIGURE 4

Source: Alpha Catalyst

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