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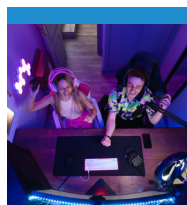
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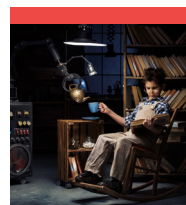
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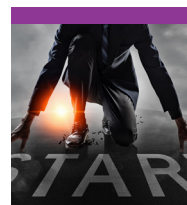
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**myForesight®** is pioneering a national level foresight initiative to facilitate technology prospecting for local businesses. myForesight® advises and provides a common platform for the government, industry and academia to share experience, insights and expertise on 'futures' strategy, both locally and at a larger global level.

Key components of myForesight's mission are intelligence, research, competency framework and community engagement. **myForesight®** raison d'être is set out to accomplish the following:

1. Anticipate Malaysia's future possibilities;
2. Promote foresighting at national, sectoral and corporate levels;
3. Identify key technologies to support sectoral development;
4. Outline key future R&D areas.



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# Initial Thoughts

The National Youth Development Policy defines youth as young people between the age of 15 to 40 years old.

As of 2022, the size of the Malaysian population that falls within this definition is

**5.7mill**  
equivalent to roughly  
**17%**

of the total population in Malaysia.

In addition, they are mostly belonged to  
**Generation Z**

(born in year 1998 to 2008)

In terms of the demographic trend of youth, the population size :

Shrinking by about **6%** since 2015

which is common for most nations that moving toward an ageing society.

For this issue, the focus is on the future of youth as it matters to Malaysia's future growth. The development policies that are geared towards making Malaysia achieve its future goals and realised future aspirations lie in the hands of today's youth. Continuation efforts of implementing the policy's initiatives will be carried on by the youth who will assume the role of future leaders. Therefore, it is pertinent to get their participation and buy-ins throughout the process of developmental planning. However, in order to position them at the forefront of national development, Malaysian youth needs to be equipped with the right tools, knowledge and attitude.

Nevertheless, there is a need to address a number of major challenges faced by the youth community in Malaysia.



The ability to learn and unlearn is key to staying relevant in the fast-changing environment driven by the advancement of technology.



Lack of relevant skills that are in demand related to digital such as artificial intelligence, data analytics and other specialised skills causes a large number of youth facing difficulty to secure a suitable job and opt for underpaid jobs.



This situation led to a subsequent issue which is youth financial constraint. A recent survey conducted by a private university, UCSI found that the main causes of the youths' financial constraints, point towards increasing living costs and insufficient savings (27 per cent) as the top two contributors, followed by lifestyle changes. This situation is further exacerbated during the COVID-19 pandemic which severely affected a large number of local businesses and overall Malaysia's economy.



Another growing concern is mental illness. The Ministry of Health reported that around 400,000 children (one in 20 children) in Malaysia as estimated, have mental disorders (The Star dated 29 August 2022). In addition, the 2019 National Health Morbidity Survey (NHMS) also found that one in eight adolescents, aged 10 to 19, have mental disorders.



Recognising the challenges and the need to provide solutions, the Government has implemented a number of dedicated initiatives and programmes to provide the required support to youth development.

In ensuring that Malaysian youth is highly employable, skills development programmes have been organised by the Government ranging from courses in areas related to accounting and finance to food and beverage down to shipping and maritime. To impart agility and ensure that Malaysian youth are well-rounded, the Ministry of Youth and Sports also offers courses such as 'Kursus Pengurusan Akaun Amanah,' 'Kursus First Aider,' and 'Kursus Piskologi Minda Beretika'.

Technology also can be leveraged for this purpose as most of them are digital natives. Powering the minds of youth through gamification allows collaboration across diverse cultures, being creative to solve elusive problems embedded in a game. Game is increasingly complex, diverse, realistic, and social in nature which can be a suitable platform for effective development tools.

In addition, guidance is also given to the younger generation who would like to embark on an entrepreneurship journey through mentoring programmes. Besides skills and an entrepreneurship, other programmes include youth workers or youth work practitioners, who provide support to a young person's personal, social and education development needs. On top of that, the assistance provided should also nurture youth people, develop their personality and advice in career development towards becoming perfect adults and effective citizens of the future.

Other form of support is to provide platforms that allow youth to be recognised as one of the critical stakeholders in the making of national policies and initiatives. This requires political commitments and community support to escalate their views and ideas in all aspects of national development: politics, economy, social, technology and environment. It has to be inclusive where the same opportunities should be given to all youth at all levels either those who live in urban or rural areas throughout Malaysia. Therefore, accessibility to reliable infrastructure and technology such as internet networks and digital platforms should be made available.

Franklin D. Roosevelt's timeless wisdom resonates:

***'We cannot build the future for our youth, but we can build our youth for the future.'***

Recognising youth as an important asset for the future of Malaysia cannot be overemphasised. They are future innovators, captains of industry and machinery to continue today's plan and steer future direction. However, they should not only be equipped with vast knowledge and skills but also a leader who ethical, has high integrity and practices sustainability integrity and sustainable oriented leader.

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MOHD NURUL AZAMMI MOHD NUDRI

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## From the desk of...

**Datuk Dr. Mohd Yusoff Sulaiman**

*President and Chief Executive Officer,*  
**Malaysian Industry-Government Group for High Technology**

# Ideation to Impact Empowering Youth in Shaping the Future

## Youth Entrepreneurship Shaping Malaysia's Future Competitiveness

Youth, I believe, is an invaluable asset for any nation, and Malaysia stands out as a country with a vibrant and youthful population. Leveraging this demographic advantage is crucial for enhancing our competitiveness and harnessing the potential for innovation, creativity, and boundless energy that young individuals bring to the table. Our work at MIGHT encompasses sectors with extended gestation periods, such as aerospace, space exploration, advanced materials, and energy transition, each with long-term objectives reaching into the future. For instance, achieving the 1.5-degree Celsius objective in energy by 2050 requires an immediate commitment to a sustainable energy transition, an endeavor whose fruits may only become fully apparent in the next two to three decades.

Considering that policymakers in these fields often find themselves around 50 or 60 years old, they may not witness the realisation of these goals personally. It is the youth, currently around 20 to 30 years old, who will bear witness to whether these objectives are met. Therefore, it's critical to start involving the youth now, enabling them to comprehend, equip themselves with the necessary skills and competencies, and develop the emotional intelligence required to see these objectives through to fruition by 2050. This continuity is vital to achieving our long-term goals.

MIGHT has implemented numerous programmes aimed at supporting entrepreneurs, including initiatives like the Global Clean Tech Innovation Programme (GCTIP), Leaders

Innovation Forum (LIF), and FameLab. These programmes serve as invaluable training grounds for entrepreneurs, particularly benefiting younger participants. They provide a platform to nurture budding entrepreneurs, honing their skills and competencies.

For instance, the Global Clean Tech Innovation Programme equips entrepreneurs with the ability to understand their businesses thoroughly, construct compelling narratives about their products, and effectively engage with the public for feedback. These are skills that may not necessarily be covered in traditional university education. Young entrepreneurs, with their energy and creativity, can greatly benefit from these programmes, which serve as a crucible for molding them into highly competent entrepreneurs.

These programmes, offer platforms for networking and skill development, are particularly beneficial for young entrepreneurs who may not yet have extensive connections or linkages with key stakeholders. They expose these aspiring entrepreneurs not just to their peers but also to experienced mentors and industry experts who often serve as trainers. Importantly, they offer exposure not just locally but, in some cases, internationally. For example, FameLab rewards top winners with opportunities to perform in the UK, while the Global Clean Tech Innovation Programme sends successful entrepreneurs to Silicon Valley, a hub for venture capital firms eager to invest in innovative products. The Leaders Innovation Forum goes a step further, transforming not just entrepreneurs but also young researchers into entrepreneurial thinkers. These programmes have received tremendous responses, particularly from young individuals eager to learn and grow. They are the source





of innovation that can be channeled to larger companies and government-linked entities. Essentially, they bridge the gap between young entrepreneurs and their markets, collaborators, and stakeholders, instilling confidence and nurturing the attributes required for entrepreneurial success.

In summary, MIGHT has made commendable efforts in this regard, and it is my hope that we can sustain and expand these programmes. Continued engagement with youth, especially aspiring entrepreneurs, is essential for our nation's prosperity and innovation.

### **Communication Mastery: Leveraging Futures Literacy for Business Expansion**

Understanding the dynamics of our ever-evolving world often happens through informal conversations with individuals outside our immediate spheres. Imagine a biotech entrepreneur exchanging ideas with a digital entrepreneur; it's a cross-pollination of insights. Similarly, Malaysian entrepreneurs connecting with their ASEAN counterparts opens doors to a broader worldview, revealing the unique business cultures of different regions. These interactions, coupled with exposure to potential mentors, provide invaluable guidance and insights that can shape a young entrepreneur's journey.

One particularly effective way of nurturing entrepreneurs is through mentorship programmes. Such programmes expose aspiring entrepreneurs to best practices, offering a clear roadmap to success by showcasing role models and real-world examples.

Furthermore, equipping our youth with tools like foresight and forward-thinking skills are essential. Foresight knowledge and capability prepare them to not only anticipate future challenges but also identify emerging opportunities, enabling them to translate these insights into innovative products and services. The ability for entrepreneurs to broaden their perspectives and gain insights into the global geopolitical and business landscape is paramount. MIGHT plays a crucial role in providing these essential tools, especially for high-tech businesses looking to expand their operations.

Consider, for instance, a company like Free the Seed, which develops biodegradable packaging products from rice husk waste. Communication with local farmers demands a specific language and understanding, essential for a smooth supply chain. However, when engaging with international clients like Amazon or Hewlett Packard, a completely different set of communication skills is necessary. This diversity in communication demands exposure that equips young entrepreneurs to navigate both local and international markets effectively. In today's interconnected world, where virtual interactions are the norm, this multifaceted expertise is becoming increasingly crucial.

In summary, nurturing youth with a keen understanding of future trends and a global perspective is vital for their success as entrepreneurs. MIGHT's role in providing these essential tools and insights is instrumental in shaping the next generation of innovative and globally competitive businesses.

### Youth-Driven High-Tech Innovation: A 'F.I.R.S.T' Perspective

At MIGHT, we firmly advocate the 'F.I.R.S.T' methodology as a foundational approach to empowering youth for active participation in the high-tech industry. 'F.I.R.S.T' signifies the fundamental steps to commence this journey.

Funding and financial backing is crucial to set our youth on the path to high-tech entrepreneurship, securing initial funding is paramount. High-tech ventures are characterised by their capital-intensive nature, lengthy gestation periods, and substantial risk. Encouraging youth to venture into this terrain necessitates the provision of a safety net for securing the initial funding to commence their entrepreneurial journey.

Next is about infrastructure, systems, and institutions. Institutions like MIGHT play a pivotal role in this process. They scrutinise the entire ecosystem and supply chain meticulously, identifying where young entrepreneurs can thrive and pinpoint the gaps within the industry supply chain that they can explore for entrepreneurial opportunities.

Effective policies and regulations are the bedrock of youth involvement in high-tech business. This includes a comprehensive policy framework that begins nurturing talent right from secondary education. Such policies should also offer incentives and privileges for youth in specific business domains. Furthermore, it should extend to financial institutions, ensuring that they align their strategies to support these youth-driven initiatives.

In the current global landscape, digital capabilities are of paramount importance. Skills that enable the utilisation of artificial intelligence and other advanced technologies are essential. We must prioritise equipping our youth with these competencies, ensuring they are well-prepared for the industry.

Last but not least, technology accessibility in providing affordable access to cutting-edge technology is another key consideration. This accessibility enables young entrepreneurs to compete effectively on a level playing field. Organisations like MIGHT play a crucial role in orchestrating a harmonious and integrated approach to facilitating this access.

High-tech industries are the linchpin of our economic development. They are often described as having a 'multiplier effect,' catapulting our nation toward becoming a developed powerhouse. Participation in the high-tech sector is not a luxury but a necessity. It's a tool not only for individual businesses but also for propelling our nation forward in terms of competitiveness and development.

To harness this potential, we must rely on the energy, creativity, and dynamism of our youth. Malaysian youth are known for their creativity, enthusiasm, and active engagement. Our collective aim is to harness this dynamic energy and channel it effectively into the high-tech industry. Whether they become engineers, scientists, or business leaders, our youth must be guided systematically and effectively to assume pivotal roles in our nation's progress.

In summary, we believe in the 'F.I.R.S.T' approach to enable our youth to become the driving force in the high-tech industry. It's about fueling innovation, building infrastructure, formulating policy, nurturing skills, and ensuring technology accessibility. With the right guidance and support, our youth will play a central role in shaping our nation's high-tech future.

### From Participants to Contributors: The Youth Impact

In closing, it's imperative that we view our youth as a cohesive force, a collective effort in our journey forward. There's a saying that goes, 'If you want to go fast, go alone, but if you want to go far, go together in collaboration.' In this context, our youth constitute an integral part of the Malaysian ecosystem, propelling us towards greater competitiveness and the realisation of our commitments. For Malaysia to achieve its aspirations, the youth must be at the forefront. They need to embrace a proactive stance, equipped with the right tools, knowledge, and attitude. By doing so, they become not just participants but significant contributors to our nation's growth story.

In parallel, it's incumbent upon all of us to adapt and understand the spirit of our youth. This understanding enables effective communication, motivation, and the channelling of their boundless energy toward constructive purposes. It's a two-way street, and together, we can embark on a journey that's not just fast, but one that takes us far, transforming Malaysia into a beacon of progress and prosperity.

***This issue of myForesight®, will be the final article from Datuk Dr Mohd Yusoff, as he has retired on 30 September 2023, after being in service with MIGHT since 1994, and leading as CEO for 15 years.***

***We at myForesight®, are truly grateful for his leadership, wisdom and insight for us to continuously improve and feature the most trending and significant topics.***



IN PERSON WITH

# Navigating Malaysia's High-Tech Industry:



## A Path to National Competitiveness

**Tan Sri Dato' Sri Haji Syed Zainal Abidin Syed Mohamed Tahir**

**Chairman,  
SilTerra Malaysia**

*Yang Berbahagia Tan Sri Dato' Sri Haji Syed Zainal Abidin Syed Mohamed Tahir is a prominent figure in Malaysia's business and corporate world. With an illustrious career spanning several decades, he has made significant contributions to various industries and held numerous high-profile positions, including executive roles in leading multinational companies and government-linked corporations. Known for his exceptional leadership skills, strategic vision and unwavering commitment to excellence, Tan Sri Syed Zainal Abidin is widely respected as a trailblazer in the business community. Under his stewardship, numerous organisations have achieved unprecedented success, earned industry accolades, and solidified their positions as market leaders. It is an honour for myForesight® magazine to share his profound insights and visionary perspectives on the realms of technology, talent and tactical considerations.*

National strategic assets encompass crucial resources, institutions and infrastructure that hold significant strategic value for a nation's economic development, competitiveness and national security. These assets are pivotal in driving key sectors, fostering innovation, attracting investments and cultivating skilled workforce. One exemplary illustration of such an asset is SilTerra—a testament to foresight, strategic planning and the power of collaboration. Through its visionary approach, SilTerra embodies the convergence of solid partnerships, supportive government policies and the creation of specialised infrastructure and ecosystems. This interview seeks to explore the future of jobs and talents, the transformation of the national innovation landscape, and the pivotal role played by SilTerra in propelling the high-tech industry forward.

### Embracing Change: Adapting to the Tech- Driven Evolution of Business

Technological advancement and automation reshaping the future job landscape, holds immense importance when considering the impact of these changes. Over the past decade, we have witnessed an array of innovations, from the Internet of Things to digitalisation, reshaping industries. Undoubtedly, COVID-19 has accelerated this transformative wave and it is here to stay.

As entrepreneurs and companies, our role must evolve from resisting change to embracing it, adapting our operations to harness its advantages. Embracing change entails understanding how technological shifts will impact our businesses. Technology often enhances efficiency but raises questions about affordability and relevance to our specific industries. We must carefully select the technology that suits us and aligns with our affordability.

For instance, SilTerra has undertaken a substantial technology upgrade programme, focusing on both hardware and, more importantly, the skill sets of our people. Skill development is an ongoing process, and bridging gaps necessitates training, exposure, and collaboration with our customers to stay aligned with technological advancements.

Efficiency resulting from technological adaptation translates to improved revenue and cost reduction. It is the way forward, especially in the post-COVID era, where adaptability is vital. Those who quickly adapt thrive, while others face struggles.

In parallel, the evolving job landscape demands different skill sets. Our industry, the semiconductor sector, is a prime example. The shift from conventional Complementary Metal Oxide Semiconductor or CMOS to Silicon Photonics and more, requires

specific knowledge not typically taught in universities. We must swiftly close this knowledge gap, which is why we have partnered with universities to align curriculum with industry needs.

Furthermore, the nature of work is changing. Traditional office spaces are becoming less necessary, with remote work proving effective. This shift necessitates flexible work environments and is a cultural shift within organisations to attract the best talent.

We have observed significant changes pre- and post-COVID, with technology adoption, cultural shifts and skillset demands evolving rapidly. Artificial intelligence, blockchain, data analytics and more are on the horizon, urging us to adapt continually.

However, it is essential to remember that we should be masters of technology, not the other way around. Technology should serve to facilitate business, not dictate it. Therefore, selecting the right technology tailored to our needs becomes paramount.

Essentially, we are on a journey where adaptation and collaboration are our compass points. Adapting wisely to technology's ever-changing landscape ensures efficiency and relevance. We are also shaping our businesses and the future of work itself.

### Creating Complete Ecosystems for Competitiveness

The importance of Research and Development (R&D) cannot be understated when it comes to continually upgrading our innovation capabilities and maintaining a competitive edge in the international market. To do this successfully, we must first recognise our strengths and weaknesses. Staying ahead of the curve means identifying where we excel and then building on those strengths.

For instance, Malaysia has a strong foothold in the electrical and electronics industry (E&E), with decades of experience. However, merely relying on past successes will not keep us competitive. We must adapt swiftly to the changes happening globally. A notable example is China, which has excelled by ensuring a complete supply chain for its industries. However, merely having strengths is not enough; we must build on them and ensure we do not fall behind.

One essential step is crafting a clear blueprint for the future. We must decide which sectors we want to grow and specialise in over the next five years. This blueprint should be comprehensive, involving key stakeholders, such as industry experts and government bodies, to ensure it aligns with our national interests.

Attracting investors is another critical aspect. We must be specific about the type of investments we want in our country, be it semiconductor manufacturing, IC design, or other areas within E&E. Providing the right incentives is essential to attract investors, making our country more competitive globally.

However, our human capital is equally important. As investors come in, we need to ensure we have a skilled workforce to meet their needs. This requires close coordination among the private sector, the Ministry of Human Resources, and the Ministry of Higher Education to bridge skill gaps effectively.

Building a complete ecosystem is imperative. This means controlling the entire supply chain, from raw materials to finished products. Having a robust local supply chain makes us more resilient to external disruptions.

To make these steps effective, we need an apparent, coordinated effort. One central body should oversee the entire strategy, avoiding fragmentation and ensuring all



resources are harnessed optimally. This demands a unified approach from the government and industry players.

Innovation should be deeply ingrained in our culture, much like the Japanese "kaizen" principle. A culture of innovation requires recognition and reward systems that motivate individuals to think creatively and improve continuously. Sadly, we often lack a holistic innovation culture and system at the national level, hampering our progress.

### Malaysia's High-Tech Aspirations: Envisioning the Desired Future

Looking ahead to the next five to ten years, it is crucial that we adopt a forward-thinking approach while staying grounded in practicality. A prime example is the aspiration to become a hub for electric vehicle manufacturing. While this goal is ambitious, it is important to consider our size. Malaysia's population, around 35 to 38 million, pales in comparison to countries like China, with over 1.4 billion, or Thailand, with 80 million.

In the automotive industry, scale matters, especially for electric vehicles, which rely on components like batteries. Batteries require substantial production volumes and transporting them by air is impractical due to their nature. Given these constraints, investing in becoming a primary electric vehicle manufacturing hub may not be Malaysia's most pragmatic choice.

Instead, we could position ourselves as a hub for electric vehicle component manufacturing, focusing on electronics where our strengths lie. By identifying our strengths and understanding where we can excel, we can create a clear direction for growth. This approach applies to the automotive industry and the E&E sector.

For instance, in E&E, our strength lies in semiconductors. We can strive to be a global hub for high-end foundry manufacturing, attracting businesses worldwide with incentives and offering the necessary infrastructure. This approach not only brings in high-end technology manufacturers but also supports the growth of supporting industries and creates valuable job opportunities.

Looking beyond the present, we must consider emerging trends. Electric vehicles represent one such trend, but rather than focusing on battery production, we should concentrate on the electronics that power these vehicles. The automotive industry is evolving towards advanced electronics, including the potential for autonomous vehicles. These areas align with our skill sets and existing capabilities.

Furthermore, we should explore fields like life sciences and healthcare. Modern healthcare is increasingly reliant on advanced electronics and sensors for diagnostics. By investing in these technologies, such as silicon-based diagnostics, we can play a significant role in shaping the future of healthcare.

In the next five to ten years, areas like the Internet of Things (IoT) and 5G technology will continue to be in high demand. To meet these demands, we must focus on advancing our semiconductor capabilities to accommodate the growing need for memory and speed.

Collaboration is essential in this journey. Rather than trying to do everything alone, we should actively seek partnerships with global players. These partnerships can bring the necessary expertise and resources to accelerate our progress.

While the path to a high-tech future is promising, it requires a clear roadmap and targeted efforts. We cannot be everything to everyone. Additionally, engaging smartly with countries like

China is crucial, recognising their role as a global economic powerhouse.

To attract investments and foster growth, we must proactively approach potential investors rather than wait for them to come to us. Countries like Indonesia are setting examples in this regard.

In essence, Malaysia has the potential and the talent to thrive in the high-tech landscape of the future. However, our government must revisit the roadmap for the Electrical and Electronics (E&E) sector, bringing clarity and focus to our strengths.

We need a collaborative effort, strategic partnerships and proactive engagement with global players to succeed. With the right direction, Malaysia can secure its place as a global leader in cutting-edge technology.

“

*Furthermore, we should explore fields like life sciences and healthcare. Modern healthcare is increasingly reliant on advanced electronics and sensors for diagnostics. By investing in these technologies, such as silicon-based diagnostics, we can play a significant role in shaping the future of healthcare.*

”



**Liz Alexander, PhD**  
Futurist. Author. Consultant. Speaker.

*Dr. Liz Alexander has been named one of the world's top female futurists. She combines futures thinking with over 30 years' communications expertise to produce publications that showcase the advice of fellow futurists on issues, including the future of education and how businesses can practically benefit from working with the futures community.*

*Dr. Liz is the author/co-author of 22 non-fiction books published worldwide that have reached a million global readers. She has contributed to leading US technology magazine Fast Company and also Psychology Today, and her work has been featured in journals such as Knowledge Futures and World Futures Review. She earned her PhD in Educational Psychology at the University of Texas, Austin.*

# The Multi-Dimensional Benefits Of Playing Video Games

In Orson Scott Card's award-winning sci-fi novel, *Ender's Game*, six-year-old Ender Wiggin spends three years at Battle School, orbiting high above the Earth, where he trains to one day fight a telepathic alien race that threatens to destroy humanity.

Whilst playing digital games, Ender demonstrates considerable strategic genius. He heads a team of children that's always at the top of the leader board. Even faced with impossible odds in the final battle, Ender and his group destroy the aliens completely. The twist in the tale is that Ender was never playing simulated computer games at all; every conflict against Earth's enemy was real.

Outside the realm of fiction, however, video gamers aren't much admired, or encouraged. One online article I read claimed that their obsession resulted in "poor social skills, time away from family, schoolwork and other hobbies, lower grades, reading less, exercising less, becoming overweight, and having aggressive thoughts and behaviours." But just how true is this? Do the computer game-based skills that Ender Wiggin developed—team building, collaboration, risk-taking, strategising, and moral decision-making—occur outside the pages of a novel? Considerable evidence suggests that they do.

Let's look at the connection between playing video games and three attributes I assume any society would wish to develop in its youth: resilience; cross-disciplinary problem-solving; and spatial skills related to STEM success.



## Resilience, Anyone?

In the opening paragraph of his essay, *The Morals of Chess*, American polymath Benjamin Franklin writes:



*The game of Chess is not merely an idle amusement. Several very valuable qualities of the mind, useful in the course of human life, are to be acquired or strengthened by it, so as to become habits, ready on all occasions. For life is a kind of chess, in which we have often points to gain, and competitors or adversaries to contend with, and in which there is a vast variety of good and ill events...*



Franklin goes on to list foresight, circumspection, caution, and “not being discouraged” as four important by-products of playing this particular game. Nowadays, we tend to use the term resilience for “not being discouraged.” Substitute Super Mario, World of Warcraft, or Halo 4 for the game of chess and the same argument applies.

Resilience in the face of failure is one of the motivational advantages outlined by the Dutch authors of a paper entitled, *The Benefits of Playing Video Games*, published in the journal *American Psychologist*. They refer to Professor Carol Dweck's theory that posits how children see their level of intelligence as either fixed (cannot be changed) or incremental (improves with effortful persistence). By earning points, acquiring more valuable tools, and gaining admittance to advantageous guilds or other teams, these authors argue that, “...video games are an ideal training ground for acquiring an incremental theory of intelligence because they provide players concrete, immediate feedback regarding specific efforts players have made.”

In short, trying and failing, then trying different tactics next time—the very challenges inherent in complex video games—can help motivate players to adopt an attitude of persistent optimism that's beneficial in both school and work contexts.

## Solve For X



*People exert large amounts of problem-solving effort playing computer games,” write the authors of the article entitled, *Predicting Protein Structures with a Multiplayer Online Game*, published in *Nature* in 2010. These University of Washington researchers found that within three weeks, the top-scoring players of a specially created online game called Foldit Identified a scientific solution that “had eluded researchers for over ten years.” They added that the “non-linear, cooperative, and creative problem-solving techniques used by these gamers seemed to be precisely the skills needed to finally solve this elusive problem.*



Unfortunately, the doom-and-gloom critics of video games and the people who play them, have helped to embed into the public consciousness an image of the pasty-faced, obese teenager slumped over his or her computer for hours on end. But as the Dutch authors of the article mentioned earlier point out, video games have, “...changed dramatically in the last decade, becoming increasingly complex, diverse, realistic, and social in nature.” And their article is now almost ten years old!

Consider the title of the book written by the Institute of the Future's Director of Game Research and Development, Jane McGonigal: *Reality is Broken: Why Games Make Us Better and How They Can Change the World*. That is not mere hyperbole when you consider that today's digital games offer more than just opportunities to virtually kill one's enemies, whether alien or human. Here are a few examples of how they can help address some of the most pervasive problems we face today:



### Saving the Environment

Anyone interested in games that deal with the topic of climate change can find such a list in Climate Interactive's article entitled, *19 Climate Games That Could Change the Future*.



### Poverty

Poverty-focused simulation games raise awareness of this social issue, claims non-profit organisation, The Borgen Project, in this “Gaming for a Cause” article.



### Sustainable Cities

SimCity is just one of the titles mentioned in an article from Smart Cities Dive, which points to how playing such games helps to develop urban design skills.

## Spatial Skills and Stem

"Contrary to conventional beliefs that playing video games is intellectually lazy and sedating, it turns out that playing these games promotes a wide range of cognitive skills," continue the Dutch authors of the aforementioned American Psychologist journal article. In a section entitled, Cognitive Benefits of Gaming, they point to the way in which 'action games' in particular help players to develop focused attention and hand-eye coordination more quickly than academic courses aimed at enhancing these same skills.

Why is this important? The authors cite a 25-year longitudinal study linking superior spatial skills with greater achievement in those academic areas we refer to as STEM: science, technology, engineering, and mathematics. As one quoted cognitive neuroscientist states, "Video games are controlled training regimens delivered in highly motivating behavioral contexts . . . because behavioral changes arise from brain changes, it is also no surprise that performance improvements are paralleled by enduring physical and functional neurological remodeling." Once someone's brain has been remodeled in such a way, they then have the capacity to apply that advantage to other contexts.

## A Necessary Balance

Let's not confound these highly popular, motivational, and skills-building games with what we're seeing happen with a lot of our infants today. As one new Japanese study points out, too many parents place an iPad into the hands of one to four year-olds, in order to keep them occupied and amused. Children that young do not benefit from so much screen time and constant stimulation. Instead, they tend to suffer delays in speaking and overall language ability, as well slower development of important motor skills and social skills.

On the other hand, youth—the majority of whom are not spending as much time playing video games as detractors often claim (see Boxout)—develop many of the cognitive, emotional, motivational, and social skills now being studied in more detail by academic researchers.

Perhaps we should ask ourselves what more we can do to incorporate games design into projects aimed at encouraging greater youth engagement. Perhaps the problem lies not so much with video games per se—which are obviously highly engaging and motivational to people of all ages across the world—but why we are not designing reality to better match these online experiences.

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## Facts That May Surprise You

The market value for video games is estimated to reach **US\$384 billion** in 2023, growing to over **US\$522 billion** by 2027.

Some **3.09 billion people** globally are active video game players, a figure expected to increase to **3.32 billion gamers** by 2024 (Note: that's roughly 38 per cent of the world's population, currently).

Asia is the top video game region with **1.48 billion active gamers**, more than the next three regions (Europe, Latin America, and North America) combined. (footnote 10)

**Over 82 %** of Southeast Asia's urban online population is a gamer.

Globally, there are said to be **618 million gamers** under the age of 18.

**Almost 90 %** of total male internet users between the ages of **16 to 24 years** played video games in 2022. (footnote 11)

Two thirds of gamers in the United States say relaxation is the main reason for playing video games. (footnote 11)

On average, **36 %** spend less than one to five hours weekly playing video games.

**Only 7 %** spend more than 20 hours on these activities.





## Dr. Jufitri bin Joha

Chairman,  
School for Community and Youth Work  
Development (SPKB)  
Chairman,  
Benevolent Malaysia (Benevolent)

*Dr. Jufitri Joha is the past President of the Malaysian Youth Council (MBM) and Vice President of the Muslim Youth Movement of Malaysia (ABIM) in charge of youth and intellectual development. He obtained an LLB from the International Islamic University of Malaysia (IIUM) and a Master of Arts in Community and Youth Work from Durham University, United Kingdom. He received his PhD in Youth Studies at the Institute for Social Science Studies (IPSAS) of University Putra Malaysia (UPM). Being a full-time youth activist, he is actively involved in advocating various international issues related to the Islamic world, and consulting several youth development programmes and policies. He received the highest recognition from the Malaysian Government as the National Youth Award Receiver (Individual Male Category) in May 2015 during the National Youth Day celebration and the ASEAN Youth Day Award in Brunei Darussalam in 2015. Currently, he is Chairman of the School for Community and Youth Work Development (SPKB) and Chairman of Benevolent Malaysia (Benevolent), a Non-governmental Organisation active in social entrepreneurial community aiming towards a charitable society.*

# Youth Worker: Trends and Drivers of Change

**P**rofessional youth work in Malaysia is still new and many still need to understand the concept. Many think youth workers are workers in various sectors, and this misconception needs clarification.

Youth work as according to the National Youth Agency (NYA), one of the leading youth work agencies in the United Kingdom, is a distinct educational process with a variety of programmes to support a young person's personal, social and educational development needs. Youth workers or youth work practitioners are individuals who educate and nurture these young people in the areas mentioned above, including the youngsters' personality and career development in becoming perfect adults and effective citizens of the future.

## VIEWPOINTS

Youth work, according to Belton (2011), is a profession practiced by individuals who work with youth in various situations in order to develop them. Smith (2013) outlines five dimensions in defining youth work, which are:

### 5 dimensions of youth work

- i. Focusing on youth
- ii. Voluntary participation of youth
- iii. Cultivating all levels of society to work collectively and in the spirit of friendship
- iv. Being youth friendly, approachable, responsive and act with integrity, and
- v. Taking care of the welfare, well-being and education of the youth

Currently, youth work in Malaysia has been practiced without professional accreditation. Most of the youth work practitioners in Malaysia, whether those working in the Ministry of Youth and Sports (KBS) or involved in youth movements such as the Malaysian Youth Council (MBM) or any institution that develops young Malaysians, do not any have specific qualifications and recognition in professional youth work.

In line with other Commonwealth countries in promoting professional youth work, Malaysia must take firm initiatives to mobilise youth development as a core activity and not just to fill up free time. In order to achieve developed nation status, Malaysia need not only expand physically but too also cultivate her people to be a balanced society with spiritual, emotional and intellectual equity – and this begins with the young.

The Malaysian Youth Policy (DBM) 2015-2035 has taken steps to list professional youth work as one of the 10 main areas of national youth development. Starting in 2015, KBS and MBM have taken aggressive steps to mobilise professional youth work until successfully producing the National Occupational Skills Standards (NOSS) for youth work. In addition, Universiti Putra Malaysia (UPM) will be offering a youth work degree by the end of 2023. These are two of the main mechanisms for the recognition of professional youth workers in Malaysia apart from the third mechanism which is through the recognition of past achievements and experiences.

To this accord, the National Federation of Youth Workers (FKPB) and the Youth and Community Work Development School (SPKB) were established to further promote youth work in Malaysia in addition to looking at the direction and welfare of Malaysian professional youth workers themselves. Not only that, as a leading country in professional youth work, alongside other Commonwealth countries such as the United Kingdom, Jamaica, Singapore, Australia, India and New Zealand, Malaysia, through SPKB, has joined the Commonwealth Alliance of Youth Workers Association (CAYWA) to promote youth work at the global level.

At the national grassroots level, Adab Youth Garage (AYG) is one of the institutions or civil society organisations (CSOs) that promotes professional youth work in the country. According to Professor Dr. Abdul Lateef (2023) from UPM's Institute of Social Science Studies (IPSAS), AYG is a community-based youth serving organisation that operates in 10 low income communities in Selangor, Kuala Lumpur, Penang, Negeri Sembilan and Johor – namely at the People's Housing Programme (PHP) areas, a low-cost community housing project. AYG establishes youth engagement centres with the aim to mobilise young people and community stakeholders towards social change and positive youth development.

In the pursuit of rapid national development, where adults are busy earning a living, youth and family development are often overlooked. Adding to this the challenge, the imminent urban decay with families being squeezed into small homes, educational neglect, lack of quality family bonding, will eventually lead to dwindling motivation and positive supervision among the children. Without a doubt, living environment greatly affect the development of our youth, particularly their mental state.

Hence, to aid the children of our inescapable rat race existence, the presence of professional youth work is both compelling and timely. The nature of youth work can help prevent drop outs – through informal education, talent development activities and highlighting youth potential. Youth work sees young people as an asset to be developed and not a liability whose problems must be solved. Young people must be respected and valued in professional youth work ethics and values.

### **NYA has underlined a clear set of values when working with young people and these include:**

- Young people choosing to take part
- Utilising young people's view of the world
- Treating young people with respect
- Developing young people's skills and attitudes rather than to remedy 'problem behaviours'
- Helping young people develop stronger relationships and collective identities
- Respecting and valuing differences
- Promoting the voice of young people





This code of ethics is comprehensively debated by the United Kingdom's Institute for Youth Work (IYW). Anyone interested can read more about this on the IYW website.

To take this professional youth work agenda more seriously, Malaysia should have special acts to regulate it and recognise youth workers as professional workers. Job opportunities in this sector can also be created to provide ample employment in this sector.

This matter requires high political commitment and community support at all levels. Nowadays, educating the young is not only the task of teachers and lecturers in formal educational institutions, but is also the task of professional youth workers in informal education settings. Both sectors are necessary and even complement each other in developing a balanced person. The Ministry of Education and KBS must work hand in hand in order to succeed. The professional youth work sector is also believed to be able to deal with the problem of student dropouts, even honing leadership skills among the young through youth movement participation.

In this increasingly challenging era, the youth development sector desperately needs workers and youth work practitioners who are trained and able to handle the young generation who have very different characters and thinking. In addition, the post-pandemic challenges that have witnessed changing trends and culture among the young generation which is very worrying. These challenges and problems require effective, creative and innovative professional youth workers – a job that needs to be given full time mode.

A study led by Emeritus Professor Azimi Hamzah (2015) outlines at least 12 competencies for Malaysian youth workers that serve as benchmarks for the basic framework and meet the standards so that youth workers get a precise and clear direction to improve work performance towards the best.

### The twelve competencies include:

1. Work with family
2. Collaboration with family and community
3. Principles of youth development
4. Positive relationships with youth
5. Programmes planning according to age
6. Respect culture and diversity
7. Youth engagement and empowerment
8. Exhibit positive role models
9. Support youth capacity building and career guidance
10. Identify and reduce risk factors
11. Professionalism in teamwork
12. Social media

These are some of the important competencies and skills required to become a professional youth worker during the 2015 study and most of them have been adapted in the youth work NOSS.

It is certain that with the rapid development of the country's post-Covid19 progress and the unique character of the younger generation, professional youth workers need to equip themselves with more competencies and skills. The increase in mental health problems has forced youth workers to learn advanced skills, for example how to handle the mental stress experienced by the younger generation, or how to work together with psychiatrists in dealing with these problems. The approach of youth work is to prevent before the problem becomes severe, where youth workers need to come up with methods and programmes for education and early prevention from youth suffering chronic mental health.

The hazards of technology and digital gadgets is another problem for young people. During the pandemic era, the lack of opportunity for the young to carry out physical activities outdoors caused stress among them, and in turn they opt for the electronics to keep themselves busy, a habit that stuck even at the post-pandemic phase. When that happened, CAYWA's professional youth workers started the digital youth work to reach as many young people as possible through online platforms. By reaching the youth digitally during the pandemic era, the youth workers were able to slowly and surely attract those youth to the physically participate in activities at a later stage. Therefore, professional youth workers should master social media because young people nowadays communicate more online, than physically.

In conclusion, although professional youth work is still new in Malaysia, its importance is increasing. Young people are not without potential, but most of them are not given the opportunity, or guided properly. Professional youth workers are like sports coaches who can polish talents and nurture the personality of young people. Professional youth work must be supported holistically and at a long term basis – all for the good of our youth, the asset of our country.

Let us all work together to develop both the youth and the future.

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## The Future of Youth: Are We Grooming the Youth To Be the Future Leaders They Deserve To Be?

### Creating Leaders of Tomorrow

The youth of today are not just the leaders of tomorrow; they are the architects of our future. This statement underscores the importance of recognising the active role that young people play in shaping the world we live in. It also emphasises that youth are not passive recipients of insights and experiences, but are active contributors to the present and future of our societies. Knowing the importance of the young generation as leaders of tomorrow, a critical question we must ask ourselves, is whether we are providing them with the right tools, guidance and opportunities to harness their leadership potential to the fullest.

### Effective communication, global impact ideas and adoption of innovative technology

All over the world, we can see young leaders making their presence felt and voices heard, to inspire the world. For instance, Greta Thunberg, the Swedish environmental activist, started the "Fridays for Future" movement at the age of 15. Her strong dedication to address climate change has inspired millions of young people worldwide to act against the climate crisis. In education, Malala Yousafzai, an advocate for girls' education, defied threats from the Taliban to speak out for the right to education. Her relentless advocacy led to her becoming the youngest-ever Nobel Prize laureate. While in entrepreneurship, Mark Zuckerberg, co-founder of Facebook, started the social media giant in his Harvard dorm room at the age of 19. Facebook has since transformed the way the world connects and communicates.



So, what can be learned from these three amazing icons? All of them can communicate their idea effectively, targeting global impact and taking advantage of digital technologies, such as social media, as platforms for spreading their messages. Each of them possesses excellent communication skills which enables them to articulate their message in a way that resonates with people, whether it is through speeches, writing or social media platforms – with each of their actions and advocacies creating global impact. For example, Malala's advocacy for girls' education has reverberated worldwide. Greta's climate strikes inspired millions of students globally to join her cause. Mark's creation of Facebook revolutionised how people communicate globally. They all harnessed the power of technology to amplify their messages to reach a wider audience. Malala and Greta used social media to spread their messages and connect with supporters, while Mark's entire career is built around technological innovation.

## Being on the right track

Likewise, for Malaysians to prepare their young leaders, these three components - effective communication, focus on global impact ideas and enhanced utilisation of digital technology - should be included. In Malaysia, youth can voice their rights and viewpoints to change the Malaysian ecosystem. A famous example is the Undi 18 Campaign, led by youth activists, successfully advocated for the lowering of the voting age in Malaysia from 21 to 18. It aimed to empower young Malaysians to have a say in the country's political future. Therefore, it is crucial to have effective communication as a tool to spread ideas and messages. Investing in youth development is a smart move and empowering them with the right skills will change the landscape of Malaysia's future.

In conjunction with that, the Government of Malaysia's Budget 2023 has allocated funding for a range of youth development

initiatives, including education, training, entrepreneurship, and social development. This includes a RM500 million allocation for the National Digital Skills Programme, aimed at upskilling young Malaysians in digital technologies and increasing their employability in the digital economy. There is also a RM150 million allocation for the Youth Entrepreneurship Programme, aimed at promoting entrepreneurship among young people and supporting their start-up ventures. These initiative examples indicate that Malaysia is on the right track for youth development especially in creating effective communication, pushing the youth to produce global impact ideas through entrepreneurship programmes and improving skills in digital technology towards a digital economy.

## Crucial Challenges in Nurturing Malaysia's Future Leaders

The future in Malaysia is fraught with distinctive issues and challenges that require thoughtful consideration. These challenges range from harnessing the potential of a multicultural society to cultivating the power of digital innovation, and these pertinent challenges underscore the vital importance of preparing our future leaders.

- In July 2023, Malaysia's population composition stood at 70.1 per cent Bumiputera, 22.6 per cent ethnic Chinese, 6.6 per cent ethnic Indians, and 0.7 per cent from other ethnicities. In light of this diverse makeup, Future leaders must prioritise inclusivity and diversity, fostering a work environment that genuinely values multitude of perspectives and backgrounds
- According to Credit Counselling and Debt Management Agency, in 2022, out of 382,761 consumers that had participated in their debt management programme, 210,409 or 55.1 per cent were between the ages of 20 and 40. It is worrying that so many young people are facing serious

financial problems, and need assistance and support to help them address their debt situation. Equipping the youth in Malaysia with financial literacy is not only a matter of personal empowerment but also a key contributor to the nation's economic growth and stability.

- Fostering ethical leadership is vital to instill transparency, trust and accountability within organisations. Upcoming leaders must adeptly handle ethical challenges. Transparency International's Corruption Perceptions Index, which ranked Malaysia 61st out of 180 countries in 2022, underscores the need for enhanced efforts to improve the perception of corruption within the nation
- Unequal access to digital infrastructure and technology can marginalise certain segments of the youth population, limiting their ability to engage in innovative practices and leverage digital platforms. The Internet penetration rate in Malaysia as of 2022 was approximately 96.8 per cent, according to the Malaysian Communications and Multimedia Commission.

## Conclusion

As we gaze into the future, it becomes increasingly evident that the leaders of tomorrow will navigate a landscape vastly different from today. The rapid technology evolution, shifting global dynamics, and societal changes demand a new paradigm of leadership.

By equipping our young ones with the right skills, we are developing a generation that can effectively steer through the complexities of the future. As we invest in their growth, we are banking in a future that is not only innovative and dynamic, but also grounded in values that will shape societies for the better. The leaders of tomorrow are just starting their journey, and it is our responsibility to ensure they are on the right vehicle towards a brighter and more prosperous future.

# Are Our Youth Ready

to Face Current Challenges and Future Changes?



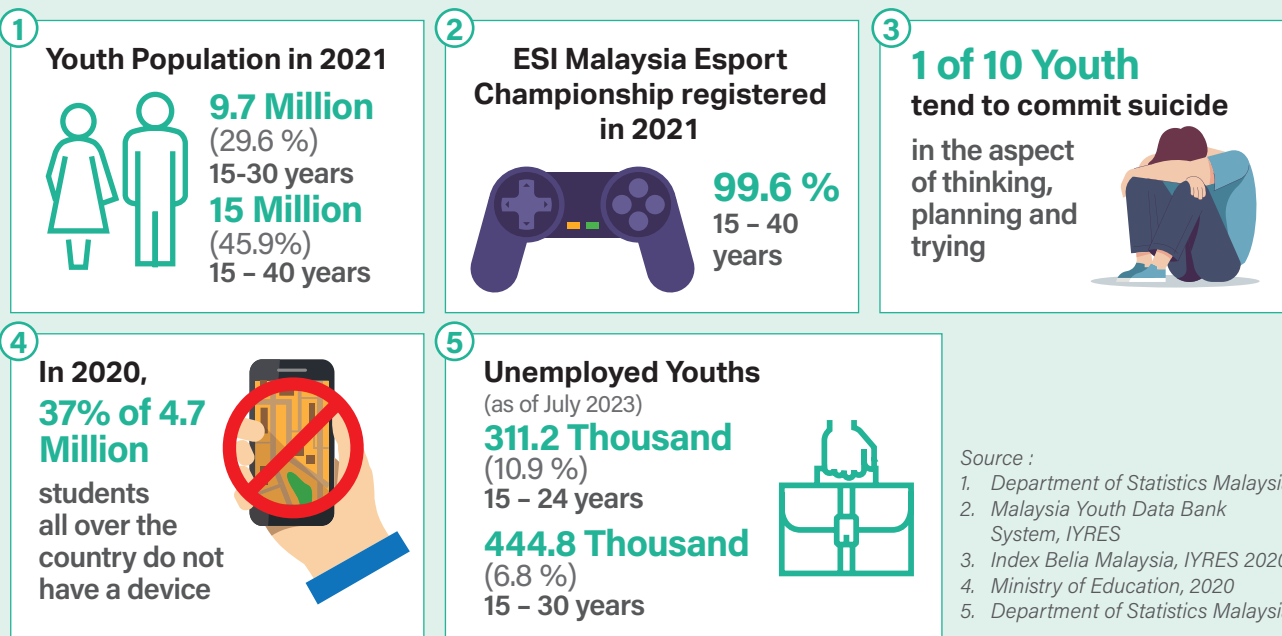
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## Current Challenges and Future Changes

Youth plays a significant role in nation-building. They represent the country's future and are also the driving force of society. Empowerment of youth with society's expectations such as high academic achievement, fast adaptation to technological advancement, innovative creation and economic resilience. However, youth unemployment rate, quality of life, mental health, technological advancement that is rapidly evolving and climate change are some of the challenges faced by youth that have always been a concern of our society.

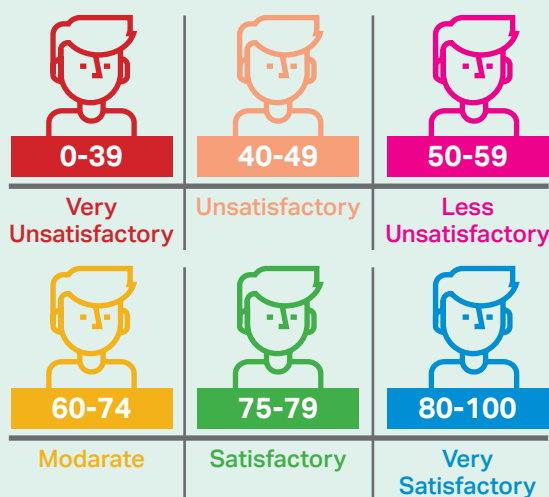
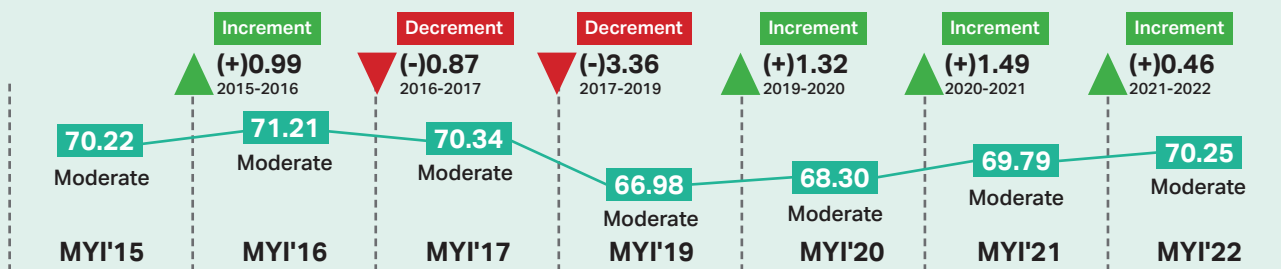


Source :

1. Department of Statistics Malaysia
2. Malaysia Youth Data Bank System, IYRES
3. Index Belia Malaysia, IYRES 2020
4. Ministry of Education, 2020
5. Department of Statistics Malaysia

## Malaysia Youth Index (MYI)

Stagnant overall achievement of Malaysian youth's quality of life and well-being. Consistently at a moderate level since 2015.



The Ministry of Youth and Sports (KBS), through the Institute for Youth Research Malaysia (IYRES), published the Malaysia Youth Index 2022 (MYI22). The index is significant to monitor the achievement of quality of life and well-being of Malaysian youth annually. **Through this Index, KBS can monitor how implemented programmes and policies impact youth development in Malaysia and the baseline to form a new policy and develop new programmes.**

Since 2015, MYI has shown a consistently moderate level, with an overall score of 70.25 in 2022.

Furthermore, the overall score has remained the same in the last eight years. This indicates the stagnant achievement of Malaysian youth's quality of life and well-being.

Based on MYI22, there are six domain definitions of quality of life and well-being for Malaysian Youth, namely:

1. Education,
2. Economy,
3. Mental & Physical Well-being,
4. Political Socialisation, Nationhood & Democracy,
5. Values and identity and
6. Media & Digital Citizenship.

## Global Youth Development Index

### Malaysia ranked among other countries

Rank	Country	Score
1	Singapore	0.875
2	Slovenia	0.866
3	Norway	0.862
4	Malta	0.859
▽		
47	Barbados	0.779
47	Bahrain	0.779
49	Brunei	0.777
50	Malaysia	0.775

### Malaysia ranked among commonwealth countries

Rank	Country	Score
1	Singapore	0.875
2	Malta	0.859
3	Cyprus	0.825
4	New Zealand	0.824
5	Australia	0.807
6	Canada	0.798
7	Maldives	0.794
8	United Kingdom	0.793
9	Barbados	0.779
10	Brunei	0.777
11	Malaysia	0.775

The Global Youth Development Index (GYDI) 2020 is based on data up to 2018. Malaysia scored 0.775 in the GYDI overall score, ranked 50 out of 181 countries. Among commonwealth countries, Malaysia ranks 11 out of 48 countries.



Source:

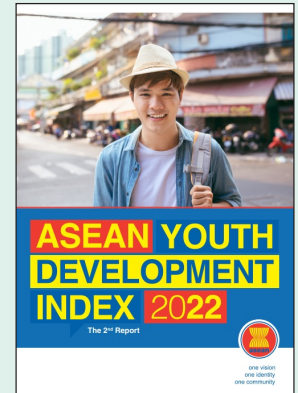
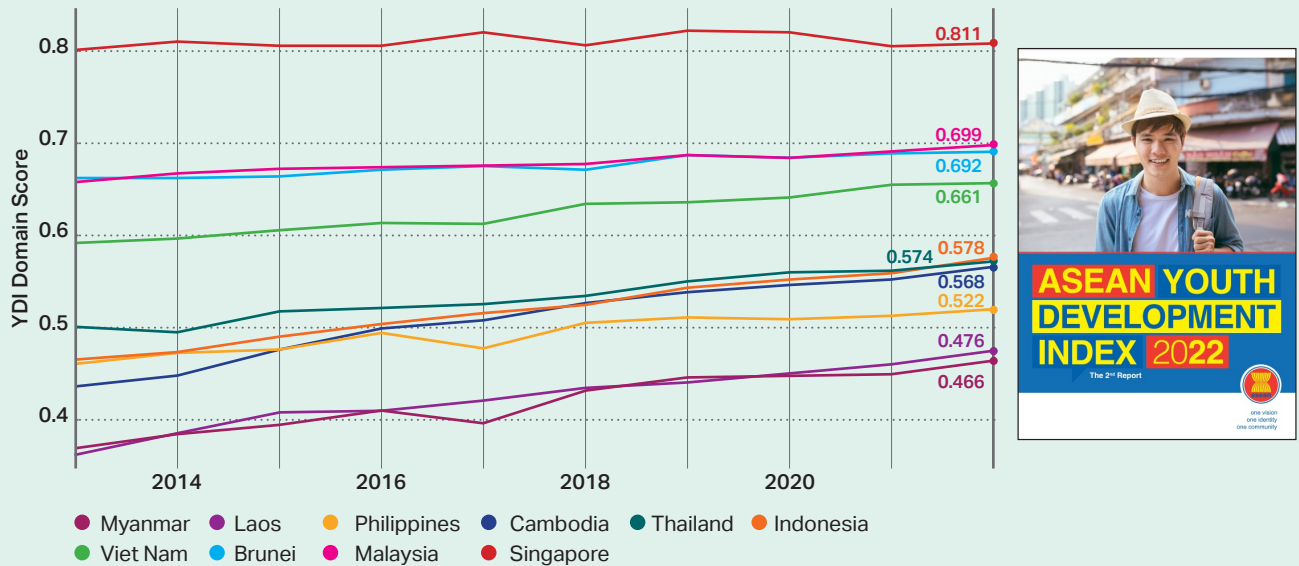
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2. Global Youth Development Report 2020



## ASEAN Youth Development Index

Always at 2<sup>nd</sup> rank, however, other ASEAN countries are catching up and running fast

For the last ten years, Malaysia has consistently ranked 2<sup>nd</sup> to Singapore (1<sup>st</sup> Rank) in the ASEAN Youth Development Index (YDI). The overall scores of Malaysia remain the same. However, other countries are catching up and running fast.

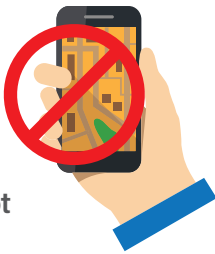


Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Brunei Darussalam	0.665	0.664	0.667	0.674	0.677	0.674	0.688	0.687	0.691	0.692
Cambodia	0.440	0.451	0.479	0.502	0.511	0.529	0.542	0.549	0.554	0.568
Indonesia	0.468	0.479	0.494	0.506	0.519	0.528	0.546	0.554	0.561	0.578
Lao PDR	0.368	0.389	0.410	0.413	0.424	0.439	0.444	0.453	0.463	0.476
Malaysia	0.663	0.670	0.676	0.678	0.677	0.681	0.691	0.687	0.693	0.699
Myanmar	0.374	0.387	0.400	0.412	0.401	0.436	0.448	0.450	0.453	0.466
Philippines	0.464	0.476	0.480	0.497	0.480	0.507	0.514	0.511	0.515	0.522
Singapore	0.804	0.813	0.810	0.809	0.823	0.808	0.826	0.822	0.826	0.830
Thailand	0.505	0.498	0.522	0.524	0.528	0.537	0.553	0.563	0.567	0.574
Viet Nam	0.595	0.602	0.608	0.616	0.615	0.637	0.638	0.645	0.657	0.661
ASEAN	0.535	0.543	0.554	0.563	0.566	0.578	0.589	0.592	0.598	0.606

Source: <https://asean.org/book/asean-youth-development-index-2022/>

# Embracing the Digital Era Learning

**In 2020,  
37% of 4.7  
Million  
students  
all over the  
country do not  
have a device**

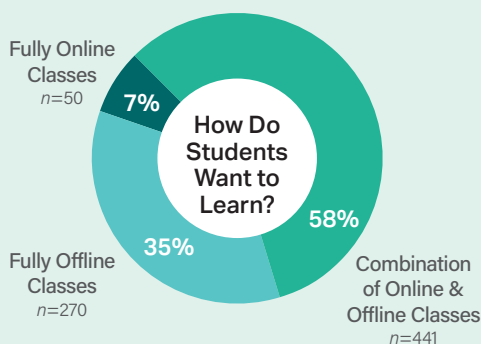


Source: Ministry of Education, 2020

Embracing digital and technological advancement, various platforms give opportunities for online learning among teachers and students. Amid the COVID-19 pandemic, online education offered numerous opportunities and accelerated digital adaptation in learning.

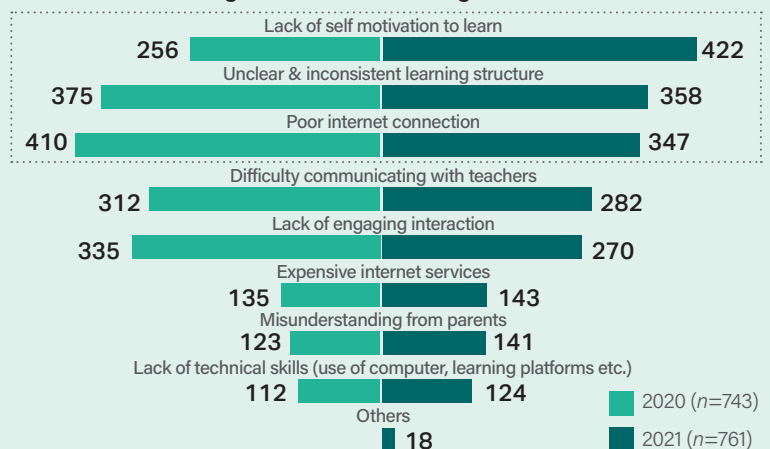
Based on the Student Voice Matter 2021 Survey of 761 Malaysian secondary school students, 58 per cent preferred a combination of online and offline classes compared to only 7 per cent selected fully online classes. In 2021, Students indicated that a lack of self-motivation is among the most significant challenges they face in online learning, followed by unclear and inconsistent learning structure and poor internet connection.

## Students want to learn using a combination of online & offline classes



## Students indicate that lack of self-motivation is among the biggest challenges that they face in online learning

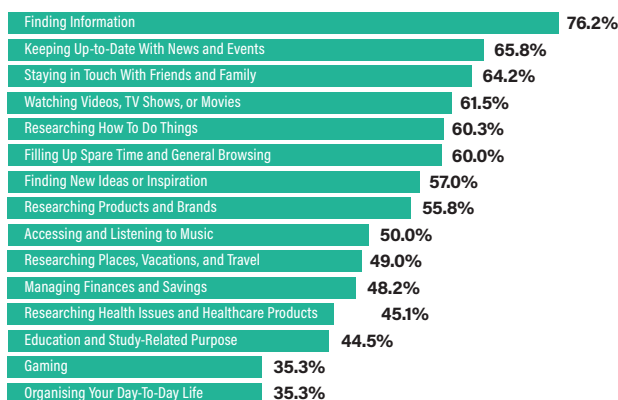
### Challenges in Online Learning, 2020 vs 2021



# Social Media and Online Platform

## Main Reasons For Using The Internet

Primary reasons why internet users aged 16 to 64 use the internet

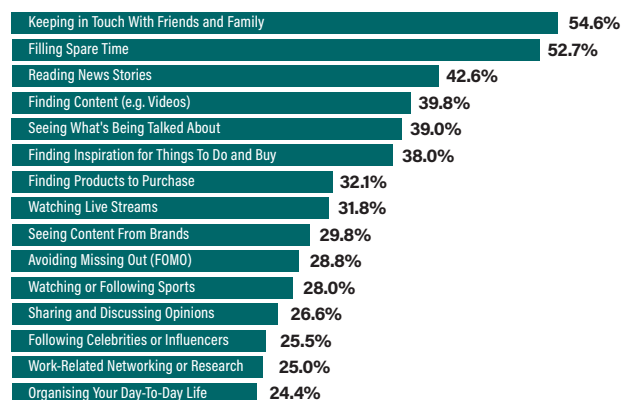


Source: GWI (Q3 2022)

Utilisation of digitalisation opportunities in kind of social media and online platforms for learning, gathering information and networking

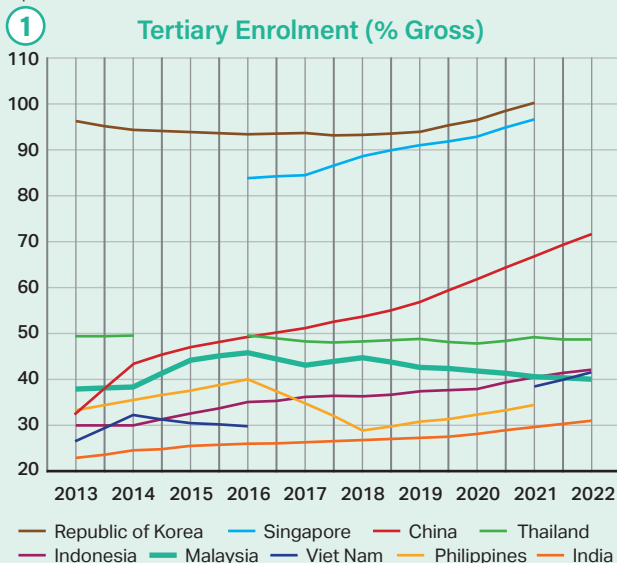
## Main Reasons For Using Social Media

Primary reasons why social media users aged 16 to 64 use social media platforms

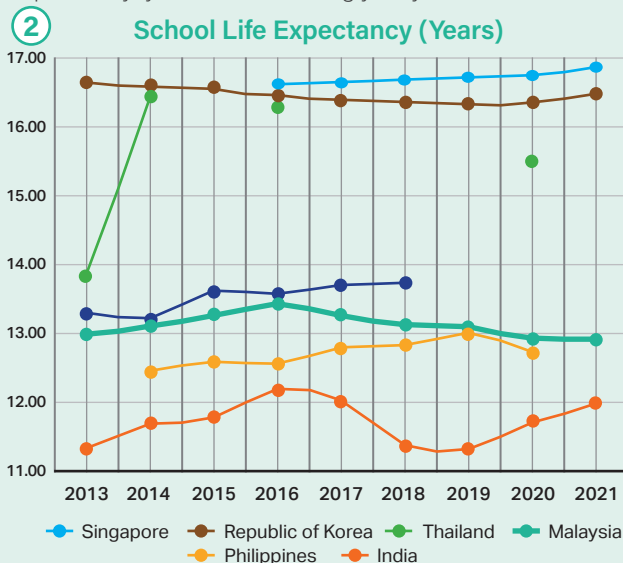


# Higher Education

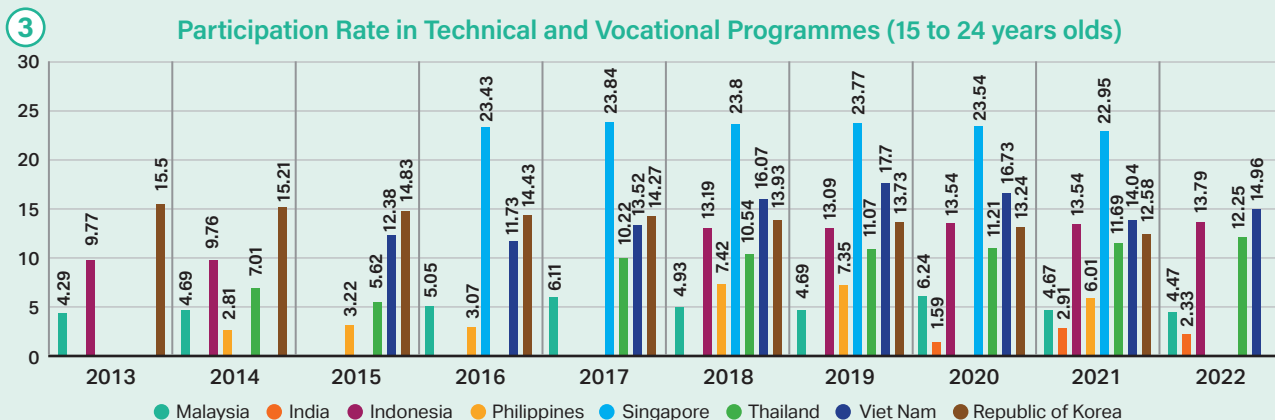
Malaysian tertiary enrolment has shown a downward trend since 2018. On the contrary, other peers showed an upward trend.



We are way behind Singapore and South Korea for School life expectancy. Furthermore, Malaysia's school life expectancy (years) is decreasing yearly.

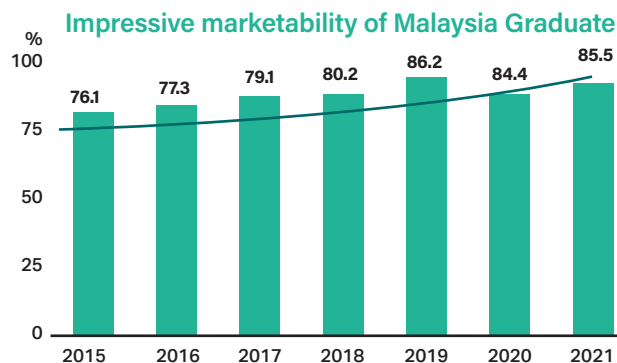


The participant rate in Technical and Vocational programmes is also low compared to our peers. Besides, there was no significant growth in the participant rate.



Source : 1,2,3 - UNESCO

# Employment

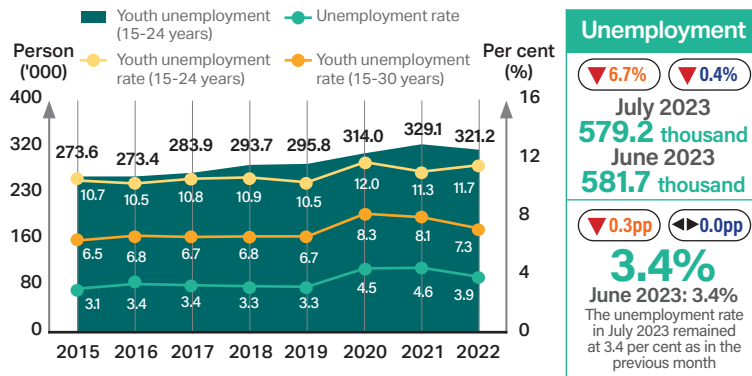


The graph shows the marketability rate of graduates from 2015 to 2021 obtained through the Graduate Tracking Study System. Malaysia aims to increase graduate employability to over 86.7 per cent by 2025. Malaysia achieved 90.2 per cent in 2022, exceeding the target (Mid-Term Review of the Twelfth Malaysia Plan). However, issues and challenges in talent development persist, which include an inefficient labour market and skill mismatch.



# Unemployment

The unemployment issues recovering slowly amid the COVID-19 pandemic

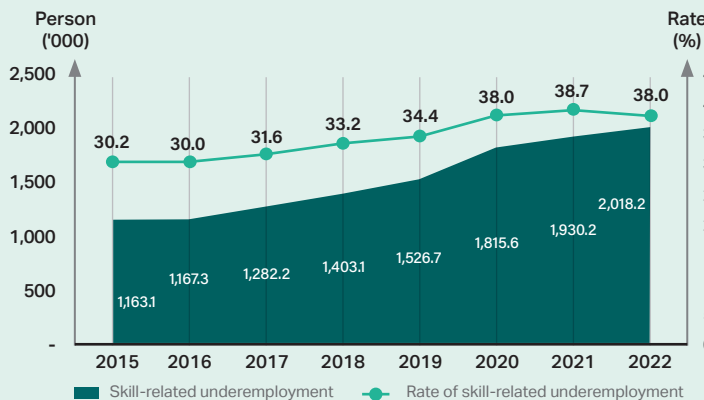


The overall unemployment rate in 2022 dropped to 3.9 per cent from 4.6 per cent in 2021, due to the improvement of the economy, which is gradually recovering from the COVID-19 pandemic. However, the unemployment rate for youth aged 15 to 24 expanded to 11.7 per cent in 2022 from 11.3 per cent in 2021. Likewise, for youth aged 15 to 30 years, the unemployment rate reduced to 7.3 per cent. Nevertheless, the youth unemployment rate recovered slowly after the pandemic.

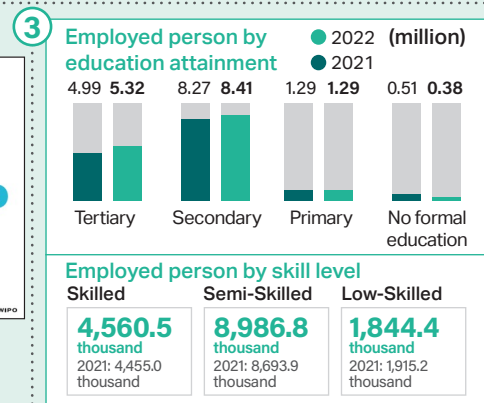
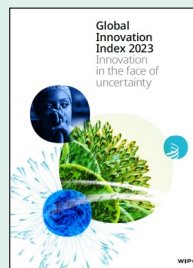
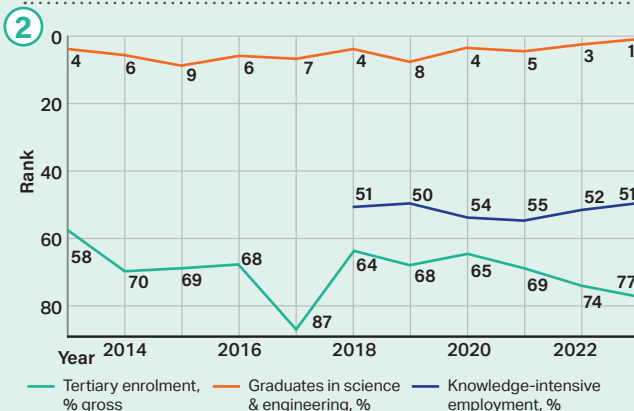
As of July 2023, Malaysia's unemployment is at 3.4 per cent, with a 10.9 per cent unemployment rate for youth aged 15 to 24 years and 6.8 per cent for youth aged 15 to 30.

## Underemployment and Skill mismatch

### ① Skill mismatch and underemployment are crucial



Skill mismatch between employees and future job opportunities was one of the issues concerned by Malaysian youth. Skill-related underemployment indicator measures those with tertiary education working semi-skilled and low-skilled jobs. From 2015 to 2022, skill-related underemployment shows an upward trend from 1.16 million to 2.02 million persons. However, looking at the rate, it registered a decrease to 38.0 per cent as compared to 38.7 per cent in 2021.



Based on Global Innovation Index 2023, showed Malaysia's position at the top (No.1) rank for indicator Graduates in science and engineering (per cent) in comparison to 132 countries all over the world. However, for knowledge-intensive employment (per cent), our ranking is only in the range of 50 to 55. Likewise, in the last 5 years, the tertiary enrolment (per cent gross) rank showed a decreased trend.

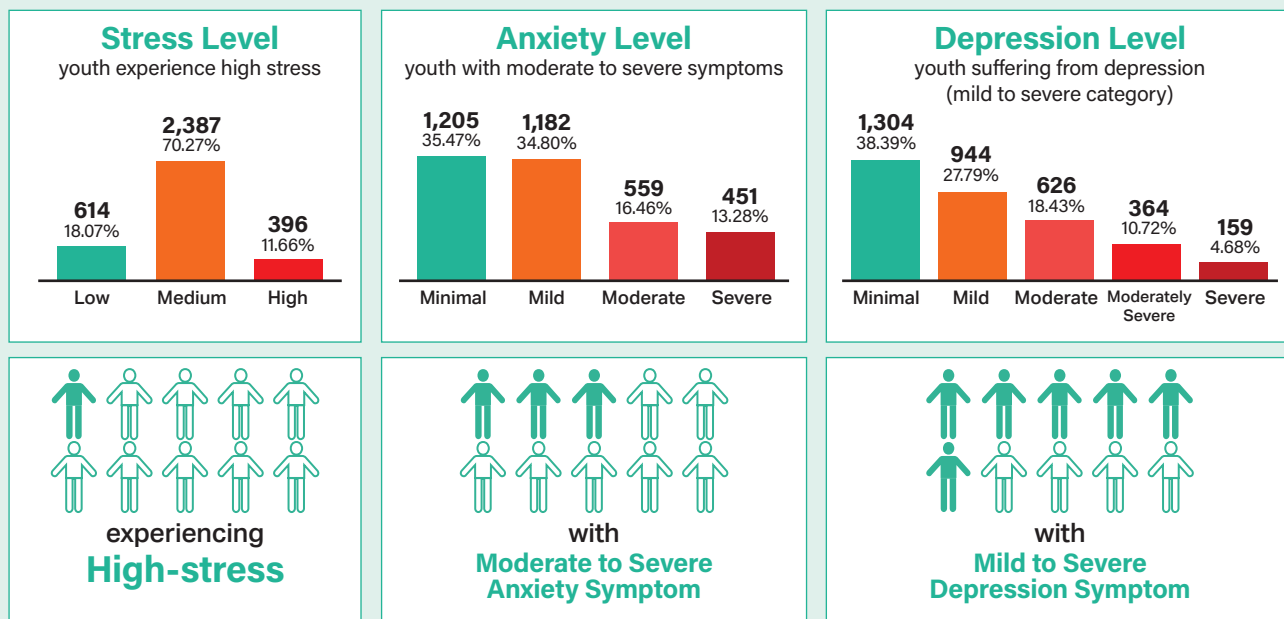
Source:

1. Department of Statistics Malaysia
2. Global Innovation Index 2023

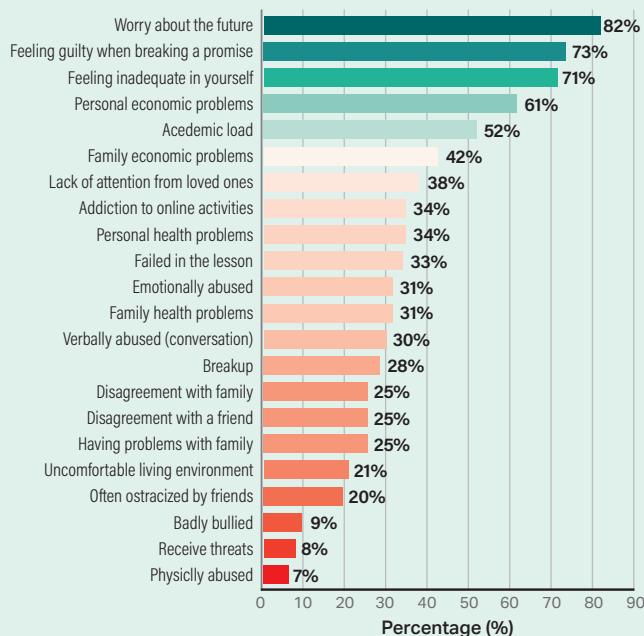
# Malaysian Youth Mental Well-being

Worrying about the future, feeling guilty when breaking promises, feeling inadequate in themselves and having personal economic problems are among the top causes of stress, anxiety and depression among Malaysian youth.

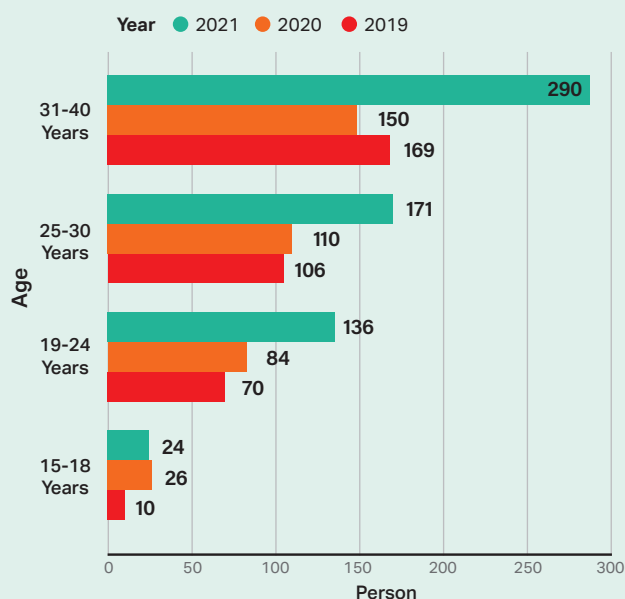
Suicide statistics among youths increase every year.



## 1 Causes of Stress/ Anxiety/ Depression



## 2 Suicide statistics among youths increase every year from 2019 to 2021 (PDRM, 2022).



Source:

1. IYRES (2022), *Kajian Profil Kesihatan Mental Dalam Kalangan Belia*
2. *Garis Panduan Menangani Isu Kesihatan Mental Belia Malaysia*, IYRES 2023

## Youth As One Of The Target Groups In The Twelfth Malaysia Plan



Referring to the Mid-Term Review of the Twelfth Malaysia Plan report, in strengthening youth development and participation, a national plan on youth economic empowerment will be launched by 2025, focusing on enhancing youth employability. More programmes will be organised, such as the new phase of the Rakan Muda initiative in collaboration with various stakeholders to develop and unlock youth potential and programmes focusing on enhancing awareness of democratic literacy among youth. A study will identify the profile of youth not in employment, education or training (NEET). In formulating policy on youth development, granular data on youth participation in government programmes and initiatives are crucial for accurate reporting and analysis.



Model Pembangunan Belia Madani (MPBM2030) is a powerful mechanism to look into youth disillusionment, especially the challenges of the pandemic era, namely unemployment, jobs, economy, education, mental health and the digital divide. The element that is worked on in MPBM2030 is reform “manhaj” (model) youth movement, internationalisation, futuristic, green technology and professional youth work. Furthermore, as a continuation of the Malaysia Youth Policy, this model will also help the government realise efforts to create dynamic, competent, competitive and resilient youth to face the current challenge and future change.



*Are our youth being supported sufficiently to address the challenges and changes?*



*Have we been creating dynamic, competent, competitive and resilient youth?*





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# Uplifting the Youth Capability Towards Climate-Smart Agriculture (CSA)

Is there any relation between agriculture and climate conditions; and can climate change disrupt our food supply and availability? The answer is yes. And to respond to climate change, conventional agriculture activity requires advanced sustainable practices in many aspects, which is commonly described as Climate Smart Agriculture (CSA).

The key philosophy of CSA is to promote the best practices of agriculture activities towards enhancing the productivity and resilience of the agriculture farm system in embracing climate change. As climate change and global warming have negative impacts on agriculture, food security and livelihoods, the implementation of CSA will improve the productivity of agriculture, adapting to climate change and thus mitigating greenhouse gas emissions.

The key principles comprise a few elements as follows:



### **Sustainable intensification**

Methods to improve agricultural productivity and preserve the natural resources without compromising the environment by applying solutions such as improved crop varieties, sustainable soil, water and agriculture waste management and integrated pest management.



### **Adaptation**

Increase the level of resilience for the agriculture system in facing climate change. Various practical solutions used include shifting the planting schedules, using resilient seeds with drought and flood-resistant characteristics, optimising soil and water management, and providing a preventive measuring system for weather conditions such as floods and heatwaves.



### **Mitigation**

Reducing the GHG emission from the agriculture sector, such as by capturing and storing carbon in soils and plants, reducing the emission of methane gas from livestock and improving the usage of naturally based fertiliser, using renewable energy found in agriculture farms and reducing energy consumption in agriculture activities.



### **Conservation and Restoration**

Conserving and restoring the ecosystems to ensure co-existence within and preservation of the surrounding biodiversity.



### **Information**

Obtaining the forecasting and real-time climate information for better decision-making processes and planning for agriculture activities. Information on market forecasting and intelligence will help stakeholders embrace the diversification of crops, intercropping etc.



### **Capacity Building and Knowledge Sharing**

The development of skills in smart farming practices will nurture the talent for innovative technology applications. Furthermore, the products invented from R&D can later be commercialised and put to market.

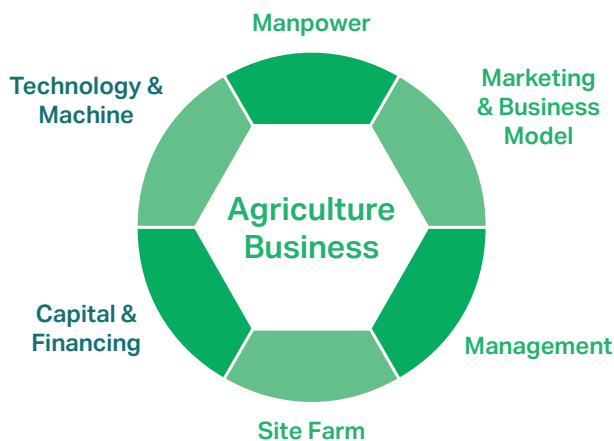


### **Social equity and gender development**

Community development model in agriculture activities to support the economy of lower income groups with benefits to both genders and are equitably distributed. The promotion of the CSA by the NGOs and social enterprises will also enhance the level of awareness involving governments, farmers, researchers, private sectors, financial institutions etc.

The two key elements of capacity building and knowledge sharing, social equity and gender development are very much interrelated and will be further elaborated in this article. As manpower or workforce factor is considered as a key parameter for the agriculture industry, there is a need to emphasise it to accelerate the industry's development. In the national context, total imports of the agriculture sector increased from RM98.3 billion in 2020 to RM120.5 billion in 2021, showing the scarcity of local agrifood production. In addition, the CSA initiatives play a critical role in the future agriculture industry. Thus, the involvement of youth in the CSA is very much essential to uplift their capability and capacity in ensuring sustainable food security.

### **Manpower or Workforce in the Agriculture Business Parameters**





## VIEWPOINTS

According to statistics, Malaysia is currently facing a shortage of workforce and talent in the agriculture sector, especially from the youth group. As of 2015, only 15 per cent of the workforce were youths and in 2016, only 4.2 per cent of tertiary graduates were willing to consider and pursue a career in agriculture. In 2019, only 10.6 per cent (equivalent to 1.6 million people) of our total workforce were involved in the agriculture sector. However, in 2021, the percentage further dropped to 10.3 per cent and was mostly dominated by the citizen group at a percentage of 63.6 per cent. According to the Green Technology Foresight 2030, the opportunity in the agriculture sector is huge considering the industry value from input supply, smart production systems, processing and manufacturing, distribution, marketing and consumption.

To promote the involvement of youth in agriculture, various initiatives and programmes have been implemented by a few institutions such as The Young Agropreneur Programme (Program Agropreneur Muda) by the Ministry of Agriculture and Food Security, and financial assistance from AgroBank.

MIGHT (Malaysian Industry-Government Group for High Technology) has also put a significant effort into driving youth involvement in smart agriculture via a special platform of Upskilling Programme for Deeptech Futureskills under the Ministry of Science, Technology, and Innovation (MOSTI). In this initiative, an opportunity was given to upskill their theoretical knowledge and hands-on practical in smart farming as part of the features of the CSA. Youth participants were given exposure to learn the latest technology solutions and agriculture best practices such as precision vertical farming (PVF) featured with a controlled environment in a container-based and integrated IOT fertigation system.

### Upskilling Programme for Deeptech Futureskills in Smart Farming towards CSA



### Precision Vertical Farming (PVF) system



The Precision Vertical Farming (PVF) system was operated in Shah Alam, Selangor and Desa Pandan, Kuala Lumpur, and is managed by Datanam focusing on Basil leaves production and other types of high-end vegetable products. Datanam, together with its subsidiary, are also venturing into large scale Napier farming. The PVF system provides an advantage to the plants by creating an efficient controlled-environment system as it offers key features of horticulture LED, energy efficiency, IOT integration, irrigation systems, CO<sub>2</sub> monitoring system and automation with zero pesticides. Besides, the participants also were introduced to multiple PVF systems such as Type-C (Container), Type-W (Warehouse), Type-S (Shoplot) and PVC Type-H (House) which can be suited based on customer needs depending on the cost, space availability, production plan and plantation type (lettuce, cabbage, mushroom, basil etc). Participants were also given an opportunity to learn about the Smart Farming Fertigation System based on IOT. The smart farming systems located in Kuala Kangsar, Perak focus on the production of aquaponics, cucumber, brinjal and chilis, is operated and managed by Koperasi Gabungan Usahawan Tani Kuala Kangsar (KOGAHAD). Currently, KOGAHAD has the capability of a system integrator and operates more than 4 farming sites in Kuala Kangsar, covering 50 acres of land and will soon venture into corn plantation.

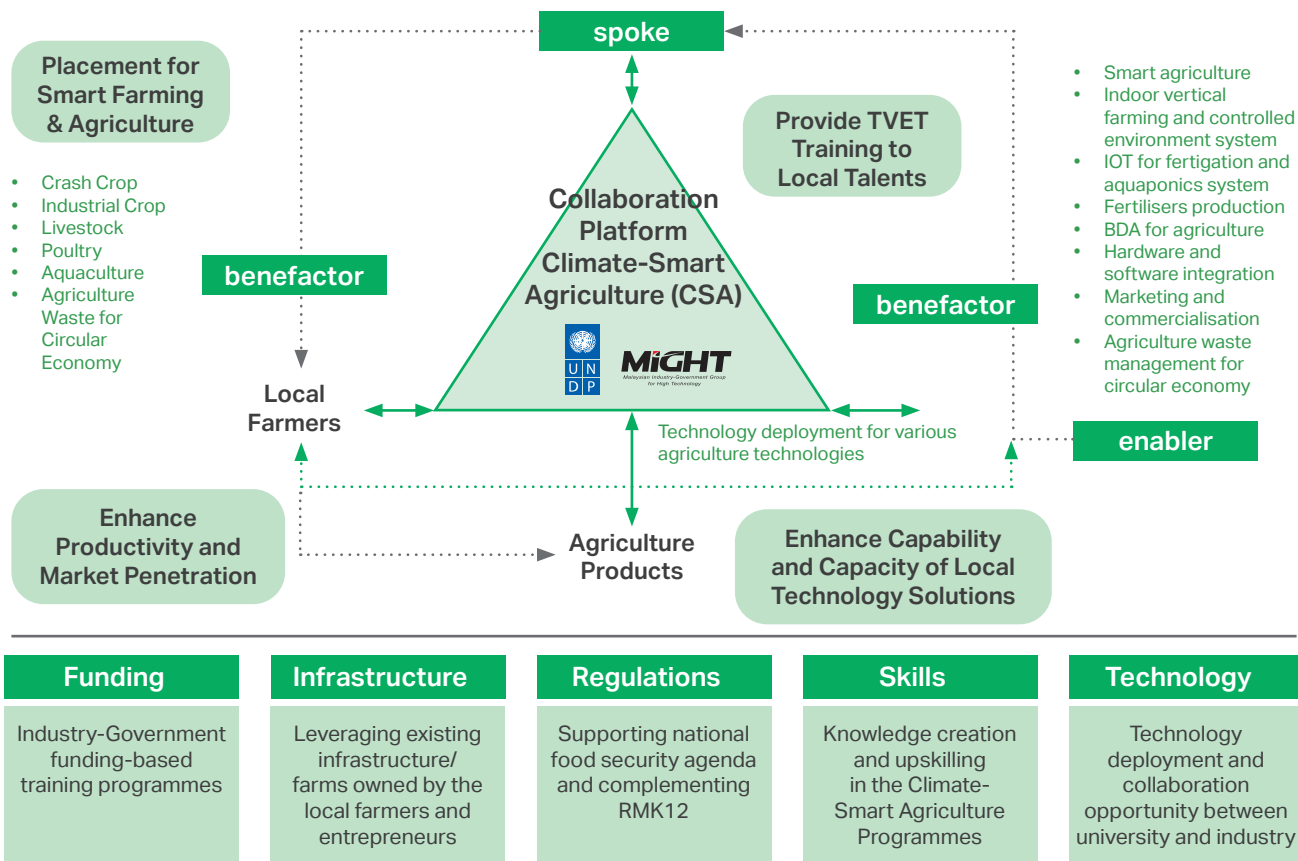
### Smart Farming Fertigation System based on IOT





In this context, there is a huge opportunity to fill the knowledge gap in the agriculture sector for youth development. A holistic capacity-building programme via a strategic platform focusing on CSA will also enhance the TVET knowledge of our youth in the CSA via industry collaboration based on the placement model of the participants to practise the technologies for agriculture. This will require a strategic intervention to facilitate the overall framework development, identify the strategic agricultural farm for CSA implementation, due diligence on the technology solutions, develop the knowledge module and coordinate the overall implementation process. This initiative can be guided by the F.I.R.S.T.® framework to structure the CSA programme comprehensively covering financing, infrastructure, regulation, skills and technology knowledge of young people as shown below.

### Conceptual model of collaboration platform for youth involvement in the CSA



Towards the future, the shift model of CSA needs to be incorporated into the local context of the agriculture industry. This is supported by projected increases in global temperature, fluctuating patterns of precipitation, extreme weather conditions and water stress, which will affect agricultural productivity. Our youth needs to be equipped with knowledge substance and 'wow' factor by creating strategic CSA programmes as this will address the issue of youth and workforce in the agriculture sector. This is also aligned with the national agenda on food security and producing new talents in CSA. Furthermore, the CSA collaborative programme will provide an opportunity for local solutions providers to deploy technology and to strengthen the partnerships amongst all parties. Ultimately, productivity of our agriculture industry will be multiplied and enhanced with the existence of knowledgeable, experienced and technology-driven generation of the future.

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# History Class

## Things We Can Learn From Young Inventors

**C**an you imagine a day without the internet or your phone? How does it feel like? We live in an age where the inventions of past investors have become ingrained in our lives. While seasoned inventors and established industry leaders have traditionally hogged the limelight, it is becoming increasingly evident that innovation knows no age boundaries. Young inventors, armed with unrestricted curiosity, unorthodox perspectives, and a passion for exploration, are making their mark on the world in extraordinary ways. Here are some of the examples of the breakthrough inventions that we know today hatched from young inventors.

## Historical Inventors

Blaise Pascal (19) designed the mechanical calculator to assist his father, a tax commissioner.

Chester Greenwood (15) created the inaugural earmuffs after experiencing the discomfort of his ears while ice skating due to extreme cold weather. He patented the invention and marketed it to soldiers during World War I.

Joseph-Armand Bombardier's (15) fascination with mechanics had been a constant part of his life, and this interest led him to invent the snowmobile.

George Nissen (16) invented the trampoline. His inspiration stemmed from observing trapeze artists concluding their acts by landing in a safety net.

1642

1717

1873

1876

1922

1924

1930

Before discovering electricity, Benjamin Franklin (11) already possessed a young inventor's spirit when he invented the swim flippers.

Alexander Graham Bell (29) invented the telephone. His revolutionary communication device forever changed how humans connected across vast distances.

Louis Braille (15) was 3 years old when he became blind. Amidst the limited resources available for the blind during his era, it was remarkable that he then invented the Braille code that serves as a global means of communication for the blind community until today.

## Modern Inventors

Larry Page and Sergey Brin (25) co-founded Google. Their innovative search engine introduced a novel ranking pages algorithm based on relevance and popularity.

Jan Koum (33) incorporated WhatsApp Inc. in California. Together with Brian Acton, they developed WhatsApp, which transformed the way people communicate.

Hannah Herbst (13) invented a device capable of capturing the energy of ocean waves and transforming it into electricity. This concept was spurred by her correspondence with a pen pal in Sub-Saharan Africa, where electrical power was limited.

Maryam Muzamir (11) from Kuantan, Pahang, succeeded in inventing a sustainable livestock feed from seafood shells. She secured three international awards at the International Invention Competition (iCAN) in Toronto, Canada.

1998

1989

2009

2001

2015

2010

2016

2021

Tim Berners-Lee (34) proposed a system to link and share information globally, leading to the creation of the World Wide Web. His innovative concept paved the way for the modern internet.

Pua Khein Seng (27), a Malaysian inventor, invented the world's first single-chip USB flash drive when he founded the Phison Electronics Corporation while studying at a university in Taiwan.

Kevin Systrom (24) and Mike Krieger (27) created Instagram in 2010. This photo-sharing app quickly gained popularity for its simplicity and visual focus.

Emma Yang (12) created an app named Timeless, driven by her desire to assist her grandmother who suffers from Alzheimer's. The app enables family and friends to upload photos and label with the corresponding person's name & category, helping the patient to remember.



### What can we learn from them?

Innovation knows no age limits. We live better lives because of the creative genius of people with innovative ideas who had the courage and initiative to bring those ideas to life. Supportive surroundings also foster creativity, encouraging young inventors to explore ideas fearlessly, learn from failures, and ultimately unlock their full innovative potential. In this section, we uncover the invaluable lessons they offer us.

#### Necessity to Improve Lives

When people encounter problems that directly affect their well-being, safety or quality of life, they are compelled to find solutions. Empathy and compassion towards the challenges others face, especially those less fortunate, can also inspire individuals to create inventions that alleviate suffering, improve living conditions, or enhance accessibility to resources.

#### Supportive Surroundings

Supportive surroundings play a pivotal role in nurturing the best young inventors. Positive environments provide resources, mentorship, and freedom to experiment. Louis Braille's parents persevered, sending him to school despite his blindness. This fosters confidence, resilience, and innovative thinking, enabling him to flourish and contribute groundbreaking ideas to the world.

#### Innovative Thinking

Dare to step outside the confines of tradition can lead to unanticipated, groundbreaking solutions. Young inventors are renowned for their ability to think beyond the boundaries. When conventional approaches fall short, they are more likely to explore unconventional methods and ideas, leading to breakthrough inventions.

#### Breaking Barriers with Limited Resources

Limited resources often nurture creativity. Young inventors frequently find themselves working with constrained budgets, tools and materials. Instead of allowing limitations to stifle their imagination, they view these constraints as challenges to overcome, transforming the obstacles into opportunities.

#### Embracing Fearlessness and Failure

One of the most notable qualities shared by young inventors is their fearlessness towards failure. While failure can be discouraging, young inventors see it as a stepping stone rather than an obstacle. This resilience and capacity to bounce back teach us that setbacks are temporary, and that pursuing innovation demands the fortitude to weather challenges.

#### Cultivating Curiosity and Lifelong Learning

Curiosity is the mother of invention, they say. Curiosity fuels the fire of innovation, and young inventors embody this trait wholeheartedly. Their insatiable desire to explore and understand the unexplained ignites their creative drive.

#### Collaboration and Multidisciplinary Approach

Young inventors recognise the value of collaboration and interdisciplinary perspectives. They often bridge various fields, combining ideas and approaches to create holistic solutions. The lesson is clear: collaborative efforts can lead to well-rounded innovations that address multifaceted challenges.

#### Championing Sustainable Solutions

With a heightened awareness of environmental issues, young inventors frequently prioritise sustainability in their creations. Youths like Maryam, understand that innovations should not only address current needs but also ensure a harmonious coexistence with the planet. This emphasis on sustainable solutions sends a resounding message about the importance of considering long-term consequences in every innovation.

#### Embodying Digital Literacy and Tech Savviness

Growing up in a digital age, young inventors possess a natural fluency in technology. Emma Yang, for example, leverages digital tools, online resources, and emerging technologies to accelerate her innovation journeys. This proficiency emphasises the significance of digital literacy in today's rapidly evolving landscape.

## Conclusion

Innovation takes courage. Success often involves setbacks, and even the best creators face their share of mistakes. Do not quit just because things get tough at the beginning but keep pushing forward. You absolutely can have the next great idea or contribute to new developments. Well-defined problems lead to the most innovative solutions. Be brave, be bold, and make your unique ideas come to life.

However, the journey of a young inventor comes with challenges. Navigating the complex process of innovation, and the doubt that can come with being young, takes strong determination. Many young inventors struggle to get funding, find mentors, and gain credibility in established industries. But these difficulties can fuel their determination, making them find new ways and question old ways of doing things.

Supporting and nurturing young inventors is crucial for a bright innovative future. The Malaysian government, schools, industries and various organisations have been known to organise events, competitions, and programmes to create an environment where young minds can thrive and showcase their talents. Events and programmes such as Khazanah Impact Innovation Challenge, MYHackathon, ASTI's Young Inventor Challenge (YIC), International Invention, Innovation & Technology Exhibition (ITEX), Sime Darby's Young Innovators Challenge (SDYIC), World & Malaysia Young Inventors Exhibition (WYIE), give young inventors the chance to show their ideas and get advice from experienced people. After all, the inventions of today's young minds hold the promise of making a better and more inventive future.

## Fun Facts:

### Some ideas are better left as ideas.

Have you ever thought up something and later decided it was not your best idea? Well, these people shared the same experience, except for one key distinction: the consequences of their ideas have touched the lives of millions. These are inventors who found themselves grappling with regrets concerning their creations.

### Alfred Nobel: Dynamite

Alfred Nobel was 34 when he invented dynamite for construction and mining. However, Nobel's unforeseen consequence was the inadvertent creation of a destructive weapon that was used mostly in warfare. He regretted and initiated the establishment of the Nobel Prizes, including the Nobel Peace Prize, to foster peace and honour achievements in fields such as science and culture that contribute positively to humanity's betterment.

### Ethan Zuckerman: Pop-up ads

Few things can be as frustrating as those annoying pop-up ads interrupting your online browsing. Ethan Zuckerman was 23 when he produced these irritating ads when he worked for a company that offered free web pages and wanted to make money from them. Nowadays, Zuckerman is known as someone who advocates for a better and more user-friendly internet.

### Mikhail Kalashnikov: AK-47

Mikhail Kalashnikov was 28 when he invented the AK-47 assault rifle during World War II. This weapon has since become one of history's most widely utilised arms due to its reliability, durability and ease of mass production. Kalashnikov experienced deep remorse for the suffering and loss of life attributed to his creation.

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## Leveraging Youth Engagement for Building Smart Cities of the Future

Cities are not merely structures, but are also the lives and activities of their inhabitants. They are vibrant spaces where people live, work and play, and are centres of innovation, heritage, culture and economic progress. Citizens form the physical and social landscapes, while cultivating urban experiences, attitudes and actions. Indubitably, cities will also shape the next societal generation, paving the way for both individual and collective living. Hence, we need to delve into the needs and requirements of the young, and rightfully include them in building the future of smart cities. A case study of successful youth engagement programmes and recommendations for future action, will be useful in planning Malaysia's future ecosystem.



## Amsterdam Smart Cities – Mobilising Cities with the Young

Since executing its entire smart city strategy in 2009, the Dutch capital, Amsterdam, has emerged as a renowned smart city in Europe. The plan, which focuses on smart economy, environment, governance, lifestyle, mobility and people, involves the government, companies, universities, research institutions and inhabitants. The City Data project was developed in partnership with over thirty city organisations and covers topographical, address, land value, healthcare and transportation data. With a population of 4.9 million young people aged 0-25, 234,000 of these youth lives in Amsterdam. The 'Amsterdam's City Doughnut' project aims for a thriving, regenerative and inclusive city, respecting planetary boundaries. Amsterdam's elementary schools have embraced circular economy ideas in their "Circular & Education" credo. The education system is crucial for developing knowledge, skills, values, performance and attitude transformation, equipping future generations to adopt sustainable lifestyles and future-proof a circular city.

In most nations, local governments and government agencies have traditionally dominated urban planning and development. They have assumed strategic, decision-making, and technical implementation responsibilities, but most need more skills to complete a full smart city project. Thus, instead of working in silos, it is vital to incorporate all interest groups to create fresh answers to the issues of modern cities. Young people, who are rapidly expanding in number, and actively seeking more venues and services to realise their potential, are an underrepresented segment in this process.

### Youth Impact to the Cities

According to UN Habitat, by 2030, 60 per cent of urban populations will be under the age of 18, a group known as the 'youth bulge'. Demographic experts believe that a large young population poses difficulties and possibilities for cities, particularly in developing nations. It frees up investment resources, offers job possibilities, and enhances production when supported by favourable conditions.

Youth age groups offer several demographic and socioeconomic issues in their absence. Overall, cities' substantial proportion of the youth population is anticipated to remain, thus, cities should plan for this demographic transformation to turn challenges into opportunities. The features of the younger generations will affect and eventually redesign cities' economic, social and environmental models. According to Pew Research Centre research published in 2021, Generation Z and Millennials (born after 1980) are "more likely to make green decisions" than Generation X and Baby Boomers (born between 1946 and 1979).

According to the report, 83 per cent of younger people are aware of responsible waste management, 74 per cent are interested in decreasing their energy use, and 71 per cent are eager to make sustainable buying decisions. They are also less interested in owning a car and are more likely to rely on public transportation or carpooling services. Regarding the digital qualities of smart cities, the International Telecommunication Union (ITU) claimed that young people are now the primary internet users across all geographical regions. While it is tempting to assume that they simply use it to connect to social media, Eurostat data reveals that youth also use the internet for education, job seeking, coding, and engaging with their governments, all of which fall under the purview of smart cities.

To gather potential solutions to future-proof future cities and their inhabitants, the Malaysian Research Accelerator for Technology and Innovation (MRANTI) organised the "Reimagine the Way We Live in Cities" Design Challenge, which attracted 690 youths aged 18 to 30. This demonstrates that Malaysia has a wealth of STI/STEM potential, and programmes like this design competition provide a clear path for these young innovators to pursue their interests in these subjects. Another programme called The Kuala Lumpur Engineering Science Fair (KLESF) aimed at fostering STEM interest among primary and secondary school students supported by various partners including, the ASEAN Academy of Engineering and Technology, IEM, MIGHT, MINDS, TAR UMT and UTAR.

Youth have historically been at the forefront of urban transformation. Each generation tends to establish its own set of values, reacting to those of the preceding generation, while being affected by more extensive social, political and economic situations of the moment. It is during this youthful period, these ideals blend, congregating energy and resources to transform them into lifestyle and societal change. These are just a few examples of how youth are beginning to impact and modify the city's environment via their everyday activities, pushing our society to become more sustainable and digital.

### Youthification!

Cities nowadays offer more services, public transportation and housing options than in the past, but rising costs are causing affordability issues. Millennials are making placement selections amid decreasing job stability, increasing expenses and high-density redevelopment in suburban areas. Youthification is driven by a combination of lifestyle, demographic, macro-economic and housing market changes, that require further investigation.

It is time for 'Youthification' and discovering youth's passion! How do we start to engage the young to help us transform today's cities and, of course, the cities' future? Start by identifying youth voices, investigate their needs, and then serve as a bridge by linking the youth with our government,

industry, and community, allowing them to inspire us. Youths will make significant differences to the process by being enthusiastic, becoming informed and participating actively. Do not underestimate the potential of young participation and action. In this era of digitalisation, gaming platforms can also be utilised to engage adolescents in developing future smart cities with greater transportation connectivity, economic growth, security and safety, health and education enhancement, and the pursuit of a sustainable living environment. Furthermore, social media initiatives can galvanise youth participation to solve environmental problems, battle climate change and raise awareness about the smartness of the cities.

Youthification in shaping future smart cities, can also encourage youth to think strategically and imaginatively about solutions to real-world challenges. Develop the right skills. It has been said that the wishbone will never replace the backbone. If young people are serious about making a difference, we must lay a solid base. Smart cities require a highly educated workforce capable of utilising cloud-based, mobile and social media platforms effectively. It also includes gathering massive quantities of data from every element of urban life, such as transportation, energy and water consumption, healthcare, and public safety, and then transforming that data into actionable insights that result in smarter cities.

### Building Future Smart Cities - Together with the New Generation

Promoting youth as stakeholders in sustainable urban development may help to strengthen systems based on human rights and democratic values, while also maintaining equality and non-discrimination. Youth, who constitute most of the population in many cities, seek participation in urban development. When working with and for children, policy makers and planners should consider their skills, knowledge and experience. Youthification may devote some tools to assist policy makers in developing instruments to increase youth participation, as well as training to gain the qualified workforce required for future smart cities.

Generate positive associations between smart cities and the youth by tackling the core causes of inequality that young people face. Cities may benefit from fresh ideas on how a young population can help local economies overcome income inequalities and increase revenue for local governments. Cities may boost their potential for prosperity, equity and innovation, by combining policies that account for a greater young population living in and migrating to urban regions. By ensuring that children have a voice and are acknowledged as stakeholders in legislative frameworks, cities can capitalise on the potential characteristic in the urban demographic youth projection.

Youth require the ability to be change agents, to coordinate their efforts in pursuit of goals, in both their private and public lives. Cities' stakeholders must be prepared with abilities for planning and problem-solving that can shape future smart cities that operate in the twenty-first century. It is critical to remember that the pursuit of inclusive planning processes is not just about expanding young people's experience base, it is also about transforming cities' governmental attitudes, communities' behaviour, industry perception and policies to approach decision-making with youth as a normal activity.

There has never been a better opportunity to have discussions on the needs to involve youth in decision-making and normative processes for future smart city development. Only with their participation will we be able to create future smart cities that are equitable, sustainable, growing and liveable, allowing them to live and prosper while also unleashing immense potential for future generations.

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## Attracting Youth Participation in the Maritime Industry

**T**he Maritime industry covers everything connected to the sea or worldwide waterways, especially in relation to navigation, shipping and marine engineering. It has direct impacts on much of our everyday lives. Consider, for example, the sea-based movement of oil that powers our cars, factories and homes. Those ships also transport the coffee we drink, many of the foods we eat, and the clothes we wear, among other things, from faraway lands to our shores.

Technology serves as a compelling magnet for young talent in the maritime industry. Its promise of innovation, connectivity and safety improvements aligns with the preferences of digitally savvy individuals seeking diverse, sustainable career paths. As the industry integrates advanced tech solutions, it not only offers exciting opportunities but also addresses the evolving needs and values of the new generation, making it an attractive and dynamic field for young professionals to consider.

### Emerging Technology Trends Shaping Maritime Careers

Several technology trends within the maritime industry provide insights into the career prospects, contemporary demands, and skills required for individuals considering this field.

#### 5 TRENDS IN THE MARITIME INDUSTRY THAT MAY SHAPE THE FUTURE



#1



Autonomous Ship

The autonomous ship market is projected to reach **USD 8.2 Billion by 2030**, a compound annual growth rate (CAGR) of 9.6 per cent during the forecast period

Source: marketsandmarkets



Norway is focusing on technological competence to dominate the autonomous ship market

3.9 USD BILLION 2022



8.2 USD BILLION 2030

Source: marketsandmarkets

### Why it matters?

The technology may enhance safety and cost savings by eliminating human barriers from difficult and dangerous shipping tasks.

The market is triggered by the increasing world trade by sea, maritime navigation and demand for automation systems for safety, as well as the growing maritime tourism.

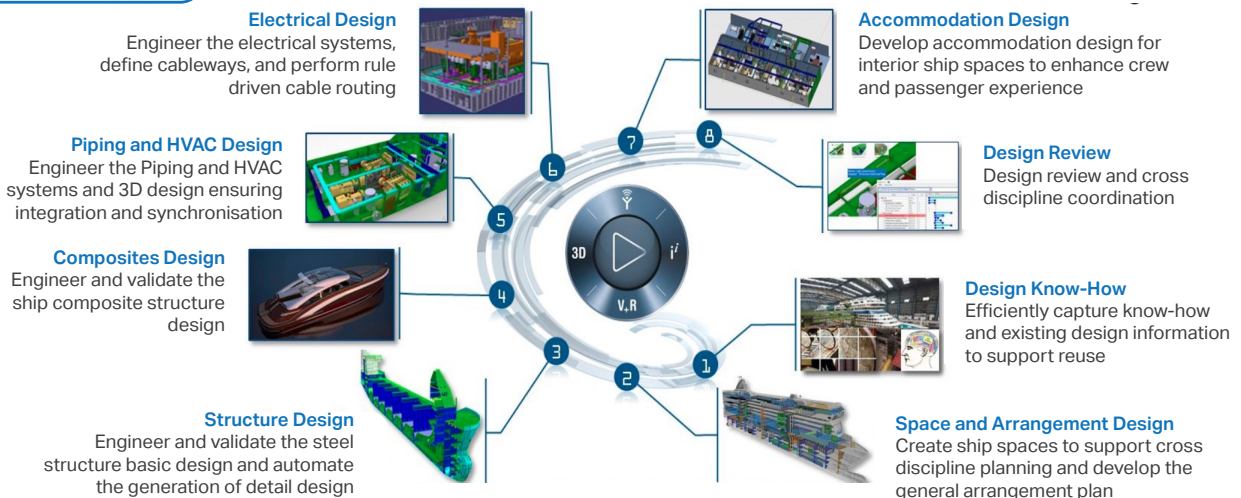
#2



Product Life Cycle Solution

The Global Quality and Lifecycle Management Software Market size is expected to reach **USD46.9 Billion by 2028**, rising at a market growth of 7.3 per cent CAGR during the forecast period

Source: Reportlinker.com



Source: Dassault Systems &amp; IBM

Design in ship's product life cycle solution.

### Why it matters?

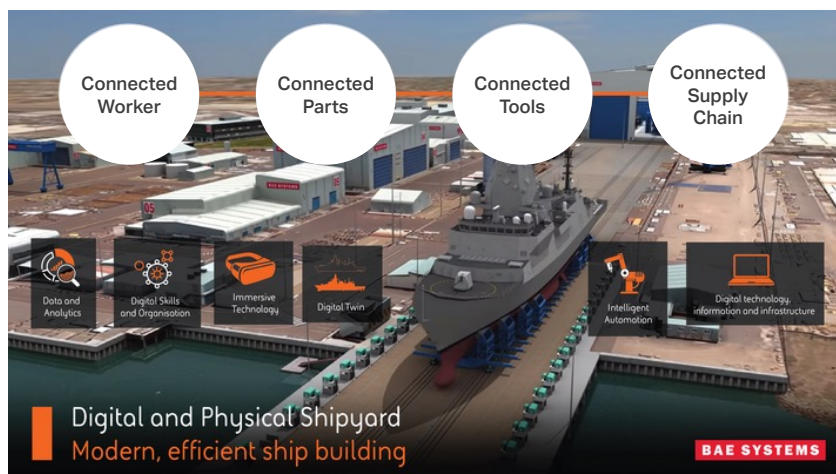
Opportunities in terms of new design techniques and technologies incorporating new material, processes and methods, are changing the industry. These cost saving elements are continuously spurring design development processes that can make Malaysia more cost competitive.

#3

Digitalisation  
Shipyard

The digital shipyard market was estimated at USD693 Million in 2020 and is projected to reach **USD 3,967 Million by 2030**, at a CAGR of 19.1 per cent from 2020 to 2030

Source: ReportLinker



Digital and physical shipyard for modern, efficient shipbuilding.

Source: BAE Systems

### Why it matters?

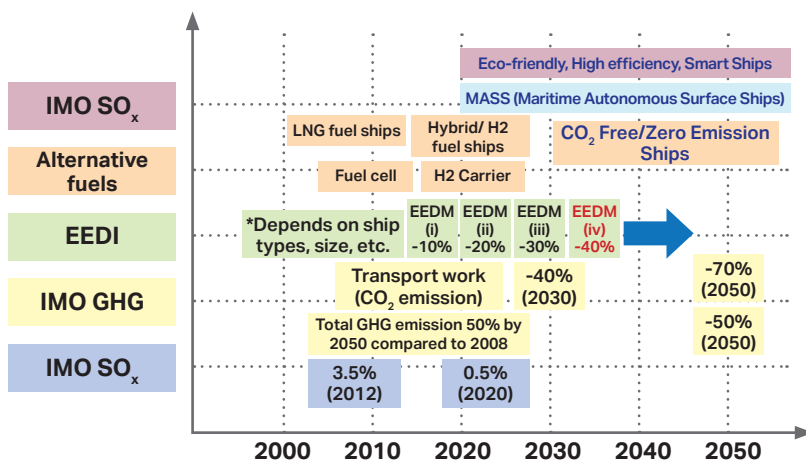
Machine learning, virtual and augmented reality, plus artificial intelligence are among the cutting-edge technologies being used by some of the industry's leading innovators.

Any changes or updates to ship design, data or project management are communicated via integrated centralised data sharing, and accessible to all stakeholders.

#4

Regulations On  
Green Practice

International Maritime Organisation implemented the Green House Gas (GHG) strategy in 2018, to reduce sea freight-related carbon emissions by **40 per cent by 2030 and 70 per cent by 2050**, compared to 2008 levels



Ship's energy efficiency management plan.

Source: International Maritime Organisation

### Why it matters?

To achieve these set targets, several measures need to be taken to improve the efficiency of ships' energy use, optimise the speed and operations of the ship, and focus on alternative fuels.



#5



Aeromarine  
Industry

Ground-effect vehicle or wing-in-ground-effect craft, combines an air-cushioned vehicle and an aircraft that glides close to the ground. It has a propeller engine that allows it to **travel over the water's surface**, and its wings allow it to **fly and support itself in the air**.



### Why it matters?

Game changer in the transportation industry.

1. Roll-on roll-off operation with minimum surface resources without transportation infrastructure
2. Classification as boat not aircraft
3. Suitable for coastal and riverine transport
4. High fuel efficiency when operating in ground-effect

## Enhancing Youth Participation and Diversity in the Maritime Industry: Looking from the Youth's Perspective

Young people often seek safety and are drawn to leisure activities, technology and enjoyable experiences. To increase youth engagement in the maritime sector, it is essential to align initiatives with their preferences and interests.

- **We are tech-savvy:** Utilising new technologies is crucial for enhancing the maritime industry's work environment, making it more appealing to young talent. This includes providing secure jobs, competitive wages, enhanced safety measures, and reducing working hours and fatigue
- **We are fast learners:** Modern training and qualification programmes should offer real career pathways for young individuals, encompassing both on-ship and onshore opportunities, even amid industrial transformations
- **We support Girl Power:** Despite a significant rise in the number of women pursuing education and training in maritime and ocean-related programmes over recent decades, their participation, retention and advancement into leadership roles in various ocean sectors, especially the maritime industry, have fallen behind
- **We can quickly adapt to technological changes:** The adoption of advanced automation technologies is anticipated to diversify career opportunities, thereby requiring a robust and scalable talent pool to support the evolving maritime industries of the future
- **We are multi-faceted talents:** The primary obstacle to youth recruitment is a lack of awareness regarding the wide range of career opportunities within the marine sector, coupled with a common perception that entry into the industry is challenging

In summary, many young individuals exploring potential career options may not initially consider the maritime sector. What is not publicly discussed or exposed are the industry's diverse career opportunities, attractive remuneration packages, and high job satisfaction rates being relatively unknown to the general public, especially among high school students planning their futures.

Drawing inspiration from the Association of British Columbia Marine Industries website's tagline, "The Marine Industry: A Place for Me," it underscores the maritime industry's inclusivity and diverse nature. It is a space where individuals can truly be themselves, with pathways available for everyone. For young people, it is an opportunity to delve deep and discover where they can find their place and belong within this dynamic sector.



## National Biodiversity Roundtable (NBR) Workshop

MIGHT, Cyberjaya

18 May 2023

On May 18th, MIGHT facilitated a National Biodiversity Roundtable (NBR) Workshop led by Prof. Emeritus Tan Sri Zakri Abdul Hamid, the Chairman of the NBR, to convene stakeholders for discussions in a hybrid format. Sixty participants attended in person, while the remaining participants joined online. During the workshop, stakeholders presented the NBR's work and shared their perspectives on the future biodiversity management in Malaysia. The NBR's activities from 2021 to 2023 were reported and discussed throughout a one-day workshop. The primary outcomes of the workshop include the NBR's findings and recommendations regarding biodiversity governance and management at both the national and international levels.

## Talk For TMIDS at UPNM

MIGHT, Cyberjaya

10 June 2023

On June 10th, MIGHT's participation in the Technology Management and Innovation for Defence & Security (TMIDS) event for the MSc International Technology Management for Defence & Security (MITMDS) programme for the 2023/2024 academic year, was proudly represented by Mr. Rushdi Abdul Rahim.

The 6-day event was hosted by the NDUM Institute of Executive Education (NIEEd) at Universiti Pertahanan Nasional Malaysia (UPNM) in partnership with Warwick University.

## SIRIM-Industry Workshop

MIGHT, Cyberjaya

17 July 2023

MIGHT's involvement in the SIRIM-Industry Workshop for Translating Frontier Technologies into Business Opportunities and National High-Impact Programme on July 17th and 18th, and August 3rd, 2023, was marked by Mr. Mohd Nurul Azammi's presentation on 'Economic, Technology Trends and Government Directions'.

The workshop focused on a few critical areas of megatrends, encompassing economic, technological trends and government directions. It was a convergence point for industry experts, innovators and visionaries, who collaboratively identified, prioritised and developed national high-impact projects and programmes.

These initiatives are poised to drive Malaysia's economic growth, harnessing the boundless potential of frontier technologies. MIGHT presented ten megatrends that will impact the future landscape of technology and the economy.

## Leading Into The Future

Mercure Langkawi, Kedah

25-28 July 2023

Titled "Leading Into the Future: Advanced Leadership Development Programme", this transformative event was held from July 25th to 28th, 2023, at the Mercure Langkawi, Kedah.

Dr. Tan Shu Ying was invited as a guest facilitator and was set to ignite the minds of aspiring leaders. As the world deals with unprecedented challenges, MIGHT's wisdom becomes more relevant than ever. Her session delved into the concept that "the best way to predict the future is to create it."

Participants engaged in various activities to ensure understanding, and applying foresight in strategic leadership. These competencies are the keys to unlocking an organisation's potential and in navigating the dynamic business world.

## 9<sup>th</sup> Asia Pacific Futures Network Conference 2023

International Youth Centre, Kuala Lumpur

18-19 Sept 2023

The 9th Asia Pacific Futures Network Conference (APFN9) took center stage at the International Youth Centre in Kuala Lumpur, bearing the theme "Futures Thinking in Practice: Bridging Academia, Industry and Society towards Sustainability and Well-being."

This international conference served as a pivotal platform, uniting researchers, practitioners and policymakers from various nations, including Malaysia, the Philippines, Australia, Indonesia, Thailand and more, which emphasised sustainability and well-being while encouraging innovative approaches to shape a positive future. MIGHT played a pivotal role as the strategic partner for this influential gathering, exemplifying its dedication to shaping a brighter and more sustainable future.

The conference revolved around the theme of "Futures Thinking," and on the first day, Mr. Rushdi, the Deputy CEO of MIGHT, shared invaluable insights during the Forum Panels Session. His message

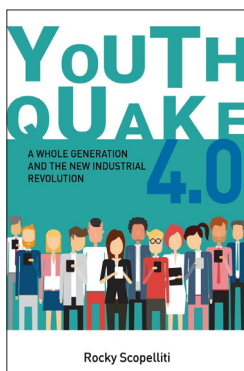
underscored the critical role of high technology in addressing pressing societal challenges.

The second day of the conference featured a workshop hosted by MIGHT, focusing on the Beta-Testing of 'SIGNALS THAT MATTER.' With a board game-themed approach, these innovative future scenario decks engaged participants during parallel thematic track sessions. The valuable feedback received during this session is set to enhance the game's development, further highlighting MIGHT's commitment to nurturing foresight and innovation.

APFN9 was a testament to the power of collaboration, where diverse stakeholders came together to promote sustainability and well-being. It showcased how MIGHT, as a strategic partner, actively contributes to shaping a positive future by harnessing the potential of high technology and innovative approaches.







## Youthquake 4.0: A Whole Generation and the New Industrial

Author : Rocky Scoppelliti

ISBN-10 : 9814828610

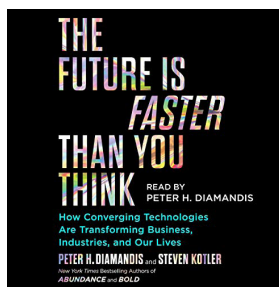
ISBN-13 : 978-9814828611

Publisher : Marshall Cavendish International (Asia)  
(July 7, 2019)

Discover how demographic change associated with millennials and the Fourth Industrial Revolution collectively influence how we think about our social, cultural, economic and technological future.

Youthquake 4.0 analyses the confluence of these two inextricably linked global forces, leveraging research from world-leading institutions and enriched by world-leading thought leaders to provide insights toward global challenges, economics, society, technology, and innovation and the role of business as the world enters the Fourth Industrial Revolution.

A book for individuals, leaders and policymakers seeking to unlock opportunities through developing specific strategies on the interplay between the millennial mind and the Fourth Industrial Revolution.



## The Future Is Faster Than You Think: How Converging Technologies Are Disrupting Business, Industries, and Our Lives

Author, Narrator : Peter H. Diamandis

Author : Steven Kotler

ISBN-10 : 1982109661

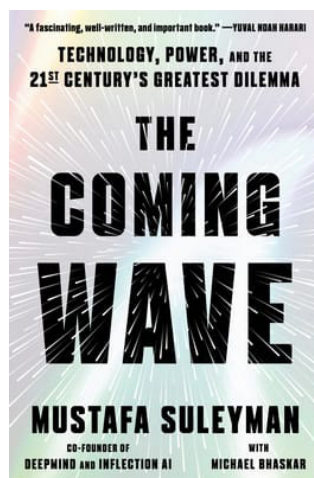
ISBN-13 : 978-1982109660

Publisher : Simon & Schuster

The Future Is Faster Than You Think, is a blueprint for how our world will change in response to the next 10 years of rapid technological disruption.

Technology is accelerating far more quickly than anyone could have imagined. We will experience more upheaval during the next decade and create more wealth than in the past hundred years. In this gripping and insightful roadmap to our near future, Diamandis and Kotler investigate how wave after wave of exponentially accelerating technologies will impact our daily lives and society. What happens as AI, robotics, virtual reality, digital biology, and sensors crash into 3D printing, blockchain, and global gigabit networks? How will these convergences transform today's legacy industries? What will happen to how we raise our kids, govern our nations, and care for our planet?

As indispensable as it is gripping, The Future Is Faster Than You Think provides a prescient look at our impending future.



## The Coming Wave: Technology, Power, and the Twenty-First Century's Greatest Dilemma

Author, Narrator : Mustafa Suleyman

Author : Michael Bhaskar - contributor

ISBN-10 : 0593593952

ISBN-13 : 978-0593593950

Publisher : Crown

We are approaching a critical threshold in the history of our species. Everything is about to change.

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As co-founder of the pioneering AI company DeepMind, part of Google, Mustafa Suleyman has been at the centre of this revolution. He argues that this wave of powerful, fast-proliferating new technologies will define the coming decade.

In The Coming Wave, Suleyman shows how these forces will create immense prosperity but also threaten the nation-state, the foundation of global order. As our fragile governments sleepwalk into disaster, we face an existential dilemma: unprecedented harms on one side, the threat of overbearing surveillance on the other.

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2050



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