

RISK
BEYOND
2024

ERMA
INTERNATIONAL
CONFERENCE
ON ERM

Sustainable Symphony:
Echoes of Change)))

Unveiling the Hidden Dangers and Risk Blind Spots Using Technology Enablers Such as GenAI

GenAI Focus – Data Driven Risk Intelligence

Deloitte. Mark Woodley | Sarjit Singh



Risk Beyond Is Hosted by
Enterprise Risk Management Academy
www.erm-academy.org



riskbeyond.com



Your Masterclass Session

A Blended Menu for Risk Beyond 2024



- ▲ Making Sense of Risk
in an Interconnected World
- ▲ Target Operating Model for ERM
in the Age of Emerging Technologies
- ▲ GenAI and Risk Intelligence:
Big Opportunities, Manageable Risk



Today's Special: "Who Wants to be a Risk Genius" Finale


With You Today



Sarjit Singh
Deloitte Singapore



Mark Woodley
Deloitte Indonesia



You can be
anything
you want with
GenAI

GLOBAL REACH



Sarjit Singh

BBM (L), BBM, PBM, FCA (Australia), FCA (Singapore), CVA, ISCA FFP, Ph.D (Hon)

Find Me on
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Sarjit is a senior advisor in Deloitte Southeast Asia. He is a qualified chartered accountant with over 30 years of multinational experience in audit, advisory and corporate roles, including 16 years in assurance and advisory practice with PricewaterhouseCoopers. Prior to joining Deloitte, Sarjit served in various leadership roles as CEO, Singapore of In.Corp Global, Chairman and Senior Partner of Kreston ACA, CFO of AIA Singapore, and CFO of Aviva Asia.

Over the past 9 years, Sarjit has led significant client engagements to structure and formulate risk management frameworks; perform internal audits and pre-IPO internal controls reviews; conduct internal reviews over sustainability reporting; sustainability reporting frameworks and processes; implement regulatory compliance; perform financial due diligence; and client training programmes. His clients included various SGX public listed companies, multinationals, financial institutions, government ministries (MHA, MOE, MND, MSF, MOH), organs of state (Istana, Supreme Court, AGO, AGC) and statutory boards.

Sarjit served as an Adjunct Associate Professor at NTU from 2010 to 2016 given his expertise in Corporate Governance, Risk Management, Ethics, Auditing, and Financial Reporting and Analysis.

Sarjit currently holds several industry appointments, including:

- Immediate Past Chairman of Chartered Accountants Australia and New Zealand (CA ANZ), Singapore Regional Council;
- Global Talent Programme Taskforce at the Institute of Singapore Chartered Accountants (ISCA);
- Investigation and Disciplinary Panel of the Institute of Singapore Chartered Accountants (ISCA);
- Advocacy Committee of The Institute of Internal Auditors Singapore (IIA); and
- Industry Advisory Committee for Accountancy at the Singapore Institute of Technology.

Sarjit was conferred the national honours of Public Service Star (Bar) in 2021, Public Service Star (BBM) in 2011, and the Public Service Medal (PBM) in 2007 by the President of the Republic of Singapore for his public service contributions to Singapore.

Qualifications and Professional Affiliations

- Fellow Chartered Accountant (FCA) of Chartered Accountants Australia and New Zealand (CA ANZ).
- Fellow Chartered Accountant (FCA) of the Institute of Singapore Chartered Accountants (ISCA).
- Member of The Institute of Internal Auditors Singapore (IIA);
- Chartered Valuer and Appraiser (CVA) with the Institute of Valuers and Appraisers Singapore (IVAS).
- ISCA Financial Forensic Professional (FFP) credential holder.
- Advanced Management Program (AMP) at Harvard Business School, Harvard University.

Selected Experiences and Recognitions

- Sarjit was awarded the prestigious SkillsFuture Fellowship by the President of the Republic of Singapore in 2019. This honour recognises individuals as ‘masters of skills and mentors of future talent’.
- Sarjit was the winner of the Nanyang Alumni Achievement Award in 2012 where he was recognised by Nanyang Technological University (NTU) as a ‘financial industry talent’.
- Sarjit has trained over 18,000 professionals at various organisations, including ISCA, IIA, CFA Institute, PwC, Monetary Authority of Singapore (MAS), Singapore Exchange (SGX), Temasek Holdings, DBS, OCBC, Singtel, Sembcorp, A*STAR, SingHealth Group, Seatrium, Far East Organisation, URA, JTC, NTU, NUS, SMU, SIT, SIM, Republic Polytechnic, Ngee Ann Polytechnic, SCDF, Singapore Chinese Chamber of Commerce and Industry, Singapore Malay Chamber of Commerce and Industry, Supreme Court of Singapore, Ministry of Education, Ministry of National Development, Ministry of Home Affairs, ISTANA, Auditor-General's Office, and the International Internal Audit Conference 2024 in Washington..
- As CFO of AIA Singapore and Aviva Asia, Sarjit responsible for formulating and implementing the financial, investment and commercial strategies for AIA Singapore and Aviva’s diverse businesses in Singapore, Hong Kong and the Asia Pacific region respectively.
- Sarjit was appointed by the Singapore government in 2016 to serve on the Committee on the Future Economy (CFE) – Working Group on Legal and Accounting Services.
- In March 2023, the Minister of Education appointed Sarjit to the Board of Trustees of Singapore’s first arts university, the University of the Arts Singapore (UAS). In addition to his role as a Board Member, he was appointed as the founding Chairman of the Audit and Risk Committee at UAS.



Let's get
STARTED

Let's do an experiment

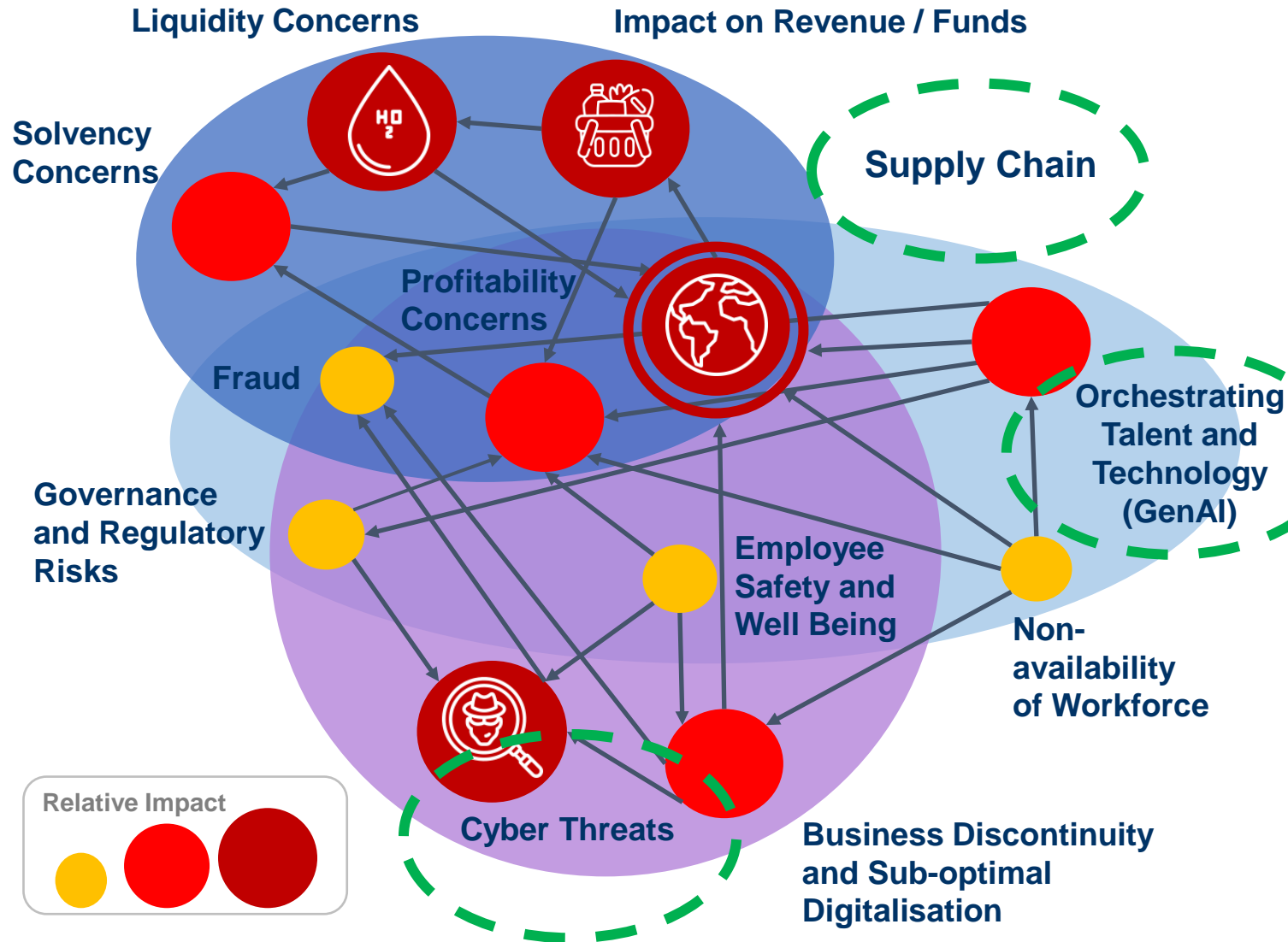
Let's Start With a Driving Analogy for Risk Management

Why do cars have brakes?



Making Sense of Emerging Risks in the Global Game of Change

Risk Beyond 2024



3-Risk Clusters Beyond 2024



<p>Cluster 1: Performance</p>	<ul style="list-style-type: none"> Supply Chain Disruptions Impact on Revenue Liquidity Concerns Profitability Concerns Solvency Concerns Fraudulent Financial Reporting
<p>Cluster 2: People</p>	<ul style="list-style-type: none"> Orchestrating Talent and Technology (GenAI) Employee Safety and Well Being Governance and Regulatory Risks Non-availability of Workforce Supply Chain Disruptions Fraud – Asset Misappropriation, Bribery and Corruption Profitability Concerns
<p>Cluster 3: Technology</p>	<ul style="list-style-type: none"> Business Discontinuity and Sub-optimal Digitalisation Cyber Threats – Data Confidentiality, Data Loss and Data Security Supply Chain Disruptions Fraud – Asset Misappropriation. Governance and Regulatory Risks Profitability Concerns Talent Supply – New Needs

6 Pictures in 10 Minutes

Let's Begin
With a Short
Story ...



**No device is
100% safe
from Cyber
Threats**



1



**I LOVE
MELISSA
AND
SHE LOVES
ME**

Every 3
seconds
somebody
suffers from
identity theft
online
because of
Cybercrime.



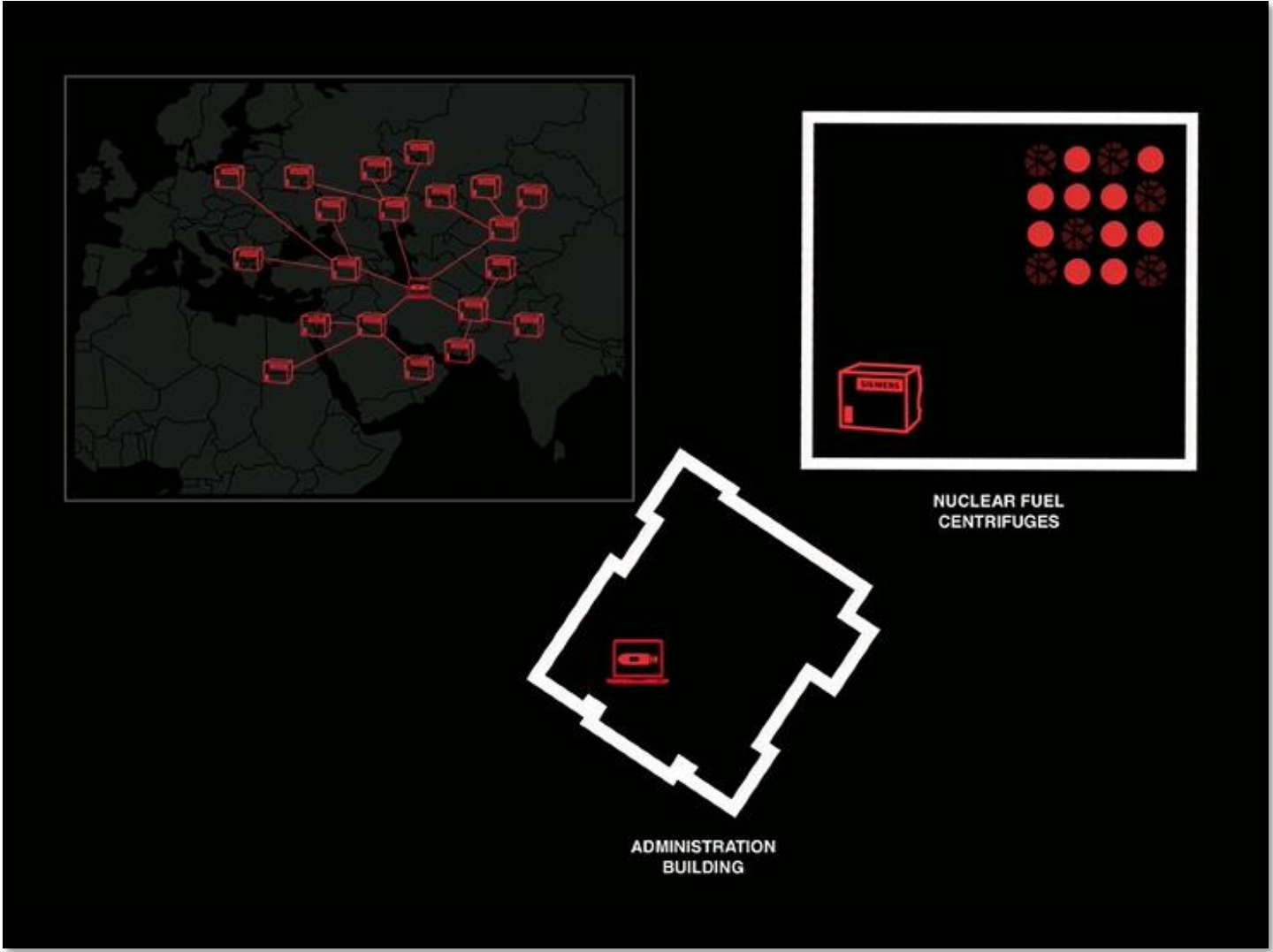
BY THE TIME WE FINISH THIS MASTERCLASS, 36 businesses would have suffered a phishing attack.





Your **HUMAN
FIREWALL** –
The answer to
the cyber
security
problem.





**The cost of
Cybercrime is
increasing by
\$1 TRILLION
EVERY YEAR.**



**Cyber Security
is a RACE
WITH NO
FINISH LINE.**



Why Cyber Risk Management is Important ?



3 Emerging Cyber Risks



**Data
Security**



**Data
Confidentiality**



**Data
Loss**

Importance of Cyber Risk Management



**1. Increasing risk of
cyber crime**



**2. Prevalence of
cyber crime**



**3. Reputational
damage**



Facebook, Whatsapp and Instagram logos are displayed through broken glass in this illustration taken October 4, 2021.

Dado Ruvic | Reuters

Facebook has apologized for [the mass outage](#) that left billions of users unable to access Facebook, Instagram, WhatsApp and Messenger for several hours.

"To all the people and businesses around the world who depend on us, we are sorry for the inconvenience caused by today's outage across our platforms," said Santosh Janardhan, Facebook's vice president of infrastructure, in a blogpost late Monday.

TECH

Facebook says sorry for mass outage and reveals why it happened

PUBLISHED TUE, OCT 5 2021 6:13 AM EDT

UPDATED TUE, OCT 5 2021 11:19 AM EDT

Sam Shead

@SAM_L_SHEAD

SHARE    

KEY POINTS

- The outage marked the longest stretch of downtime for Facebook since 2008.
- "To all the people and businesses around the world who depend on us, we are sorry for the inconvenience caused by today's outage across our platforms," said Santosh Janardhan, Facebook's vice president of infrastructure, in a blogpost late Monday.
- Facebook shares closed down almost 5% on Monday but they were up nearly 1% in early trading on Tuesday.

TECH  R. REPUBLICWORLD.COM 

Last Updated: October 05, 2021 09:44 IST

Amid Facebook outage, Mark Zuckerberg loses \$7 billion as shares slip over 5% on Monday

Along with the drop in stocks of Facebook, Mark Zuckerberg's worth has fallen by nearly \$19 billion since September 13, 2021, due to a whistleblower and outage.

Written by Shikhar Mehrotra



IMAGE: AP/UNSPASH

Some things you see coming.
Some things you don't.
The trick is to be ready
for anything.

Pablo from Infrastructure Support is working every day to keep essential market data flowing. Seamlessly.

We keep on.
So you can keep on.

Bloomberg

[bloomberg.com/company](https://www.bloomberg.com/company)

CAN SMALL STATES CONTRIBUTE TO A RULES-BASED ORDER IN CYBERSPACE?

Sponsored by



Digitalisation should result in win-win outcomes where the global community leverages innovation and interdependencies toward an interoperable cyberspace that ensures we have a stake in one another's success.

For small States like Singapore, it is in our interests to develop a cyberspace that is rules-based, interoperable, and secure. Digital connectivity fuelled by data will allow small States to transcend limitations in natural resources, land, and manpower.

This also means that small States can have an outsized impact in shaping the rules, norms and principles of operating in cyberspace. There are three ways they can contribute: policy, partnerships, and platforms.

Forward-Looking Policy

Cybersecurity starts at home. States need to have the requisite domestic regulatory policies, regimes, and capacities to implement cyber best practices.

For example, Singapore's Cybersecurity Act establishes a legal framework requiring the implementation of mandatory cybersecurity measures and reporting of incidents by Critical Information Infrastructure owners.

Several plans and initiatives strengthen the resilience of our Critical Information Infrastructure and create a safer cyberspace. This includes the Safer Cyberspace Masterplan which articulates Singapore's vision to secure our core digital infrastructure, safeguard digital activities, and empower a cyber-savvy citizenry.

Amid the exponential growth of Internet of Things (IoT) devices, Singapore launched the Cybersecurity



“Small States can have an outsized impact in shaping the rules, norms and principles of operating in cyberspace.”

David Koh,
Chief Executive of the Cyber Security Agency of Singapore (CSA)

Labeling Scheme to enhance the security of such devices and improve transparency for consumers. We welcome international partners and industry to work with us to internationalise the labelling of IoT devices for a more secure global cyberspace.

Collaborative Partnerships

It is imperative for small States to collaborate to achieve common desired outcomes. This is where regional organisations, like the Association of Southeast Asian Nations (ASEAN), provide crucial platforms to exchange information on emerging and existing threats, implement Confidence-Building Measures, and build capacity.

ASEAN remains, to date, the only regional organisation that has subscribed in principle to the UN's 11 voluntary, non-binding norms of responsible State behaviour in cyberspace. ASEAN is also developing a concrete plan of action to implement these norms. Such an action-oriented approach working through strong and enduring partnerships among States allow us to collectively mitigate risks.

Public-private partnerships are also crucial to enhance global cyber resilience. The Singapore-U.S. Joint Cyber Security Working Group is one such platform for the Cyber Security Agency of Singapore (CSA), the U.S. government and the industry to collectively address dynamic cyber threats.

Inclusive Multi-stakeholder Platforms

A rules-based multilateral system with the UN at its core is our best hope to build a secure, resilient and interoperable cyberspace. This is why Singapore participated actively in the sixth United Nations Group of Governmental Experts (UNGGE) and the inaugural Open-Ended Working Group (OEWG) on international security in cyberspace.

Small and developing countries are increasingly keen to co-create a secure, resilient and interoperable cyberspace. However, States alone do not have all the answers for the dynamic cybersecurity problems we face. The private sector, non-governmental organisations and academia also have views that States should consider.

In recognition of the need to strengthen the multi-stakeholder nature of cyber discussions, Singapore has organised the Singapore International Cyber Week (SICW) annually since 2016 for both State and non-State stakeholders to collaborate on key cyber issues. The 6th SICW will be held this year from 4-8 October and is aptly themed: Living with Covid-19 - Reimagining digital security risks and opportunities.

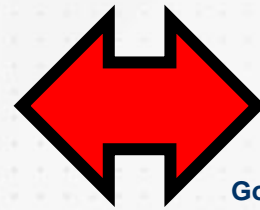
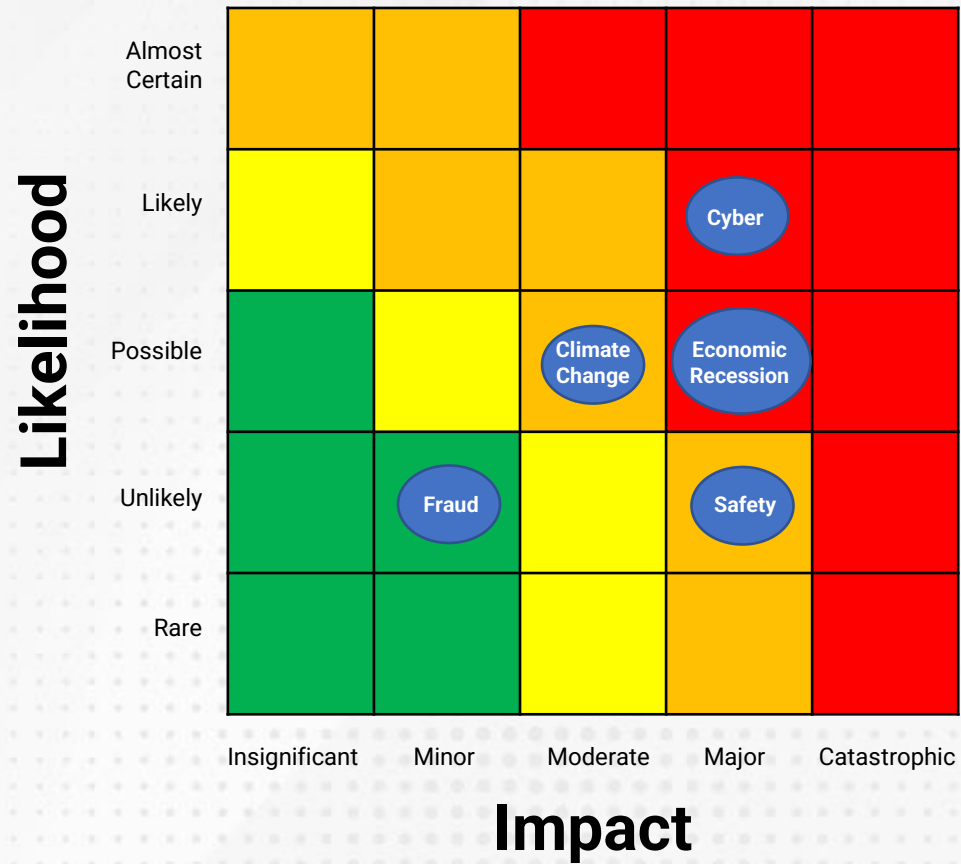
David Koh is Singapore's first Commissioner of Cybersecurity and Chief Executive of the Cyber Security Agency of Singapore (CSA).

Unleashing Dynamic Risk Management In the New Normal

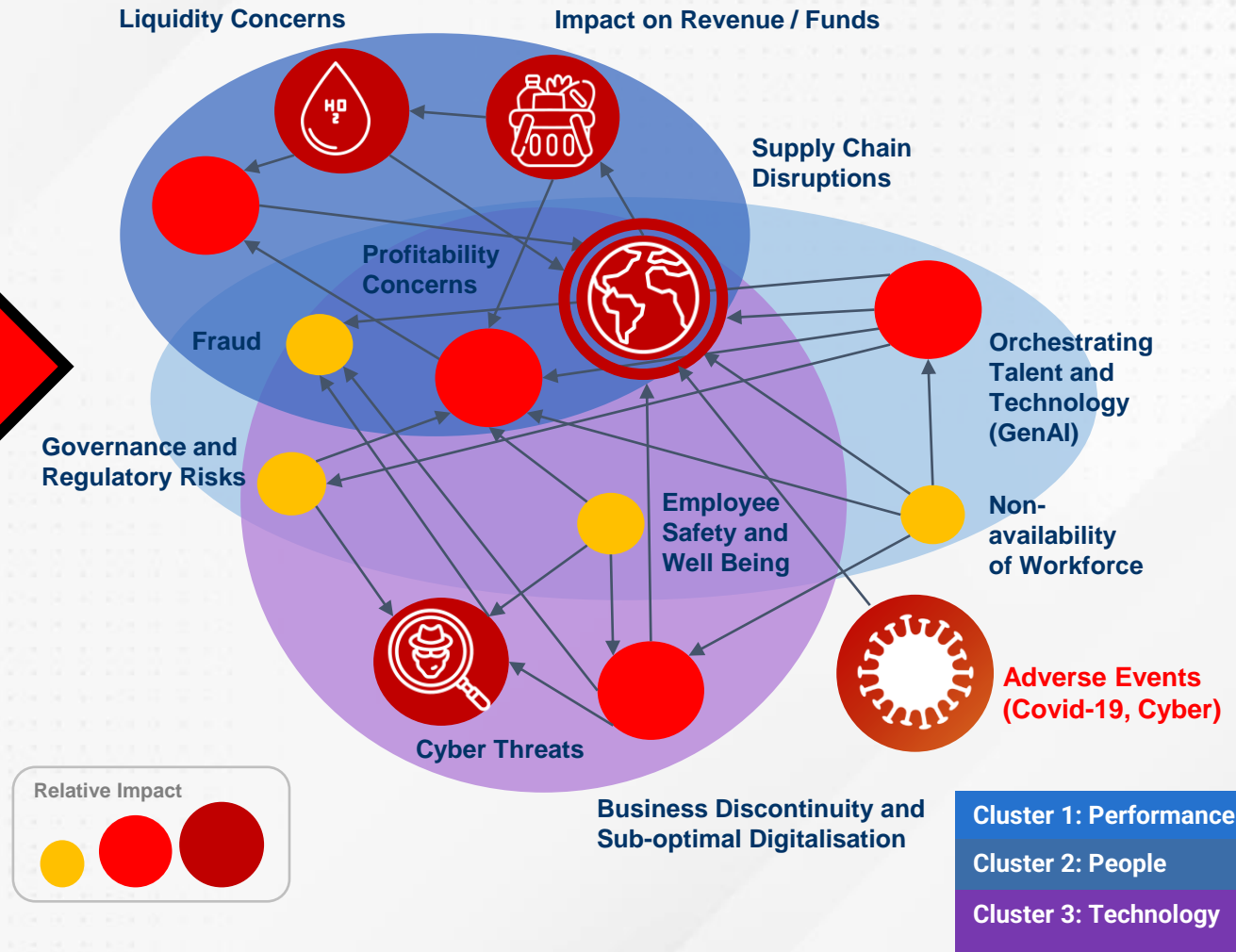


Making Sense of Risk in an Interconnected World

Traditional 'Static' View



Dynamic 'Connected' View



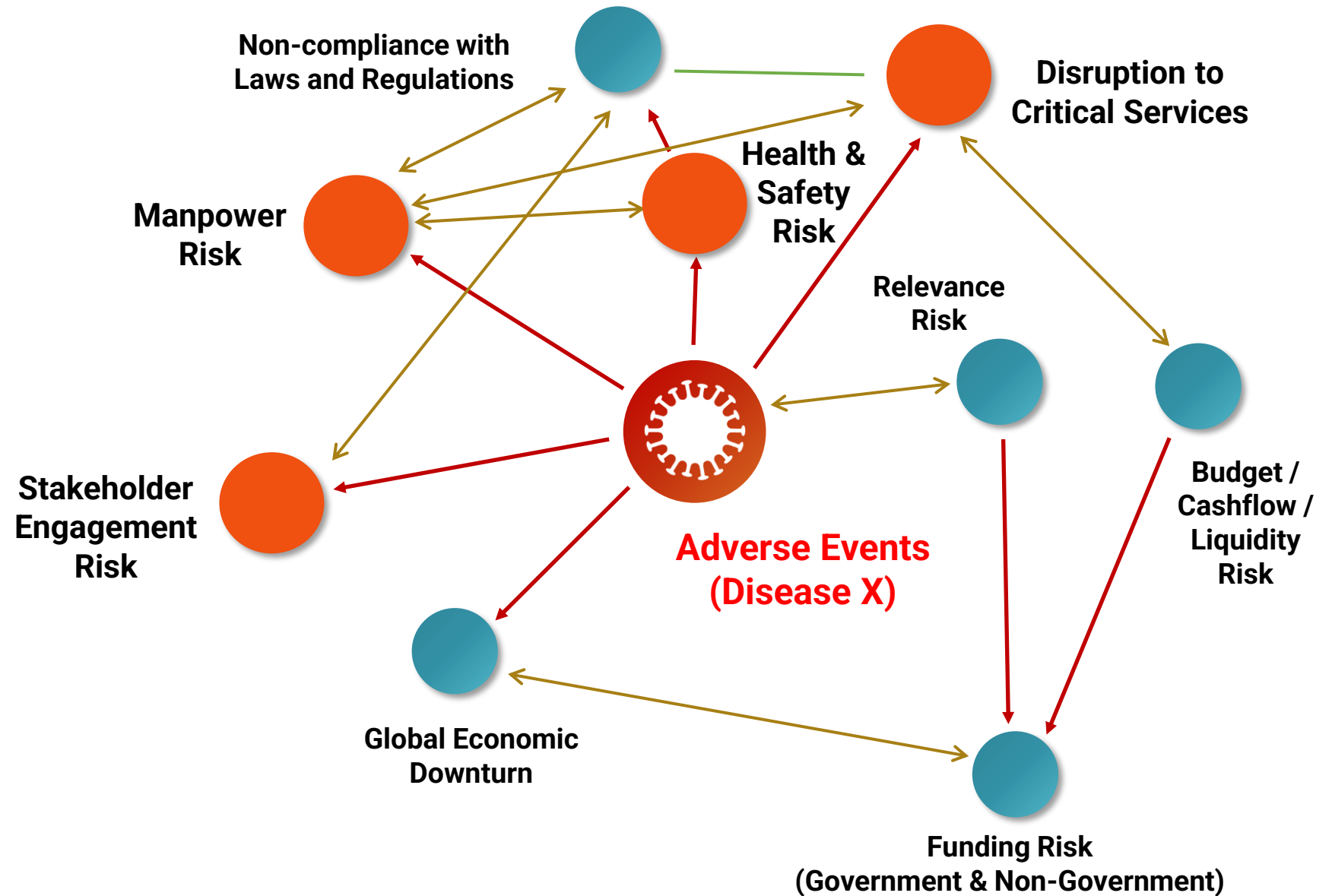
Integration of ERM and BCM

Some Key Considerations

- 1** Is this a risk / threat to the organization or its units?
- 2** What are the Business Continuity considerations for the Disease X new normal?
- 3** What else should our BCPs cover to manage the network of risks / threats?

Legend

- Strong connection strength
- Medium connection strength
- Weak connection strength



Disease X



The new pandemic, dubbed Disease X by the World Health Organization

Down
To
Earth

How dangerous is Disease X?

2.18min

What is Operational Resilience?



Operational resilience is the ability of an organisation to **adapt rapidly** to changing environments. This includes both the **resilience of systems and processes** and more generally the ability of the organisation to **continue to operate** in the face of **adverse operational events** by anticipating, preventing, recovering from, and adapting to such events.



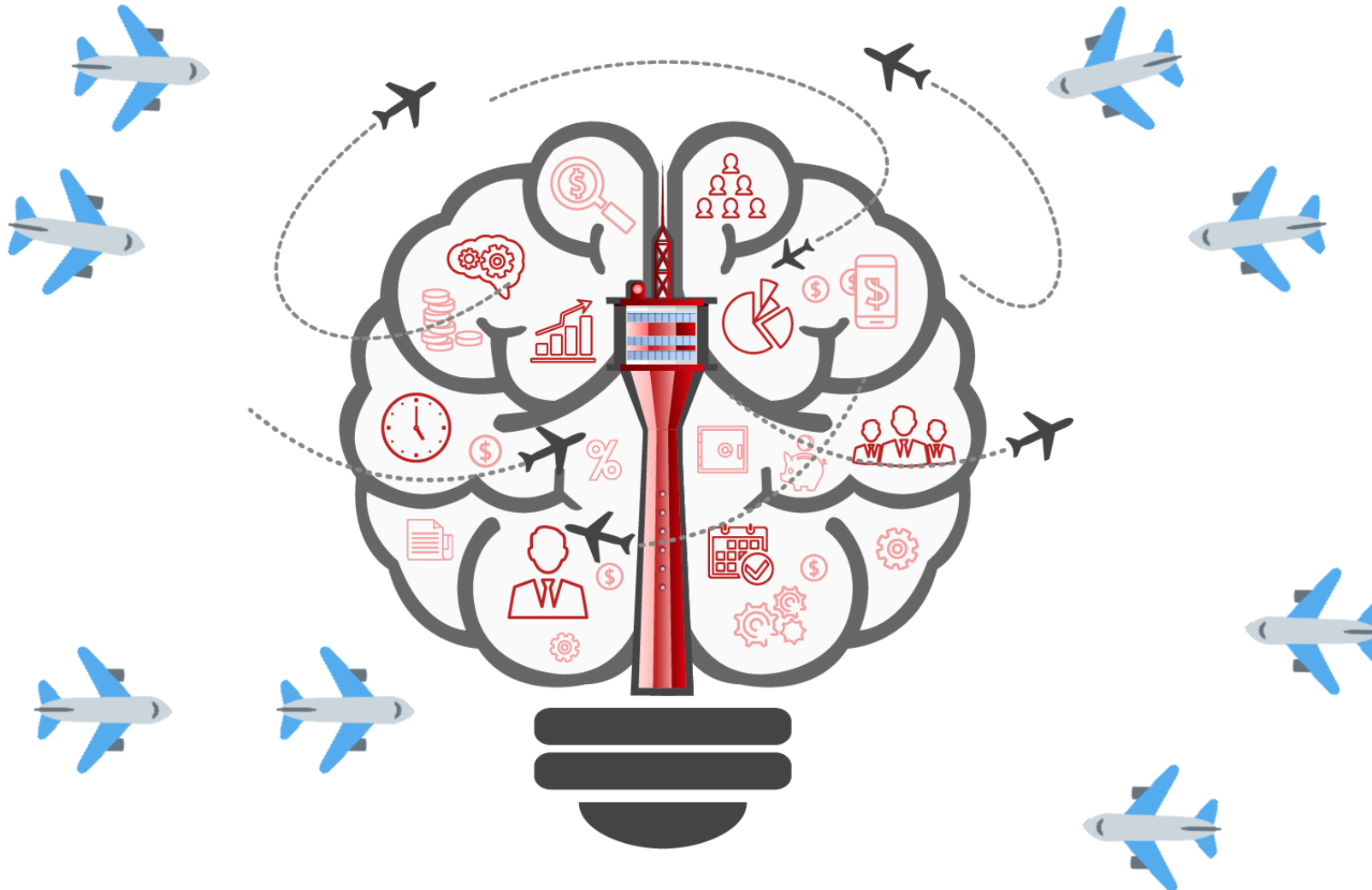


Vision for the Future of ERM

Disrupted by Design

ERM as the Air Traffic Control Tower

Vision for the future of ERM to maintain trust



In the future, ERM will be viewed as an air traffic control tower.

Technology will enable **real-time risk monitoring and timely reporting of high-risk findings** to:

- ✓ instill **trust**;
- ✓ support confident **decision making**;
- and
- ✓ contribute to increased **organisational value**.

The Risk Manager in the Global Game of Change



Re-thinking the Vision for the Future of the Risk Manager in the
Age of Emerging Technologies, Evolving Expectations and Dynamic Ecosystems

An Elevated Risk Management Experience, Supercharged by AI



Data Analytics

- Investment to establish credible data analytics tools and techniques.
- Focus on “end-to-end” processes rich in data / information.
- Goal is to drive continuous monitoring and real-time response.
- Opportunity to provide operational insights to board and management.



Digital Drivers

- Aggressive review of internal processes to identify opportunities for automation, simplification and streamlining of control activities.
- Consider leverage for risk assessment, audit planning, execution and digitised audit documentation.
- Shift to mobile where possible.



Dynamic Risk Lens

- Shift from a linear to dynamic, real time approach.
- Will require extreme flexibility and agility.
- Risk data aggregation to achieve dynamic outputs.
- Predict control failures and risk triggers.
- Align level of effort with residual risk.



Digital Reporting

- Re-think ‘traditional’ reporting content and format to deliver ‘communication of key risks’ on interactive dashboards.
- ‘Lasting actions’ based on interactive data base, incorporating strategic goals, metrics, targets, and key risk indicators.



Develop Talent

- A flexible, agile and collaborative talent model.
- Aggressive recruitment and development of critical competencies, especially data analytics and AI.
- Deploy resources with the right skill sets, involving subject matter experts.
- Build and participate in audit and risk communities.

We live in times of unprecedented change and opportunity ... with an evolving and dynamic workforce

75%

of the global workforce
will be comprised
of Millennials by 2025

30-80%

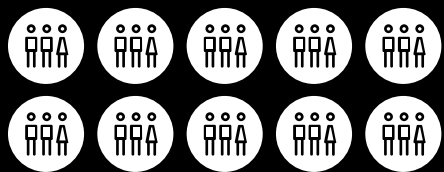
of job descriptions
will be redefined

40%+

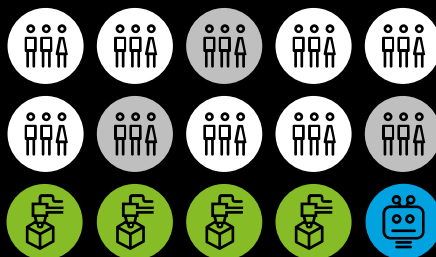
of the workforce will be
complemented with
digital workers by 2025

A multi-generational workforce and changing demands will drive new operating models and new ways of working.

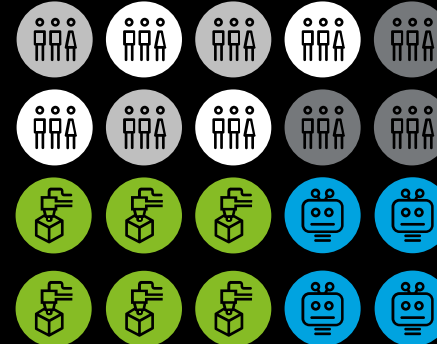
2018



2020



FUTURE



- ● ● Different Human Working Groups
- Intelligent Automation
- Artificial Intelligence

Data Analytics

Using audit tools to provide greater assurance, operational insights and strategic advice

Descriptive
Analysis

+
Diagnostic
Experience



An Illustration for the Analysis on Procurement and Payment Records

1. Split Purchases

Identify any split purchases which circumvent the approval process.

2. Annual Purchases by Vendor

For each supplier, compare various period purchases in order to identify and investigate unexpectedly large or small differences

3. Duplicate Purchase Invoices and Payments

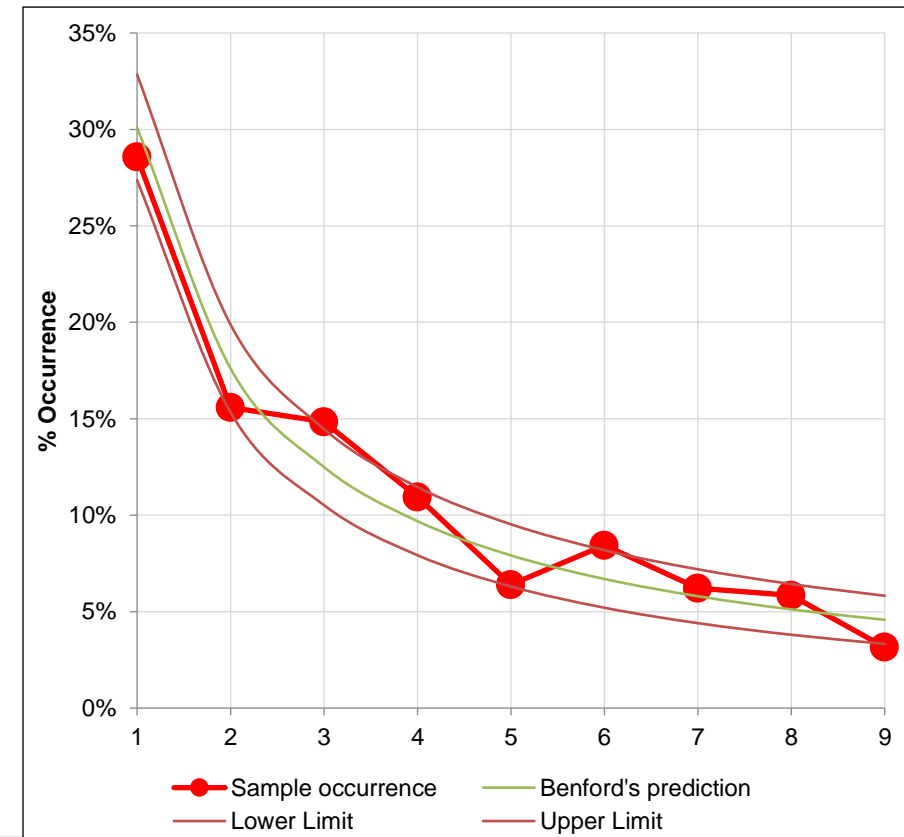
Identify any potential duplicate invoices based on information such as Vendor, amount, Invoice Date and invoiced reference to ensure that the organisation has not been billed more than once for the same goods/services.

4. Unusual Invoice Patterns

Identify any potentially suspicious unusual invoice patterns

5. Benford's Testing of Payments

Determine whether payments fit Benford's law, using significant deviations to identify possible suspicious activity.



Digital Reporting

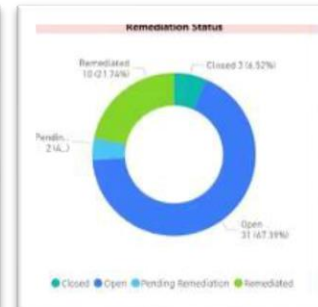
Digital real time reporting providing business insights and strategic advice

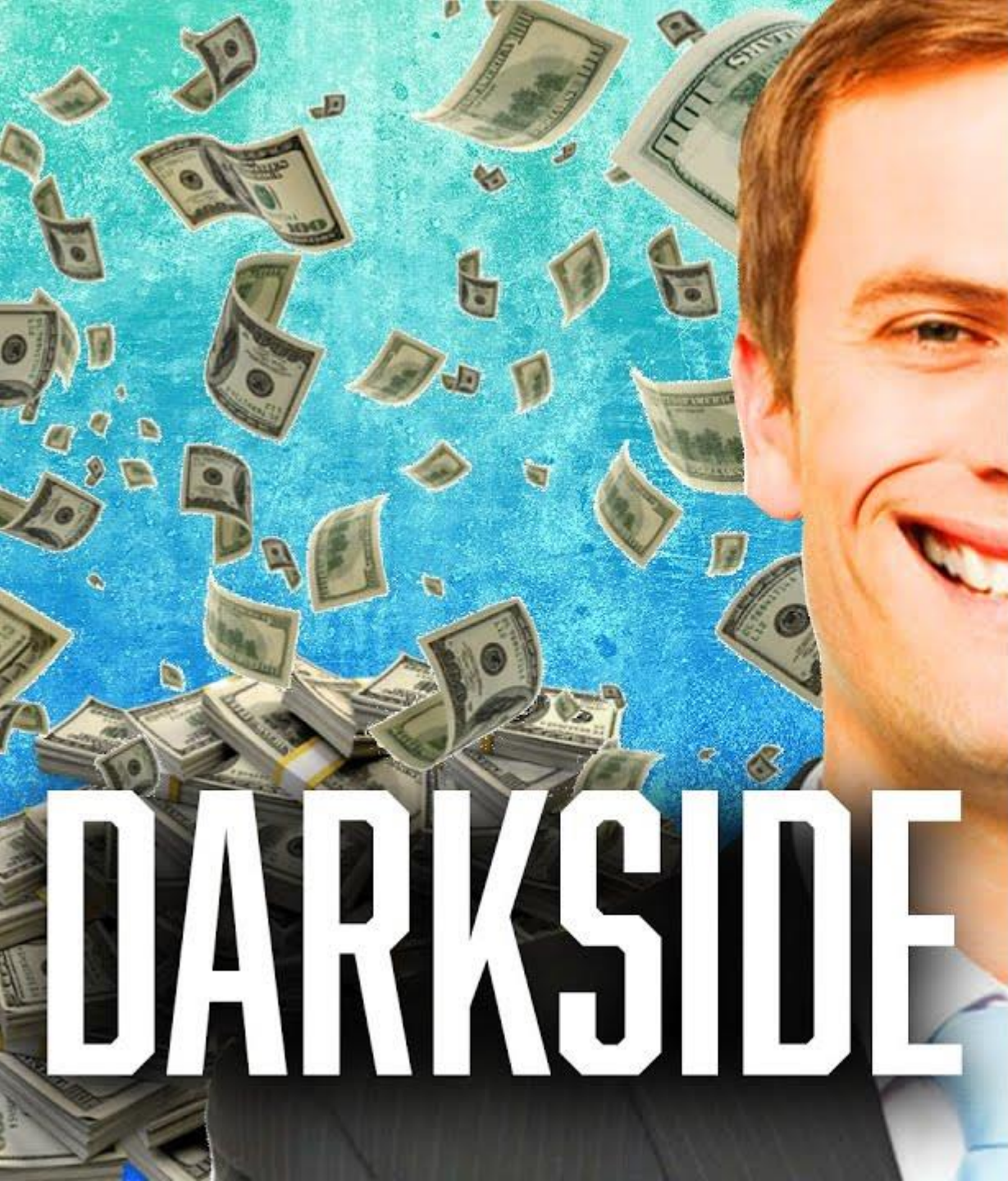
Re-think 'traditional' reporting content and format to deliver:

- **'Communication of results'** based on videos, interactive dashboards, click-through examples etc.
- **Dashboard reporting** which draws upon digitized audit results and evidence to provide a real time view of internal audit findings and results
- **'Lasting actions'** based on interactive data base for auditee, allowing easier follow up of management actions by IA

Automated report delivery based on:

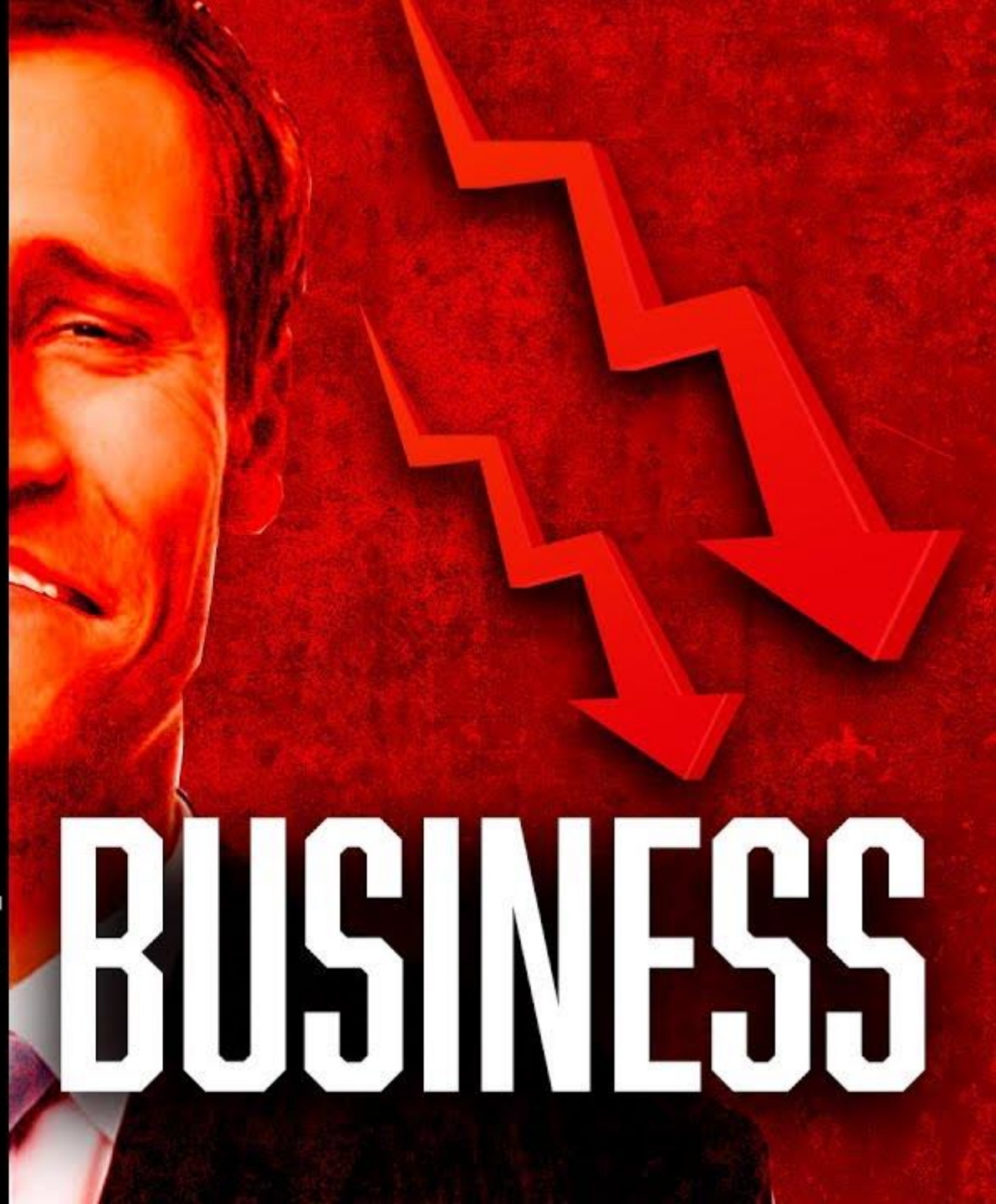
- Digitised audit documentation and internal audit delivery tools, resulting in **'one click' reporting**
- **Robotics based transcription of content** (e.g. utilizing RPA to transcribe content from work papers or voice enabled technology)





DARKSIDE

OF



BUSINESS

Lessons Learned from Fallen Idols

Practical Mini Case Studies

Real life examples and illustrations to help you spot red flags

Complicit: How we enable the unethical ?
... a fresh new research coming soon!



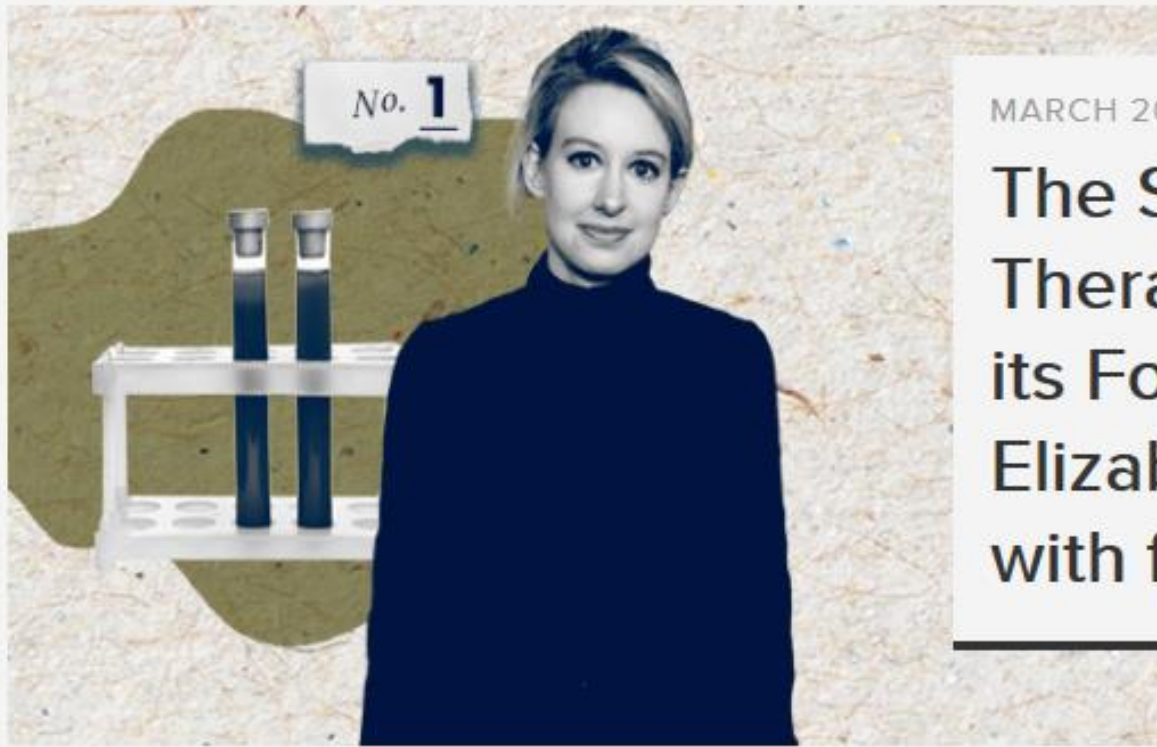
It's **Story** Time!

Theranos

*Responsibilities to All
Stakeholders*

Who Has Blood on Their Hands?





MARCH 2018

The SEC charges Theranos Inc., and its Founder and CEO Elizabeth Holmes, with fraud

Money lost: \$1 billion

Duration of fraud: Estimated 8 years

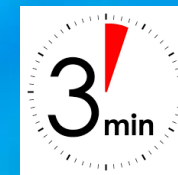
After a meteoric rise in fame, one of Silicon Valley's darlings fell hard and fast. By the mid-2010s, Elizabeth Holmes was a familiar face on magazine covers and TV screens. She was often hailed as a visionary for founding her blood-testing company, Theranos Inc. In October 2015, *Inc.* magazine called Holmes "the next Steve Jobs" on its cover and *T MAGAZINE*, The New York Times style publication, wrote, "It's hard to overestimate the potential benefit of what Elizabeth Holmes has developed with her tech company Theranos."

Your questions about Elizabeth Holmes and the Theranos scandal, answered.

Fun Facts

In ancient Greek mythology **Theranos** was the **god of health**, who stole medicine from the gods for the good of mankind and was sentenced to eternal punishment by Zeus for his troubles.

**Meet the
World's
Youngest
Self-Made
Female
Billionaire**





It's **Movie** Time!



Theranos

The Inventor Out
for Blood in
Silicon Valley

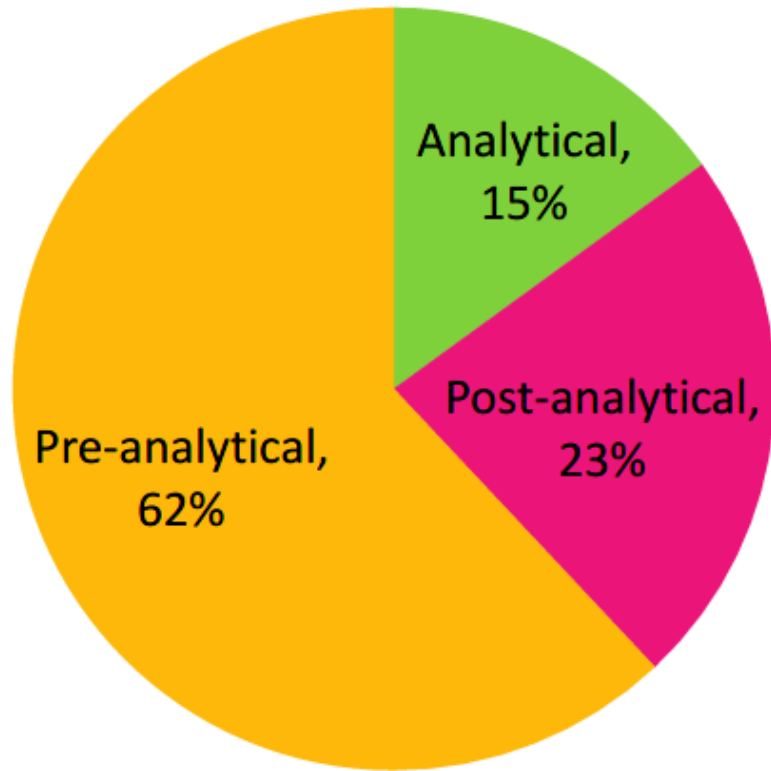
Brought to you by Sarjit Productions

2.50mins

Fake It ...Till You Make It

Sources of Laboratory errors

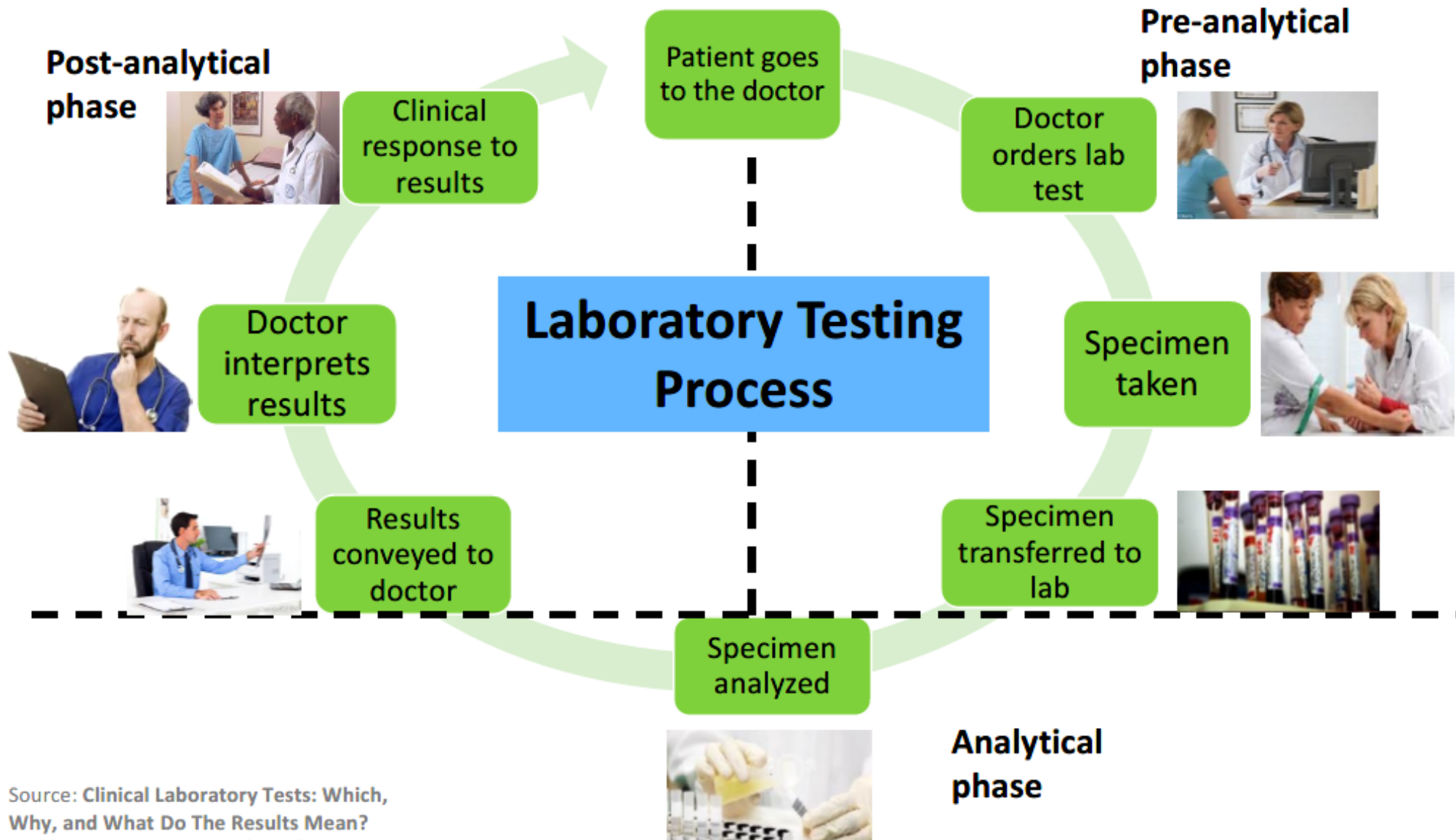
Laboratory Errors



Top Pre-analytical Errors (62%)

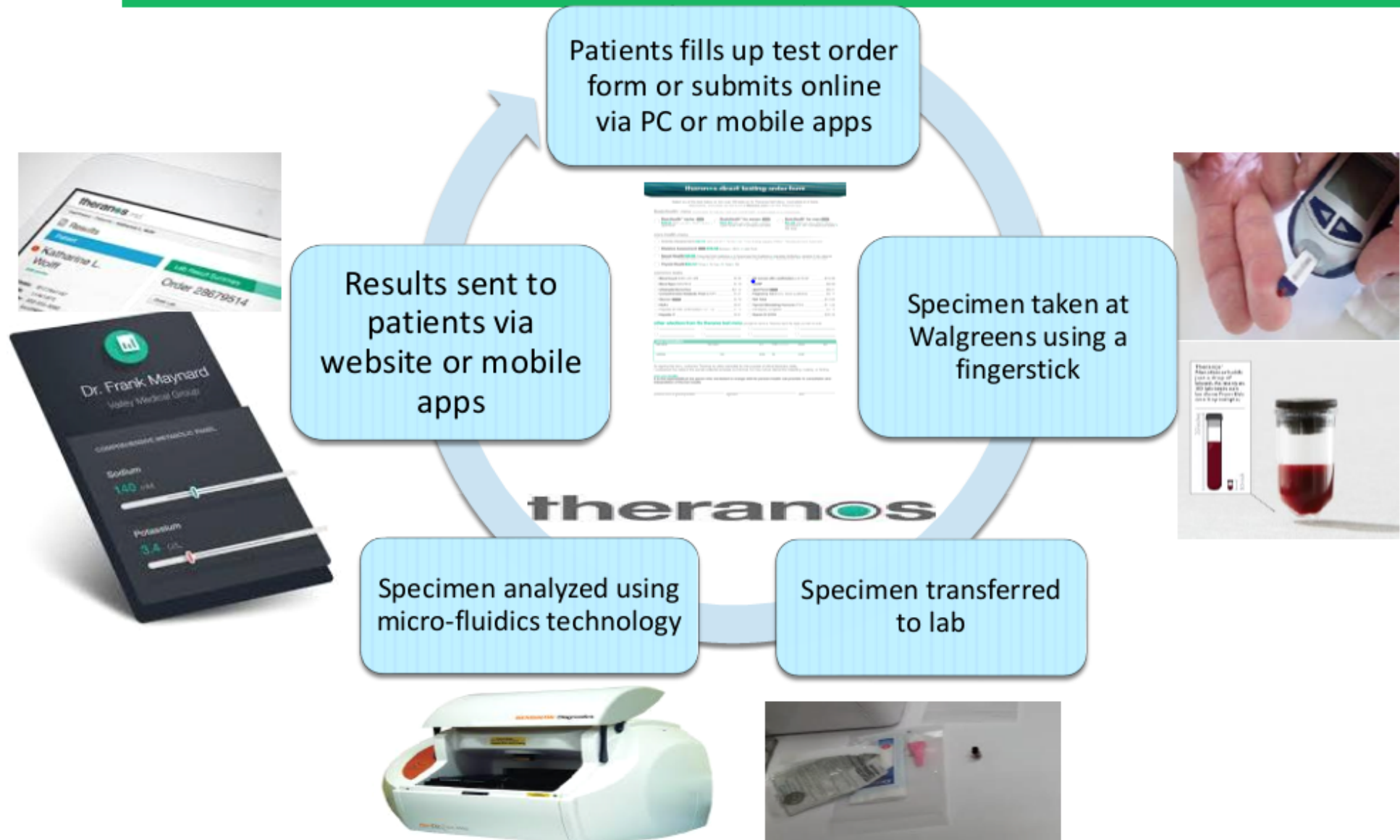
- Specimen collection tube not filled properly – 13%
- Patient ID error – 9%
- Inappropriate specimen collection tube/container – 8%
- Test request error – 7%
- Empty collection tube – 7%
- Others – 18%

Incumbent Laboratory Testing Process



Source: Clinical Laboratory Tests: Which, Why, and What Do The Results Mean?

Theranos Eliminates Many Steps



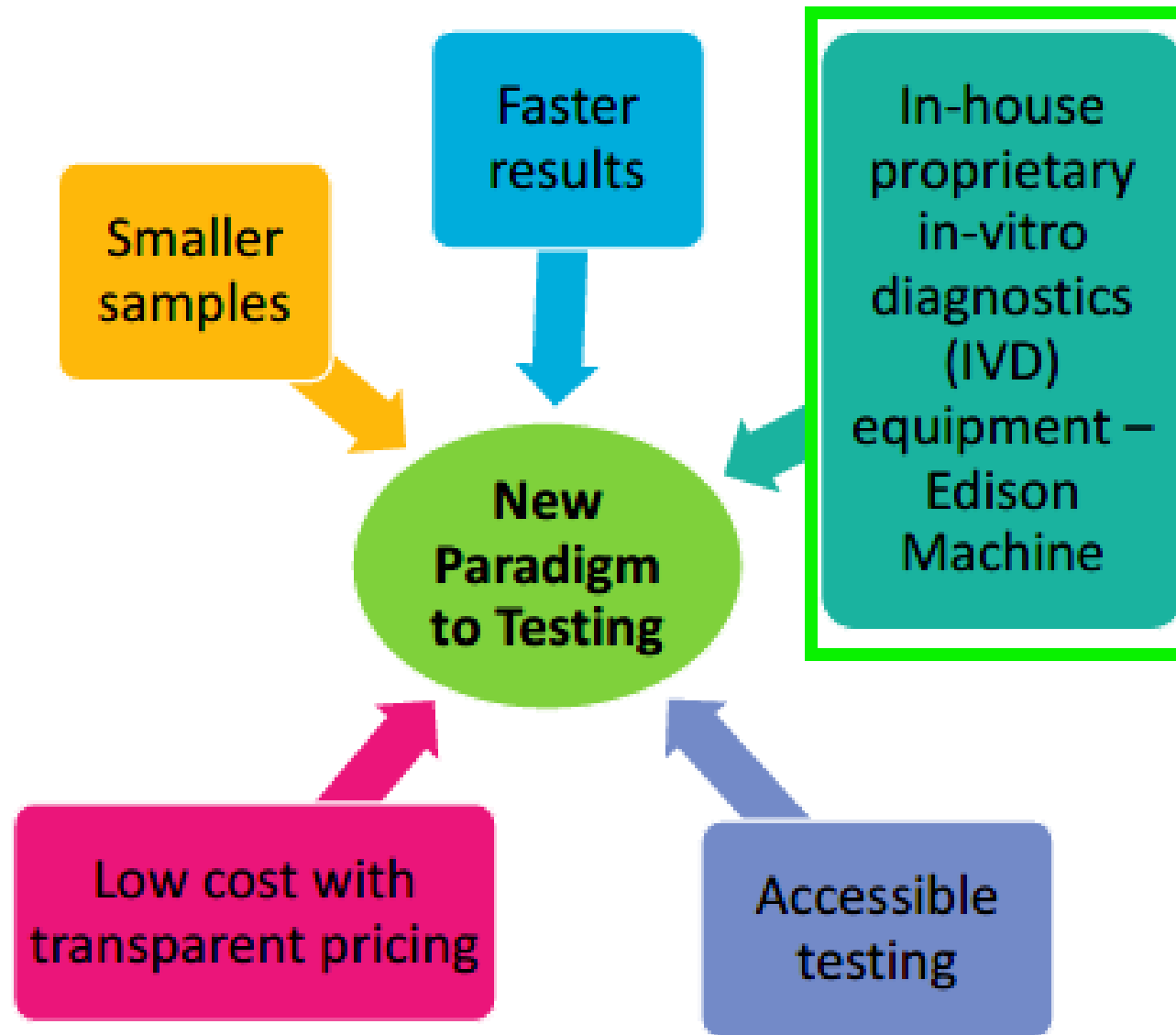
Value Proposition

- Comparison between Theranos with Incumbent

Typical Blood Test Process	Theranos	Incumbent
Appointment for specimen collection	Not applicable	Before blood test Waiting List
Waiting Time for specimen collection	Not applicable	Average 15 to 45 mins
Blood Sample Size	0.18ml	5ml to 10ml or more
Price for Test Report	Cholesterol = \$2.99	Cholesterol = \$17.00
Order/Purchasing of Tests	Online menu	Clinical written authorization letter
Waiting Time for Test Results	1 to 2 days	1 to 30 days
Collection of Test Report	Online via email	Appointment for self collection or via mail



The Theranos Advantage



THERANOS BOARD MEMBERS OUT



Henry Kissinger

Former US Secretary of State



George Schultz

Former US Secretary of State

Bloomberg

LEADERSHIP • MANAGE THIS!

Theranos' board: Plenty of political connections, little relevant expertise

BY JENNIFER REINGOLD

October 16, 2015 12:49 AM GMT+8

LIVE ON BLOOMBERG TV



It's **Movie** Time!



Theranos

The US\$9 Billion
Medical 'Miracle' That
Never Existed

Brought to you by Sarjit Productions

1.56mins

Elizabeth Holmes Spilling the Blood

"Chilling. . . . Reads like a thriller. . . . [Told] virtually to perfection."—*The New York Times Book Review*

The Story of
Elizabeth Holmes
and Theranos

BAD BLOOD

Secrets and Lies
in a Silicon
Valley Startup

John Carreyrou

With a New Afterword

Winner of the FT/McKinsey
Business Book of the Year Award 2018

Bad Blood

Secrets and
Lies in a
Silicon Valley
Startup

The story of
Elizabeth Holmes
and Theranos

**John
Carreyrou**



Theranos Fraud Trial: Elizabeth Holmes To Defend Herself On Grounds Of 'Mental Health' Issues Due To Ex-Partner 's 'Psychological And Sexual Abuse'

On 30 May 2023, Elizabeth Holmes began her 11-year prison sentence at a federal prison camp in Texas.



What Caused the Massive Fraud at Theranos?

- **70** senior executives responded – all of whom had studied the Theranos story.
- **62** of the 70 responses offered a **single cause**:
 - 56 of those 62 were a simple description of Elizabeth Holmes (ego, lack of integrity); and
 - 6 single-cause explanations had to do with the Board's governance failures.
- **8** mentioned **two causes**:
 - Two simple descriptors of Holmes; or
 - One descriptor of Holmes plus the Board's failure.
- No mention was made of the role of the **venture capital firms**.
- No mention of **Walgreens' lack of due diligence**.
- No mention of the **Board's lack of expertise in medicine and technology**.
- The vast majority of the executives in the HBS class, who knew all aspects of the story, blamed a single source.

More Similar Than Different



Deloitte.

LearningSolutions



Artificial Intelligence
Big Opportunities
Manageable
Risks

SARJIT SINGH | SINGAPORE



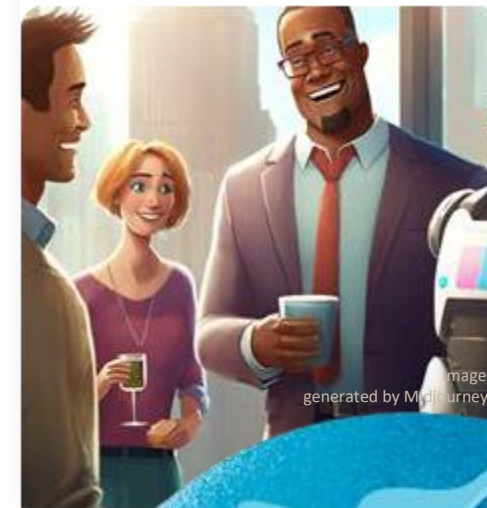
MAKING AN
IMPACT THAT
MATTERS
since 1845

We're in an AI revolution



Wave 4

Artificial General
Intelligence
(AGI)



Wave 3

Autonomous
Agents



Wave 2

Generative



Wave 1

Predictive

How to |

- How to increase conversions
- How to optimize spend
- How to personalize experiences
- How to grow relationships

Global Advances in (Generative) AI

Top 10 Countries Leading in AI Research in 2024



USA

60% of "top tier"
AI researchers



China

\$95 billion
in private investment



UK

Market valued
at \$21 billion



Israel

Total AI investment
at \$8.6 billion



Canada

144 generative-AI
related startups



France

338 startups and
\$7 billion invested



India

Highest penetration
rate of AI skills



Japan

Home to 294
AI startups



Germany

\$7 billion
in private investment



Singapore

165 AI startups

Generative AI

*“With great power
comes great
responsibility”*

Voltaire / Spiderman / FDR





14 trillion \$

That's the global economic growth that AI will provide by 2030, according to Deloitte research

AI enables organization to automate processes that's requires human cognition. Examples of RA use cases



Insurance : fraud detection and churn reduction, claims management, regulatory mgt...



Banking : KYC, AML, fraud detection, regulatory mgt, financial crime, trade surveillance, ESG, climate ...



Manufacturing : supply risks, predictive maintenance, regulatory management, ESG, decarbo,...



Aerospace & Defense : predictive maintenance, compliance...



Automotive / Transportation : autonomous vehicles software/AI Control



Healthcare : regulatory, PV, CT, R&D, Medical Device

BREAKING NEWS LIVE

It is now available on the HBS [website](#).



Professor Zhu said,

“The case study on DBS illustrates how AI technologies can

potentially transform

traditional industries, such as financial services, while driving value creation.

By integrating AI into core processes, companies can unlock new potential for customer-centricity and operational excellence.”

Feng Zhu

Harvard Business School Spotlights DBS Bank's AI Journey in New Case Study



Fintech News Singapore — September 16, 2024

🕒 2 Mins Read



Piyush Gupta

“DBS has been working with AI for over a decade now, and in recent years, we’ve managed to industrialise the use of AI across the bank. We today deploy over 800 AI models across 350 use cases, and expect the measured economic impact of these to exceed SGD 1 billion in 2025, after sequential doubling in the last few years.

More importantly, the infrastructure and governance framework we established during our AI journey have put us in good stead to unlock the potential of Generative AI while managing its emergent risks.”


AI IS
SAFE

DON'T ASK
QUESTIONS

The Fraudsters Have AI, Too


As artificial intelligence enables a new wave of almost unimaginable schemes, internal auditors must help ensure the organization is ready to combat them.

RELAX


 US MARKETS CLOSED
 DOW JONES +1.18% NASDAQ +1.99% S&P 500 +1.26% META +1.72% TSLA -0.56% AAPL +6.47%

A car dealership added an AI chatbot to its site. Then all hell broke loose.


Katie Notopoulos, Senior Correspondent covering technology and culture
 Dec 18, 2023, 3:56 PM GMT-6



A car dealership that just wants to sell you a car, not have its artificial intelligence write you a Python script.
Mario Tama / Getty

- Pranksters discovered that a local car dealer's AI chatbot could be used as a way to access ChatGPT.
- People shared attempts to trick the chatbot into selling them a new Chevy for as little as \$1.

Source: <https://incidentdatabase.ai>



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TECH · A.I.

A robot's \$100 billion error: Alphabet shares tank after its ChatGPT rival makes a mistake in its very first ad

BY [TRISTAN BOVE](#)
 February 8, 2023 at 2:42 PM CST



Google and Alphabet CEO Sundar Pichai
MATEUSZ WLODARCZYK—NURPHOTO/GETTY IMAGES


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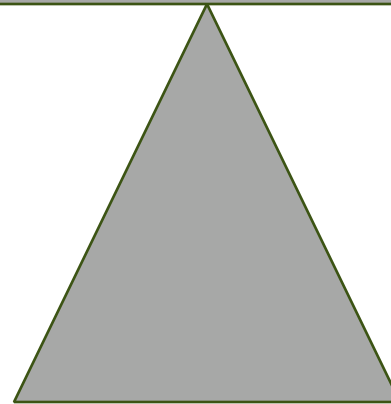
World / Asia

Finance worker pays out \$25 million after video call with deepfake 'chief financial officer'

Weighing Risks vs. Benefits of using GenAI



- Loss of confidential data
- Accuracy of outputs
- Bias and toxicity
- Increasing reliance
- Copyright considerations



- Workplace productivity
- Multidomain application
- Democratisation of information and skills
- Competitive differentiation

RISK
BEYOND
2024

ERMA
INTERNATIONAL
CONFERENCE
ON ERM

Sustainable Symphony:
Echoes of Change)))

Unveiling the Hidden Dangers and Risk Blind Spots Using Technology Enablers Such as GenAI

GenAI Focus – Data Driven Risk Intelligence

Mark Woodley **Deloitte.**



Risk Beyond Is Hosted by
Enterprise Risk Management Academy
www.erm-academy.org



riskbeyond.com

Agenda

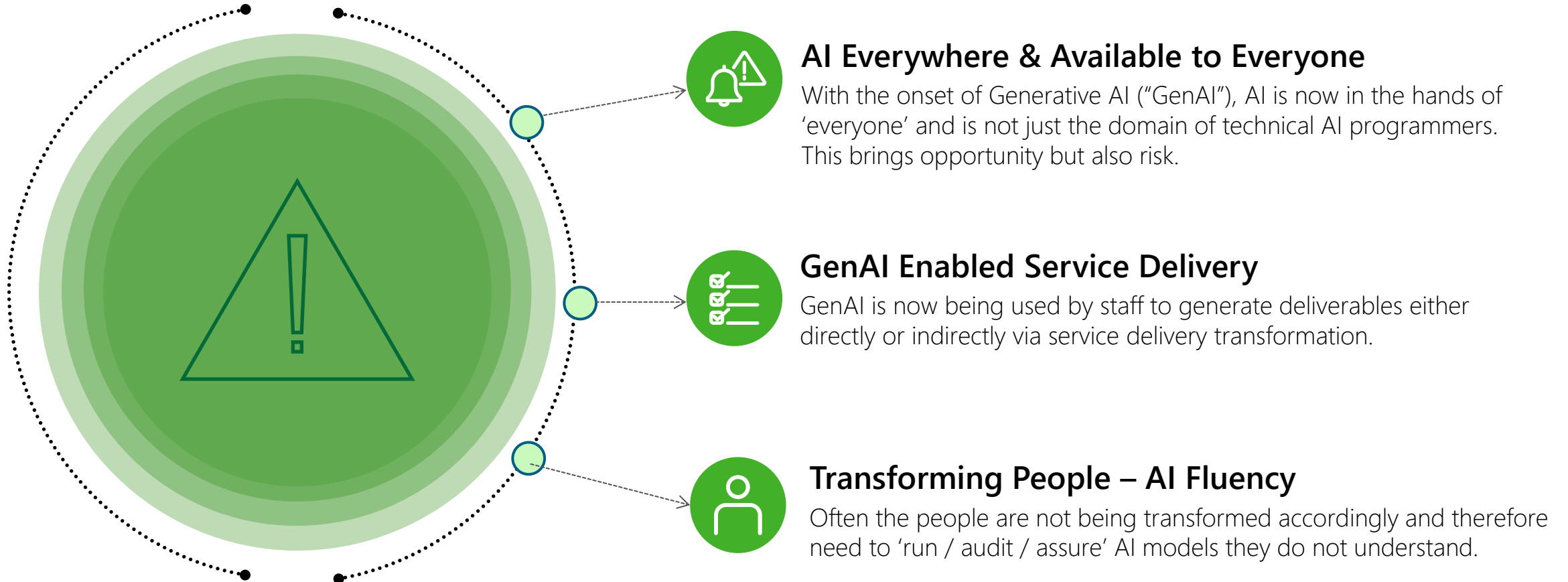
01	GenAI Introduction
02	GenAI & Risk Intelligence – The Opportunity
03	GenAI & Risk Intelligence – The Risk
04	GenAI Risk Enabling Solution Demonstrations
05	What About The People?
06	Where Do You Start?





GenAI Introduction

AI Trends



Types of AI



Discriminative AI

Traditional AI models focus on understanding data and making accurate interpretations and predictions.



Generative AI

AI power to "the Masses". Generative AI involves building & training models to generate new content.

Text Generation

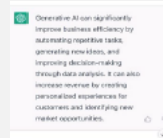


Image Generation



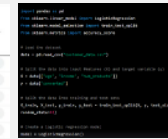
Video Generation



Audio Generation

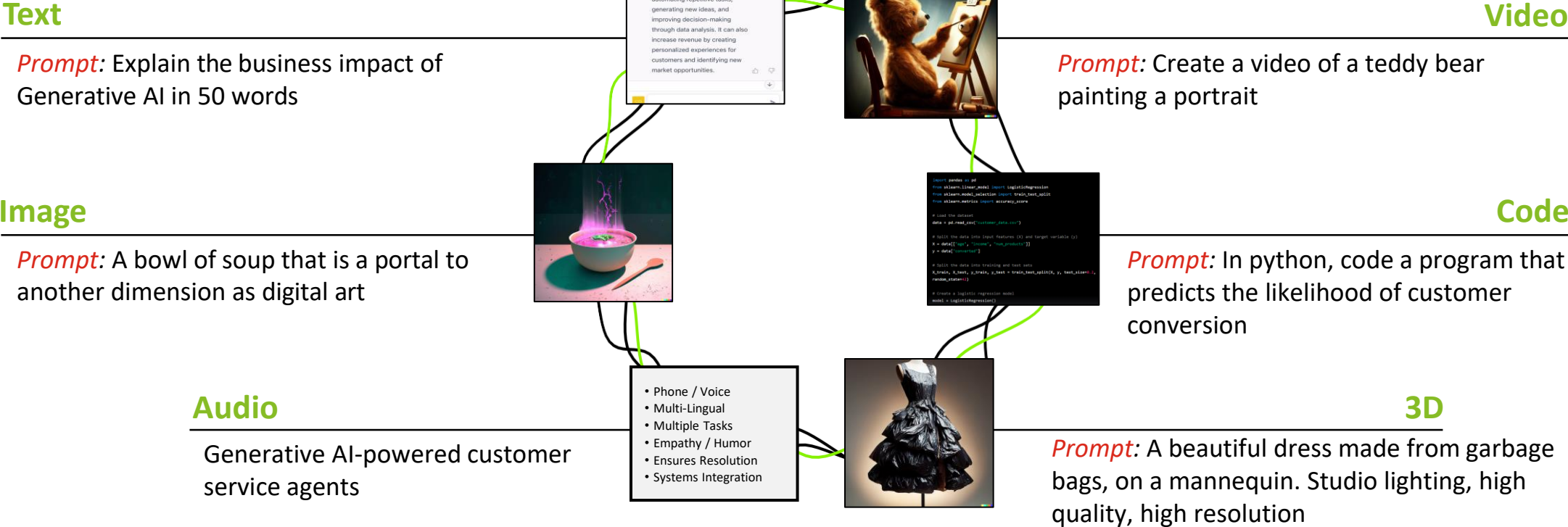


Code Generation



Both categories have application and relevance to Risk & Internal Audit

GenAI In Action

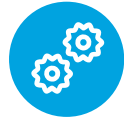


GenAI Value Adding



Documentation Creation

Generate natural language reports and summaries of audit findings, making it easier for auditors to communicate their findings to stakeholder



Knowledge Retrieval

Ability to research complex accounting questions through smart search mechanisms



Documentation Review

Inspection of source documentation to produce summarized text and a consistent evaluation



Natural Language Interface

Use of natural language to interface technology across an organization, such as risk and audit platforms and external sources.

Differences Between Robotic Process Automation (RPA) & GenAI

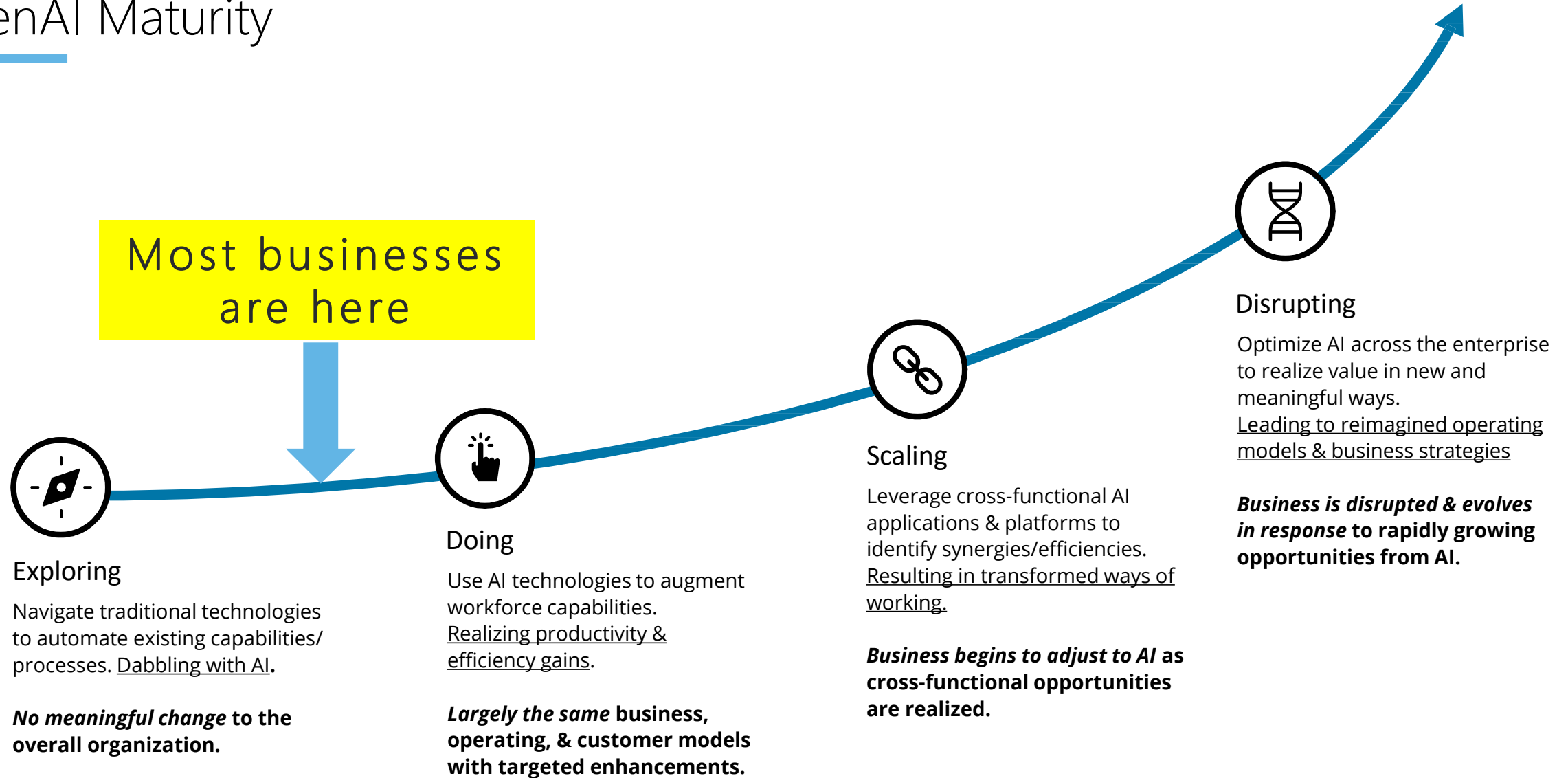
RPA

- Performs pre-defined rules based tasks
- Accepts inputs only in the specific and exact format for which it was programmed to handle
- Focuses on improving task efficiency and consistency particularly for repetitive tasks

GenAI

- Accepts unstructured data from different sources and in different formats
- Does not need 're-programming' for different model inputs. Model can learn and re-train
- Learns from data and experiences with the ability to adapt over time

GenAI Maturity

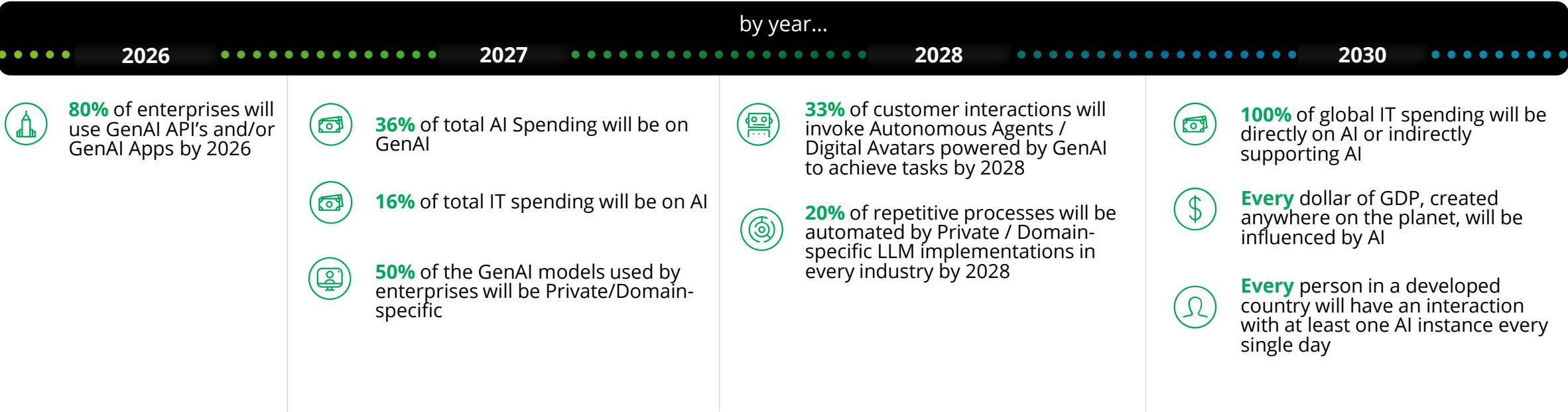




GenAI & Risk Intelligence – The Opportunity

AI Looking Ahead

Between 2023 and 2027, **USD \$3 Trillion dollars** will be spent on AI*



*Gartner: 2024 – the year of the AI plan; Gartner: Emerging Tech Impact Radar (November 2023)

An Asia Pacific Lens

An analysis of more than 11,900 surveyed individuals across the region highlights the role of younger employees in driving GenAI adoption, presenting new opportunities and challenges for employers as they adapt to these changes

Already, GenAI is transforming...

WORK



6.3 hours per week saved for employees who are daily users of GenAI

ECONOMY



Over 11 billion working hours across Asia Pacific will be impacted by AI each week, equivalent to 16% of all working hours



\$5 trillion USD of economic activity within industries that face a short fuse, big bang scenario

SOCIETY

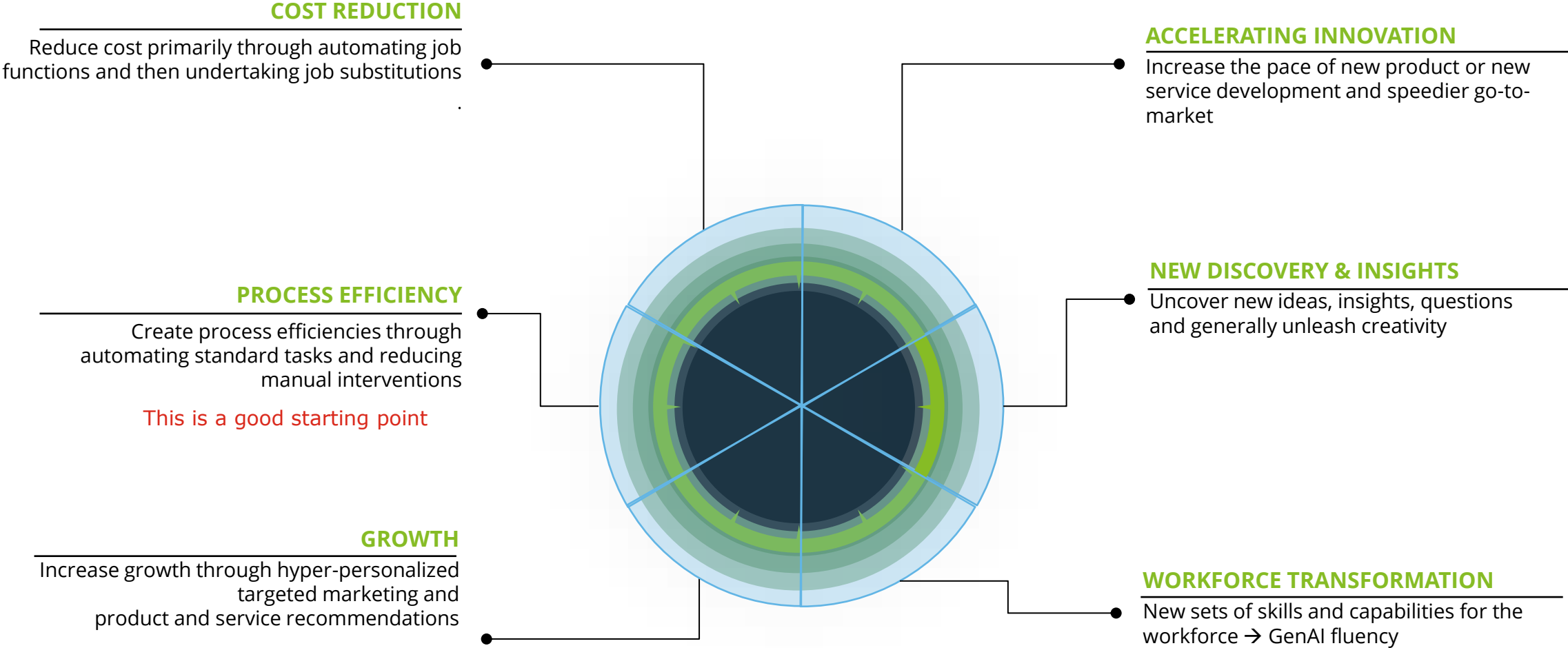


67% of GenAI users said their experienced improved satisfaction with work or study

- 71% of GenAI users said that it's improved their ability to generate new ideas
- 67% of GenAI users said that it's improved their ability to learn new skills
- 73% of users said GenAI improved the speed and quality of their outputs
- 65% of users said GenAI improved the accuracy of their outputs

Source: [Generation AI in Asia Pacific | Deloitte Insights](#)

GenAI Opportunity



GenAI Fields of Play

Clear fields of play are emerging with the many ways Generative AI can lead to value across the enterprise

1



Back Office

Enable the future of common enterprise back-office functions that transcend industries through functional domain LLMs:

- Finance
- Supply Chain
- Business of IT
- R&D/Innovation
- Legal
- HR
- Tax

Cost reduction; process efficiency

2



Front Office

LLMs are being built / accessed by businesses for building consumer facing apps for their customers. We are seeing this across

- Sales
- Marketing
- Customer Service
- Content Personalization
- Customer Engagement

Growth; process efficiency

3



Embedded

Software / technology companies are looking to tie up with LLM Model Providers and incorporate LLMs that are specifically trained for usage within their packages:

- | | |
|----------------------|-------------------|
| Enterprise Software: | Industry ISV: |
| • Oracle | • Intuit |
| • Salesforce | • Bloomberg |
| • ServiceNow | • Thomson Reuters |
| • Adobe | |

Growth; accelerating innovation (products/services)

4



Software Engineering

LLMs are already being used to autonomously develop software code. It is where models are writing software code automating computer programming at scale in areas including:

- Product engineering services (PES)
- Product development
- IoT software
- Networking software
- Cyber defense
- Communication protocols

Cost reduction; process efficiency

How GenAI Can Help Risk, Compliance & External / Internal Audit

Risk Assessment

Supporting risk and audit research and understanding of risks for a specific industry, sector and business

Identify areas of focus when using a risk based approach

Plan Development

Supporting risk and auditor research and understanding on risk, business process and expected controls in advance of engagement planning

Engagement Planning

Suggest control objectives and test procedures based on in scope risk areas

First draft of risk and audit scope/terms of reference

Engagement Execution

Drawing themes from interview notes / audio

Summation / interrogation of audit evidence documents

Initial workpaper review and QA

Initial draft of issue/observations

Reporting

Initial draft report

Editorial QA e.g. simplifying language, sentiment analysis

Summation of reports for Audit Committee summaries

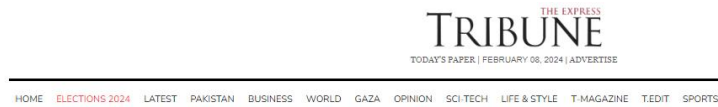
GenAI can be applied across the whole lifecycle



GenAI & Risk Intelligence – The Risk

GenAI Risk

Aside from GenAI opportunity there is also GenAI risk that needs to be dealt with



YouTube AI blocks chess channel after mistaking 'black v white' discussion as racism

Radic suspects that the account may have been blocked because he referred to the chess game as 'Black against White'

Reuters/Tech Desk | February 22, 2021



The world's most popular YouTube chess channel was blocked after artificial algorithms set up to detect racist content and hate speech mistook discussion about black and white chess pieces as racism, reports Independent UK.

ChatGPT: What Are Hallucinations And Why Are They A Problem For AI Systems

22 March 2023

In recent years, the rapid development of artificial intelligence (AI) has led to the rise of sophisticated language models, with OpenAI's ChatGPT at the forefront. While these powerful tools have revolutionized various industries, they also come with their own set of challenges. One of the most concerning issues is the phenomenon of hallucination. In this article, we will demystify this term, explore why it's a problem, and discuss ongoing efforts to mitigate it.



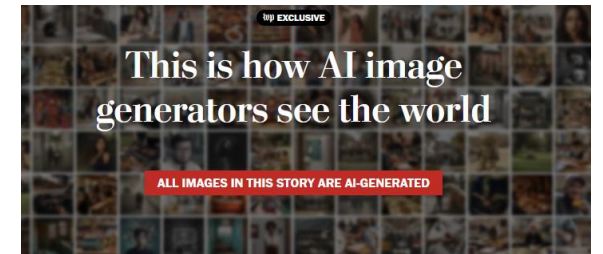
Examples of AI hallucinations?

Here are two examples of what hallucinations in ChatGPT might look like:

User input: "When did Leonardo da Vinci paint the Mona Lisa?" AI-generated response: "Leonardo da Vinci painted the Mona Lisa in 1815." (Incorrect: The Mona Lisa was painted between 1503 and 1506, or perhaps continuing until 1517.)

User input: "Tell me a fact about George Washington." AI-generated response: "George Washington was known for inventing the cotton gin." (Unrelated: Eli Whitney, not George Washington, invented the cotton gin.)

The Washington Post
Democracy Dies in Darkness



TOYS IN IRAQ
are soldiers with guns

AI Risks

Bias



- ✓ **Bias in; bias out**
Biased training data (e.g., over/under-representation of a population cohort, sexism, racism), can lead to biased output.

Model training data and responses are reviewed, including using human rank preferred answers to reduce bias

Cost



- ✓ Foundation models generally offer a pay-as-you-go billing mechanism however, the **cost per use of sophisticated models can be material.**

AI budgets are established with automated monitoring and reporting to escalate costs at defined thresholds

Ethical Use



- ✓ Is the AI being used in a manner consistent with the purpose of the overall exercise?
- ✓ **Is customer data being used ethically?**

Meta prompting guardrails are established to detect potential unethical use and moderate outputs

Hallucination



- ✓ Models might **output statements that are factually false.**
- ✓ Sources and citations are unavailable for most models.

Models are grounded with retrieval augmented generation to provide a factual basis for responses

IP Protection & Infringement



- ✓ SaaS-AI companies may use prompt payloads to train future versions of the base model, potentially including **confidential data that could expose the user to IP infringement claims.**

Generative AI outputs include accessible, non-technical explanations of the output including appropriate citations

Malicious Behavior



- ✓ To maintain operations and customer trust, proactively **minimizing risk from malicious behavior on the network is critical.**

Models are fine tuned with example prompts and responses to train out false or harmful content

Model Performance



- ✓ Foundation models are comprised of **billions of parameters (model size) and trained on petabytes of data.**
- ✓ In theory, the larger the model, the better the output.

Models are monitored using pre-defined thresholds and ranges of acceptable performance

Confidentiality & Privacy



- ✓ Models are built on data sharing.
- ✓ **Consent for data used (confidential information, personally identifiable information) is necessary.**

Model training data is anonymized and reviewed prior to use

Text Formatting



- ✓ Models can **struggle when the data are in irregular formats** or when the position of the text on the page (e.g., infographic, presentation slide) is relevant to the context and understanding.

Model feature design is reviewed prior to implementation to specify input format

Token Size Limits



- ✓ Most models have a 2k token size limit while some larger ones can process 4k tokens in a single call.
- ✓ This **limit makes it difficult to process larger documents.**

Model input parameters are defined and tested prior to implementation

Foundations of a Trustworthy AI Risk Management Framework

Safe/Secure

AI systems can be protected from risks (including Cyber) that may cause physical and/or digital harm

Robust/Reliable

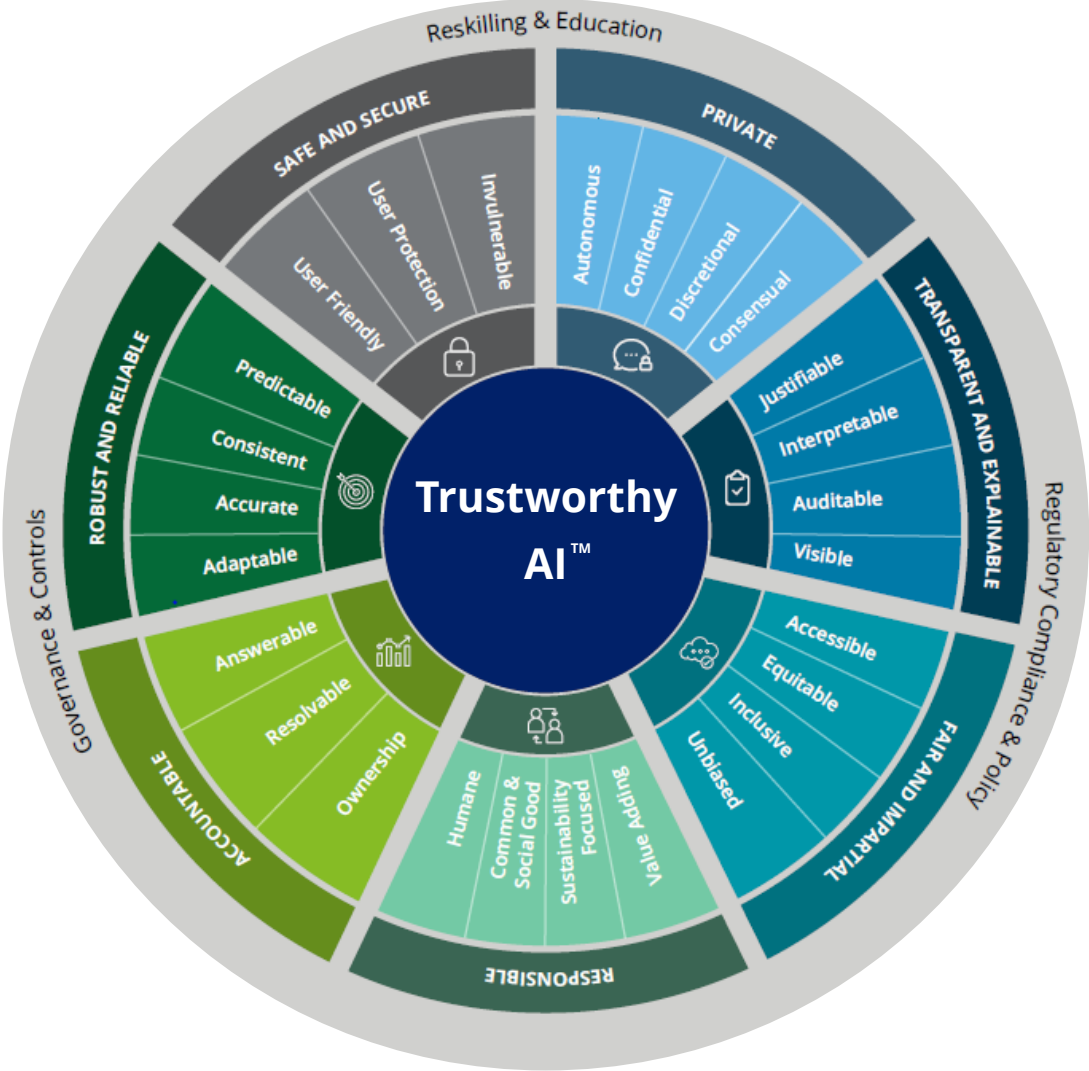
AI systems have the ability to learn from humans and other systems and produce consistent and reliable outputs

Accountable

Policies are in place to determine who is responsible for the decisions made or derived with the use of technology

Responsible

The technology is created and operated in a socially responsible manner



Private

Consumer privacy is respected, and customer data is not used beyond its intended and stated use; consumers are able to opt in/out of sharing their data

Transparent/Explainable

Participants are able to understand how their data is being used and how AI systems make decisions; algorithms, attributes, and correlations are open to inspection

Fair/Impartial

AI applications include internal and external checks to help ensure equitable application across participants

Making AI Fit for Audit

Below is an overview of key evidence required to ensure AI models are fit for audit

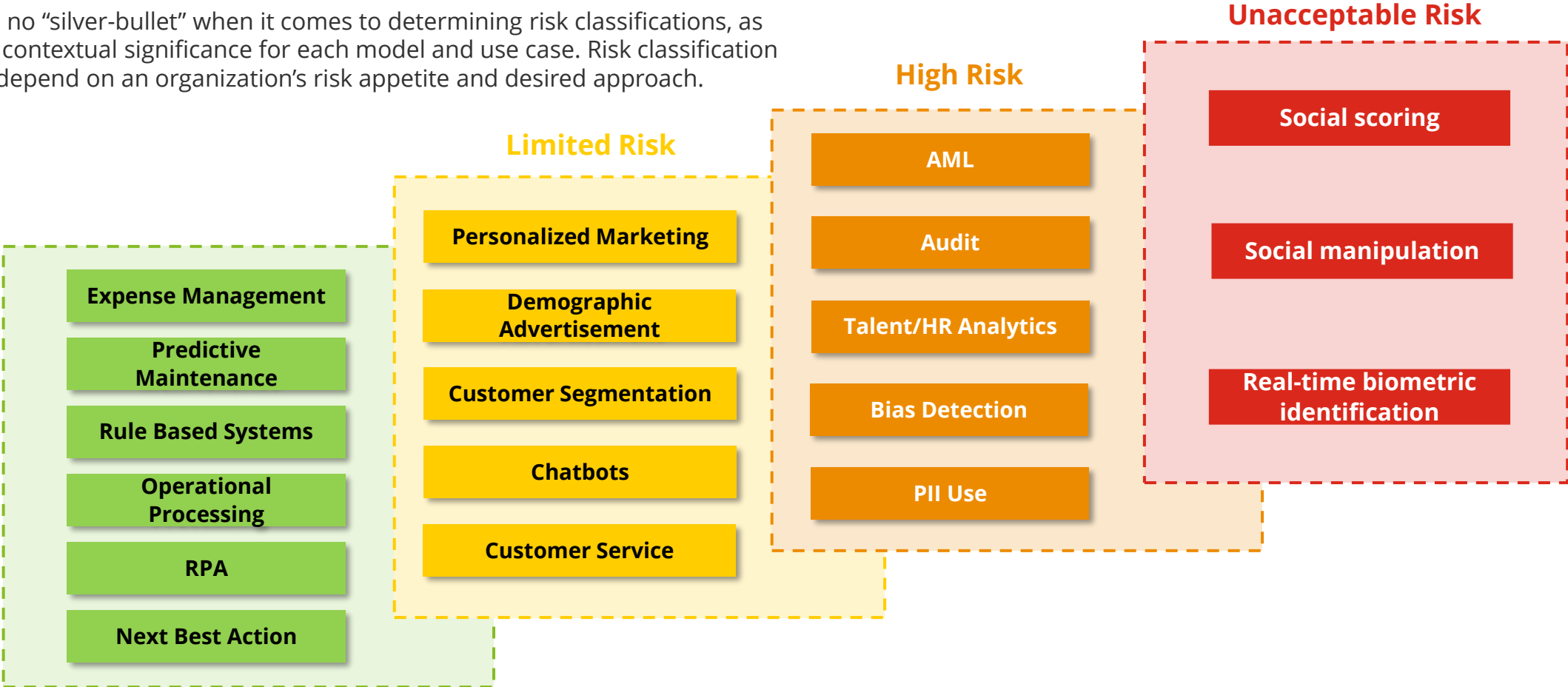
D. MODEL DEVELOPMENT & TRAINING	D. DEPLOYMENT & OPERATIONAL MONITORING	D. GOVERNANCE & CONTROLS
<p><i>Assess if the data used was appropriate, if the model was designed robustly, and if the training process was sound.</i></p> <p>Data Lineage and Provenance: Complete records of data sources used for training, including timestamps, versions, and any preprocessing steps. This proves the AI's foundation is reliable.</p> <p>Training Code and Configuration: Version-controlled code used for model training, along with hyperparameter settings. This ensures the model can be reproduced.</p> <p>Model Performance Metrics: Detailed results on standard metrics (e.g., accuracy, precision, recall) calculated on validation and test datasets. This demonstrates how well the AI generalises.</p> <p>Bias and Fairness Testing Results: Bias detection KPI, along with documentation of bias mitigation techniques used and the outcomes of fairness assessments across relevant demographics. This is crucial for responsible AI.</p>	<p><i>Evaluate if the model's performance remains consistent, if its inputs are valid, and if there are any production risks.</i></p> <p>Deployment Environment Details: Record of the hardware, software, and infrastructure where the model runs, including versioning. This ensures consistency between development and production.</p> <p>Input Data Monitoring: Statistics and potential drift detection on the live data fed into the AI. This catches if the real-world data starts differing from training data.</p> <p>Model Prediction Monitoring: Tracking of the AI's outputs over time, including potential anomalies or deviations from expected behaviour. This spots performance degradation.</p> <p>User Feedback and Issue Logs: Systematic capture of any user feedback, complaints, or issues encountered, linked to specific predictions if possible. This provides real-world performance insights.</p>	<p><i>Assess if risks are effectively managed, if the system is fair and unbiased, and if there's accountability for decisions.</i></p> <p>Risk Assessments: Documentation of risks management system and identification, analysis, and mitigating controls of known and reasonably foreseeable risks. This demonstrates targeted risk management.</p> <p>Regulatory Compliance: Clear documentation and processes, including compliance assessments, certifications and policy documents. This demonstrates compliance with regulatory requirements and standards</p> <p>Model Explainability: Evidence of methods used to understand and explain model decisions, such as feature importance analysis or surrogate models. This ensures decisions made by the AI system are understandable and trustworthy.</p> <p>Change Management Documentation: Version control for model updates, including reasons for changes, testing performed, approvals obtained, access logs. This provides an audit trail for model evolution.</p>

A Risk Based Approach to AI Models

Below is an overview of how the industry is categorizing and defining high / medium / low risk based evolving regulation (e.g., EU AI Act, SR 11-7, E-23) and other academia and research

Use Case Risk Curve Visualization

There is no “silver-bullet” when it comes to determining risk classifications, as there is contextual significance for each model and use case. Risk classification should depend on an organization’s risk appetite and desired approach.



Cloud Vendor Data Privacy

When it comes to data privacy and risk, there are already some guardrails in place via the cloud vendors

Your prompts (inputs) and completions (outputs), your embeddings, and your training data:

- are NOT available to other customers.
- are NOT available to OpenAI.
- are NOT used to improve OpenAI models.
- are NOT used to improve any Microsoft or 3rd party products or services.
- are NOT used for automatically improving Azure OpenAI models for your use in your resource (The models are stateless, unless you explicitly fine-tune models with your training data).
- Your fine-tuned Azure OpenAI models are available exclusively for your use.

The Azure OpenAI Service is fully controlled by Microsoft; Microsoft hosts the OpenAI models in Microsoft's Azure environment and the Service does NOT interact with any services operated by OpenAI (e.g. ChatGPT, or the OpenAI API).




GenAI Enabling Solution Demonstrations

GenAI Internal Risk & Internal Audit Use Cases



GenAI Regulatory Compliance Example

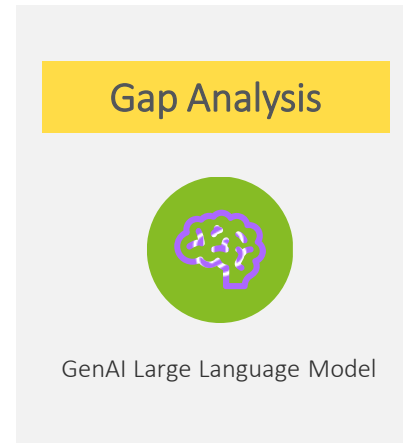
AML Regulatory Requirements


OTORITAS JASA KEUANGAN
REPUBLIK INDONESIA

SALINAN
PERATURAN OTORITAS JASA KEUANGAN
REPUBLIK INDONESIA
NOMOR 8 TAHUN 2023
TENTANG
PENERAPAN PROGRAM ANTI PENCUCIAN UANG, PENCEGAHAN PENDANAAN
TERORISME, DAN PENCEGAHAN PENDANAAN PROLIFERASI SENJATA
PEMUSNAH MASSAL DI SEKTOR JASA KEUANGAN
DENGAN RAHMAT TUHAN YANG MAHA ESA
DEWAN KOMISIONER OTORITAS JASA KEUANGAN,

Menimbang : a. bahwa untuk melakukan penguatan pencegahan tindak pidana pencucian uang, tindak pidana pendanaan terorisme, dan pendanaan proliferasi senjata pemusnah massal serta untuk mewujudkan integritas di sektor jasa keuangan, Otoritas Jasa Keuangan berkomitmen untuk mendukung regulasi yang sesuai dengan perkembangan prinsip internasional yang mengatur mengenai penerapan program anti pencucian uang, pencegahan pendanaan terorisme, dan pencegahan pendanaan proliferasi senjata pemusnah massal;

b. bahwa untuk mewujudkan komitmen penerapan program anti pencucian uang, pencegahan pendanaan terorisme, dan pencegahan pendanaan proliferasi senjata pemusnah massal, perlu melakukan penyesuaian dengan perkembangan peraturan perundang-undangan di Indonesia yang secara langsung maupun tidak langsung berkaitan dengan penerapan program anti pencucian uang, pencegahan pendanaan terorisme, dan pencegahan pendanaan proliferasi senjata pemusnah massal di sektor jasa keuangan;



Bank "ABCD" AML Policy

Kebijakan Pelaksanaan Program Anti Pencucian Uang (APU) dan Pencegahan Pendanaan Terorisme (PPT) PT Bank ABCD (Persero) Tbk.

Penerapan program Anti Pencucian Uang dan Pencegahan Pendanaan Terorisme (APU-PPT) merupakan kewajiban bagi semua pihak, terutama bagi Bank sebagai Penyedia Jasa Keuangan (PJ). Masuknya era globalisasi dan kemajuan teknologi informasi yang semakin kompleks, mendorong Bank untuk lebih komprehensif dalam mitigasi risiko Bank digunakan oleh pelaku Tindak Pidana Pencucian Uang (TPPU), Tindak Pidana Pendanaan Terorisme (TPPT), dan Pendanaan Proliferasi Senjata Pemusnah Massal (PPSPM). Hal ini wajib dilakukan karena modus yang dilakukan oleh pelaku kejahatan semakin variatif dalam memanfaatkan Bank sebagai sarana TPPU, TPPT, dan PPSPM. Oleh karena itu, diperlukan komitmen dari seluruh pihak dalam mendukung rezim pemberantasan Pencucian Uang, Pendanaan Terorisme, dan Pendanaan Proliferasi Senjata Pemusnah Massal (PPSPM). Tindak Pidana Pencucian Uang, Pendanaan Terorisme, dan Pendanaan Proliferasi Senjata Pemusnah Massal merupakan kejahatan transnasional dan memerlukan upaya yang *extraordinary* dalam penanganannya. Maka dari itu, dibentuklah sebuah badan yang bersifat *intergovernmental* yaitu *Financial Action Task Force* (FATF) yang memiliki tujuan untuk menetapkan standar dan mendorong implementasi yang efektif atas peraturan dan operasional, serta tindakan hukum untuk memerangi TPPU, TPPT, dan PPSPM atau ancaman lainnya yang berdampak pada integritas sistem keuangan internasional.

Sebagai bentuk komitmen penguatan rezim APU dan PPT di Indonesia yang mengacu pada *best practice international* dan rekomendasi FATF, Indonesia saat ini tengah dalam proses penilaian *Mutual Evaluation Review* (MER) oleh FATF. Penilaian ini sekaligus akan menentukan keberhasilan Indonesia untuk menjadi anggota FATF. Salah satu *sample review* dari penilaian tersebut adalah sektor Perbankan, dimana Bank ABCD turut berkontribusi sebagai salah satu bank yang akan ikut serta dalam proses penilaian. Sebagai upaya mendukung keberhasilan Indonesia dalam penilaian MER dimaksud, Bank ABCD telah melakukan serangkaian penguatan efektivitas penerapan program APU dan PPT baik dari sisi kecukupan prosedur, kehandalan sistem, dan kompetensi sumber daya manusia.

Selain keikutsertaan Bank ABCD dalam penilaian MER, secara nasional Bank ABCD juga berpartisipasi dalam penilaian *Financial Integrity Rating on Money Laundering & Terrorism Financing* (ML/TF) yang diselenggarakan oleh PPATK untuk menilai efektivitas penerapan APU dan PPT atas komitmen antara PPATK, Pihak Regulator, Pihak Penegak Hukum serta Pihak Pelapor dalam penerapan langkah-langkah Anti Pencucian Uang, Pencegahan Pendanaan Terorisme, dan Pendanaan Proliferasi Senjata Pemusnah Massal. Penilaian ini juga merupakan salah satu bagian dari persiapan Indonesia dalam menghadapi MER FATF.

Kebijakan dan Prosedur Penerapan Program APU dan PPT

Bank telah memiliki kebijakan dan prosedur penerapan program APU dan PPT yang sejalan dan sesuai dengan Rekomendasi FATF dan Peraturan OJK (POJK) No. 12/POJK.01/2017 sebagaimana telah diubah dengan POJK No. 23/POJK.01/2019 tentang Penerapan Program APU dan PPT Di Sektor Jasa Keuangan, yang antara lain mencakup :

1. Pengawasan Aktif Direksi dan Dewan Komisaris;

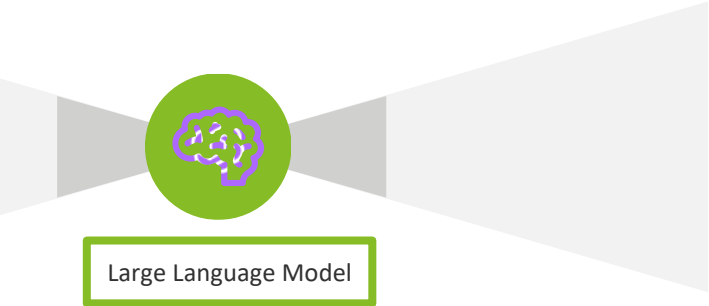
Generate Audit Scope, Controls & Test Plan

Employing large language models and digital tools to analyze and create/update a risk control matrix

Animation

Generate Audit Scope, Controls & Test Plan

Audit Context	
A: Privacy Program Governance	
1.	Privacy Governance Structure
2.	Privacy by Design/Default and Data Protection Impact Assessment (DPIA) program
3.	Roles & Responsibilities
4.	Privacy & Data Protection Requirements and Controls
B: Privacy Program Policies and Procedures	
1.	Privacy and information security policies, procedures and standards
2.	Privacy notices and consent mechanisms
3.	Security for privacy
4.	Records of processing activities architecture (location of personal data, access to personal data, use of third party personal data, third party access to <Client Name> personal data, personal data
5.	Data subject access rights process and capabilities to support requests
6.	Privacy incident response program (i.e. breach management and notification)
C: Training and Awareness	
1.	Privacy and information security training and awareness curriculum
D: Third Party and Cross border Data Transfer	
1.	Third party/vendor management processes, contracts and due diligence
2.	Cross border data transfer mechanisms in use
3.	Jurisdictional localization of GDPR privacy program elements



Audit Scope Ref	Audit Scope Description	Control Objective	Risks	Test Plan
-----------------	-------------------------	-------------------	-------	-----------



Input Context:

- Company profile
- Industry
- Audit scope

Contract Risk Review

Reviewing contract for risks and abnormal terms

- **Example case in contract terms audit with manual testing**
 - Requires audit profession to **manually review contracts** documents (takes up to 2 weeks per contract review)
 - Contracts terms may come in phrasing and present different risks
 - Difficult to cross-reference other contracts
- **Challenges to automation**
 - Requires domain legal knowledge
 - Lack of clear checklist and guidelines
 - Requires judgement on reasonability

25/10/2023, 16:39 Turn Key Datacenter Lease Agreement

120 EAST VAN BUREN STREET
TURN KEY DATACENTER LEASE

This Turn Key Datacenter Lease (this "Lease") is entered into as of the date specified in Item 4 of the Basic Lease Information (the "Effective Date"), by and between Landlord (defined in Item 1 of the Basic Lease Information, below) and Tenant (defined in Item 2 of the Basic Lease Information, below):

REGISTRATION

A. Landlord is the owner of the Land (defined in Item 20 of among other things, the Building (defined in Item 21 of the Basic personal property thereon or therein may be referred to herein as the Building).

B. Tenant desires to lease (i) a portion of the space in the Building (defined in Item 20 of the Basic Lease Information, below) and (ii) that certain Pathway (defined in Section 23 of the Basic Lease Information, below) for the use of the Building for telecommunications networks during the Term (as defined in Section 23 of the Basic Lease Information, below).

NOW, THEREFORE, in consideration of the covenants and conditions set forth herein, the parties have agreed to the following:

BASIC LEASE INFORMATION

- Landlord:** Digital Phoenix Van Buren, Inc.
3101 Park Boulevard
Palo Alto, California 94306
Attn: Manager, Network Operations
Contact Name: Network Operations
Phone No: (650) 289-1602
Facsimile No: (650) 493-0501
E-mail: noc@danger.com
- Tenant:** DANGER Inc., a Delaware corporation
Tenant represents that it has the authority to execute this Lease and to bind itself to the terms and conditions hereof.
- Tenant Addresses:**

Tenant Address for Notices:
Danger, Inc.
3101 Park Boulevard
Palo Alto, California 94306
Attn: Manager, Network Operations
Contact Name: Network Operations
Phone No: (650) 289-1602
Facsimile No: (650) 493-0501
E-mail: noc@danger.com

Tenant Address for Invoice:
Danger, Inc.
3101 Park Boulevard
Palo Alto, California 94306
Contact Name: Accounts Payable
Phone No: (650) 289-5000
Facsimile: (650) 289-5001
E-mail: AP@danger.com

<https://www.sec.gov/Archives/edgar/data/1156378/000119312507268313dex1028.htm>

Facilities lease agreement
~ 100 pages

Small construction project contracts
~ 50 pages

CALLTECH
MASTER AGREEMENT FOR
OUTSOURCING CALL CENTER SUPPORT

THIS AGREEMENT (this "Agreement"), dated as of _____, 1998, is made and entered into this _____ day of _____, 20XX, by and between priceline.com LLC, a Delaware limited liability company with offices located at Five High Ridge Park, Stamford, Connecticut 06905-1325 (hereinafter called "Contractor"), and _____ (hereinafter called "Owner" or "County"), for the Construction Project known as: _____.

The Owner's Representative (OR) is _____.

The Owner and Contractor agree as follows:

**ARTICLE 1
THE WORK:**

The Contractor shall complete all the work on the _____ as specified in the Scope of Work included and also contained in the RFP attached hereto and incorporated herein. The Work is generally described as _____.

**ARTICLE 2
TIME OF COMMENCEMENT AND COMPLETION:**

2.1 The Work to be performed under this Contract shall be commenced upon receipt of a Notice to Proceed and completed by _____. Start date is anticipated to be on or about _____.

2.2 Except as otherwise required for the safety or protection of persons or the Work or property at the Work Site or adjacent thereto, all Work at the Site shall be performed between the hours of 7 AM and 5:30 PM, Monday through Friday, unless otherwise provided in writing by Owner or OR, such consent not to be unreasonably withheld.

**ARTICLE 3
CONTRACT AMOUNT AND BASIS:**

The Owner shall pay the Contractor the amount of \$_____ for the satisfactory performance of the Work, subject to additions and deductions by Change Order as provided in the General Conditions, the following:

_____ shall be the basis for the contract based on actual measured quantities in _____ stated in the Project Special Provisions, which case payment will be based upon _____.

ons, Incorporated, with offices
3228 (herein "CALLTECH").
in several businesses including
ices through its Internet site
its toll-free telephone number
; and
retain the services of CALLTECH
ting services to customers and
L business (each, a "Customer"),
ces, on the terms and conditions
ion of the mutual covenants
llows:
ICLE 1.
H; DESCRIPTION OF SERVICES
ALLTECH
itions of this Agreement,
er support and telemarketing
es"), and CALLTECH hereby accepts
rovide PRICELINE inbound
ve p
ces
o an

Outsourcing contracts
~ 100 pages

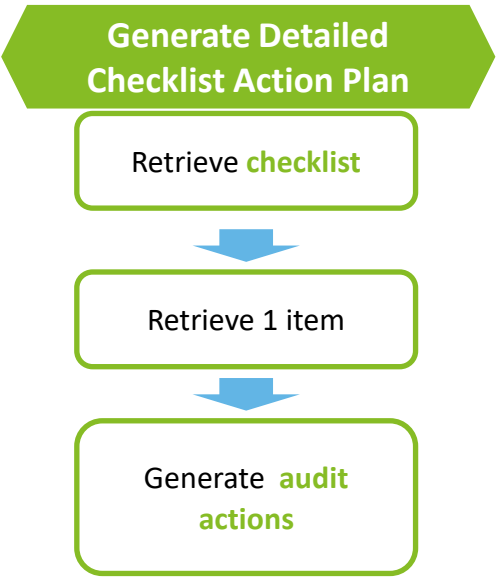
Contract Risk Review

Employing large language models for contract review

Animation

Contract Review Workflow

- Given context (counter-parties profiles, background, specific policies) generate checklist to analyze a given contract
- Analyze the contract and highlight risks associated with the generated checklist



CALLTECH
MASTER AGREEMENT FOR
OUTSOURCING CALL CENTER SUPPORT

THIS AGREEMENT (this "Agreement"), dated as of _____, 1998, is between priceline.com LLC, a Delaware limited liability company with offices located at Five High Ridge Park, Stamford, Connecticut 06905-1325 (herein "PRICELINE"), and CALLTECH Communications, Incorporated, with offices located at 4189 AcLingGate Lane, Columbus, Ohio 43228 (herein "CALLTECH").

WHEREAS, PRICELINE is engaged in several businesses including the business of selling airline travel services through its Internet site priceline.com (the "Site") and through its toll-free telephone number 800-PRICELINE (the "Toll-Free Number"); and

WHEREAS, PRICELINE desires to retain the services of CALLTECH to provide customer support and telemarketing services to customers and potential customers of PRICELINE's airline travel business (each, a "Customer"), and CALLTECH desires to provide such services, on the terms and conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties hereby agree as follows:

ARTICLE 1:
ENGAGEMENT OF CALLTECH; DESCRIPTION OF SERVICES

AGREEMENT OF CALLTECH
terms and conditions of this Agreement, e the Customer support and telemarketing the "Services"), and CALLTECH hereby accepts

TECH will provide PRICELINE inbound omers who have purchased airline tickets

Site. CALLTECH will provide such services in accordance with the specifications set forth on SCHEDULE A attached hereto and made a part hereof (collectively, the "Inbound Teleservices").

Outsourcing contract
~ 100 pages



Large Language Model

Contract Risk Review

Employing large language models for contract review

CALLTECH
MASTER AGREEMENT FOR
OUTSOURCING CALL CENTER SUPPORT

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Outsourcing contract
~ 100 pages



Large Language Model

Audit Contract

Animation

Audit, Analyse & Review Contract

Retrieve detailed action plans



Retrieve 1 audit action



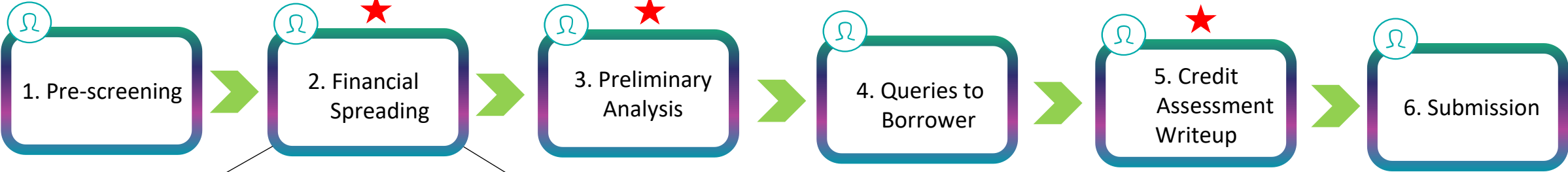
Automatically retrieve relevant contract parts



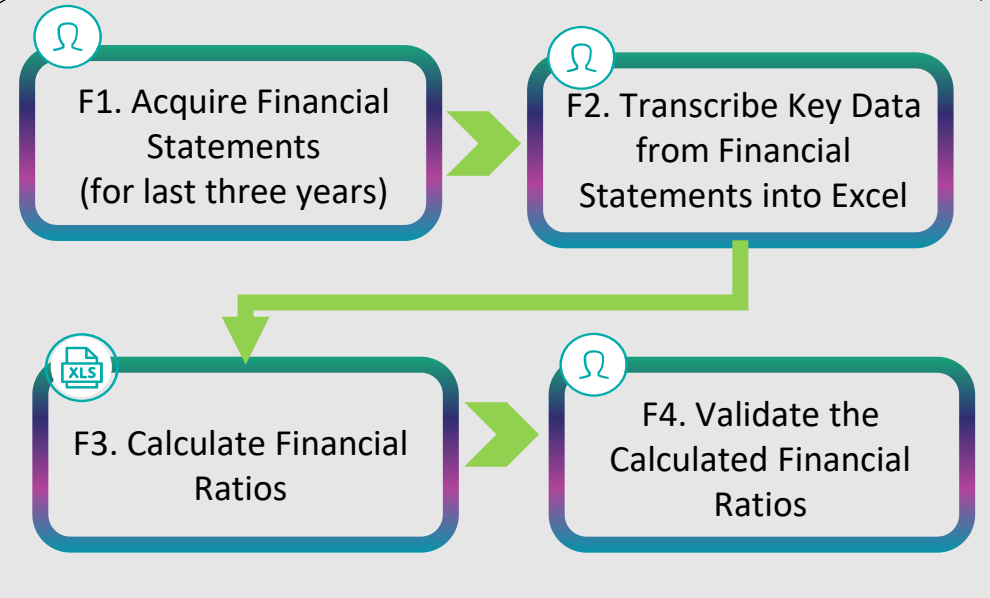
Analyze and review contract identifying coverage, risk and recommendations

Financial Statement Review

Traditional Loan Origination Processes

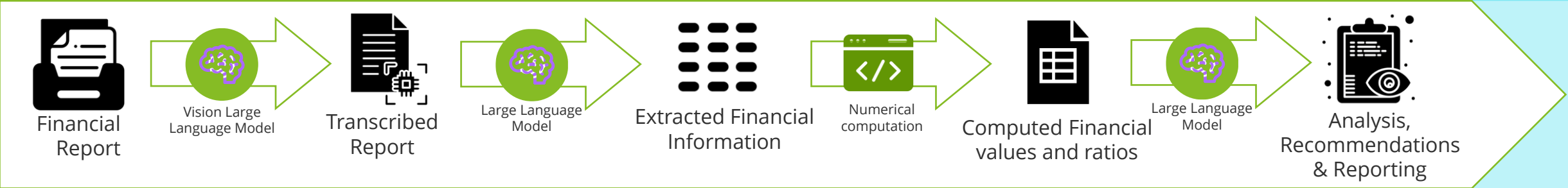


Sub-processes within Financial Spreading



- Indicates processes where *manual* tasks are involved
- Indicates partial calculations are done by Excel formula
- GenAI Enabled POC

Gen AI Financial Statement Analysis



Step 1 Transform 'raw' input data into LLM readable format

Step 2 Extract values from data

Step 3 Numerical calculations

Step 4 Analysis & reporting

- Financial reports in PDFs etc..
- Various formats

- Vision-LLM read in document in PDF/scanned images
- Gen AI transcription to markdown text into LLM readable format

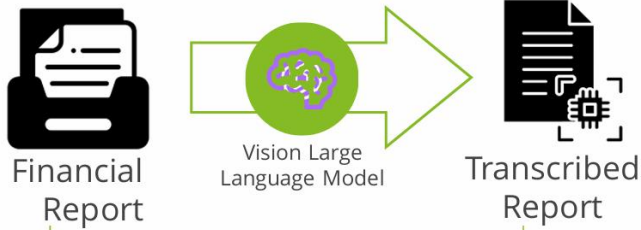
- LLM deconstructs report into sections
- For each financial value:
 - LLM identify relevant sections to extract financial values
 - LLM reason out arithmetic operations to perform
 - LLM review of extraction

- LLM pass extracted values and operations to a program to execute those steps
- Deterministic computer functions perform the operations to compute the financial values and ratios

- LLM receive results and preform financial analysis on the information
- Draft the assessment report based on a given format
- Arrive at recommendations

Transform Input Documents

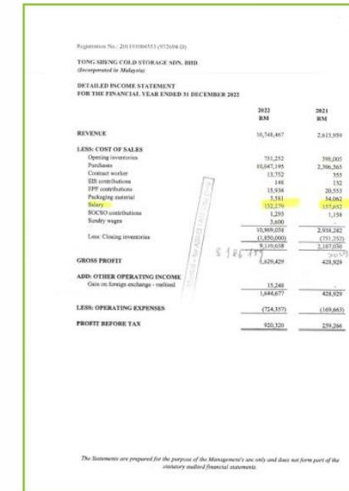
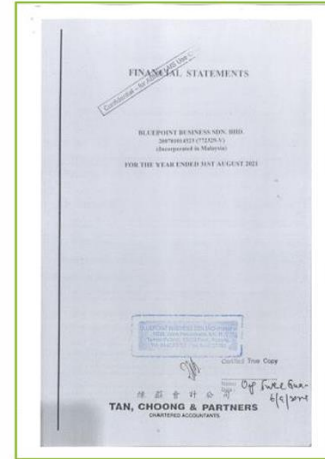
Transform input document using vision-LLM into LLM readable format



Data Description

- Financial reports in PDFs, scanned images
- Content not directly readable by LLM
- Markdown formatted text readable by LLM
- Non-text information is retained including tables, charts and images
- Formatting conveys important structure information

Sample Financial Report Pages



Transform

```

Confidential - for ABMB/AIS Use Only

FINANCIAL STATEMENTS

BLUEPOINT BUSINESS SDN. BHD.
200701014323 (772329-V)
(Incorporated in Malaysia)

FOR THE YEAR ENDED 31ST AUGUST 2021

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BLUEPOINT BUSINESS SDN. BHD. (772329-V)
1633, Jalan Perusahaan, MK. 11,
Taman Perai, 13600 Perai, Penang.
Tel: 04-5079722 Fax: 04-5079438

Certified True Copy

Name: Ooi Swee Guan
Date: 6/9/2021

陳莊會計公 TAN, CHOONG & PARTNERS
CHARTERED ACCOUNTANTS
    
```

Transform

TONG SHENG COLD STORAGE SDN. BHD. (Incorporated in Malaysia)		
DETAILED INCOME STATEMENT		
FOR THE FINANCIAL YEAR ENDED 31 DECEMBER 2022		
	2022 RM	2021 RM
REVENUE	10,748,467	2,615,959
LESS: COST OF SALES		
Opening inventories	751,252	398,005
Purchases	10,047,195	2,306,365
Contract worker	13,752	355
EIS contributions	148	132
EPF contributions	15,938	9,553
Packaging material	3,581	54,062
Salary	132,279	157,652
SOCSCO contributions	1,293	1,158
Sundry wages	3,600	
	10,969,038	2,938,282
Less: Closing inventories	(1,850,000)	(751,252)
	9,119,038	2,187,030
GROSS PROFIT	1,629,429	428,929
ADD: OTHER OPERATING INCOME		
Gain on foreign exchange - realised	15,248	
	1,644,677	428,929
LESS: OPERATING EXPENSES	(724,357)	(169,663)
PROFIT BEFORE TAX	920,320	259,266

The Statements are prepared for the purpose of the Management's use only and does not form part of the statutory audited financial statements.

- Can be in different formats
- Can have watermark or stamps, etc..

Extract Values from Transcribed Report & Perform Ratio Calculations

LLM deconstruct report and extract all related components and values from the data



Sample Computed Balance Sheet Table & Financial Ratios

Sample Transcribed Data

TONG SHENG COLD STORAGE SDN. BHD.
Registration No.: 201101004553 (932694-D)
(Incorporated in Malaysia)

REPORTS AND FINANCIAL STATEMENTS
FOR THE FINANCIAL YEAR ENDED
31 DECEMBER 2022

Confidential - for ABMB / AIS Use Only

Certified True Copy

(Signature)

Name:
Date: 3/4/MP

TONG SHENG COLD STORAGE SDN. BHD.
(932694-D)
No. 17, Batu Berang Tieng,
34200 Tg. Piandang, Perak.

DCT & CO. (AF 002428)
CHARTERED ACCOUNTANTS
MALAYSIA

5. INVENTORIES

	2022 RM	2021 RM
Raw materials, at cost	1,850,000	751,262

The cost of inventories recognised as an expense during the financial year amounted to RM8,948,447 (2021: RM1,953,118).

6. TRADE RECEIVABLES

The normal trade credit terms granted by the Company to its customers ranges from 90 to 120 days (2021: 90 to 120 days). Other credit terms are assessed and approved on a case by case basis.

7. OTHER RECEIVABLES AND DEPOSIT

	2022 RM	2021 RM
Other receivables	4,340	136,756
Deposit	2,000	-
Total	6,340	136,756

In 2022, included in other receivable is RM2,040 owing by related parties and Companies in which the directors of the Company have interest. The amount is unsecured, interest-free and repayable on demand.

8. AMOUNT DUE FROM / (TO) A DIRECTOR

This amount due from / (to) a director is unsecured, interest-free and repayable on demand.

9. SHARE CAPITAL

Number of shares	2022 Units	2021 Units	2022 RM	2021 RM
Issued and fully paid ordinary shares:				
At beginning of the year	100,000	100,000	100,000	100,000
Issued during the year	250,000	-	250,000	-
At end of the year	350,000	100,000	350,000	100,000

Ordinary shares of the Company have no par value. The holder of ordinary shares is entitled to receive dividends as and when declared by the Company. All ordinary shares carry one vote per share without restrictions.

- LLM deconstructs report into sections
- For each financial value:
 - LLM identify relevant sections to extract financial values
 - LLM reason out arithmetic operations to perform
 - LLM review extraction

Extract & Compute

Balance Sheet

field_name	amount
Cash	265798
Fixed Deposit - Unencum	
Fixed Deposit - Encumbe	
Cash Equivalent	
Trade Receivable	
Trade Receivable - Parer	
Sundry Debtors	
Income Tax Receivable	
Income Tax Benefit-Loss	
Deferred Income Tax Ass	
Inventory	
Raw Materials	
Work in Process	
Finished Goods	
Other Inventory	
Other Current Assets (inc	
Accumulated Depreciation (fixed assets)	57877
Short Term Bank Borrowings	12614
Trade Finance	null
Curr Mat LTD - Term Loans	12614
Curr Mat LTD - PDS Instruments	null
Curr Mat LTD - Hire Purchases	null
Trade Payable	2634221
Trade Payable - Parent/Sub.	null
Progress Payables - Contracts	null
Cash Advances Received (Rel. Parties)	null
Accounts Payable - Parent/Sub	null
Other Payable, Deposits & Accruals	111241
Due to Parent/Subsidiaries & Related Co	null
Due to Directors/Shareholders	37012
Interest Accrued	null
Dividends Payable	null
Income Taxes Payable	139776
Deferred Income Tax Liabilities (Curr)	null
Other Current Liabilities	null
Long Term Debt - Term Loans	67560

Financial Ratios

ratio_name	ratio_value
currentRatio	1.39
quickRatio	0.77
cashRatio	0.09
debtToEquityRatio	0.11
gearingRatio	0.11
leverageRatio	3.47
workingCapital	1053833.00

Example Gen AI Analysis and Assessment

Example analysis

The screenshot displays a software interface for a credit risk assessment. On the left, a sidebar titled 'Sessions' shows a workflow of custom instructions: 'Perform Credit Risk Assessment for Corporate Loan Application', 'Income Statement Analysis with Detailed Commentary for Credit Risk Assessment', 'Detailed Balance Sheet Analysis for Credit Risk Assessment', and 'Conduct Cashflow Analysis for Credit Risk Assessment'. The main content area is titled '4.3 Cash Flow Analysis' and contains the following text and data:

4.3 Cash Flow Analysis

Cash Generation:

The analysis of the cash flow information, although implicitly inferred, reveals several critical aspects of the company's financial health and operational management over the past three years. Notably, the cash balances experienced fluctuations across the fiscal years:

- 2022: RM582.00
- 2023: RM493.00
- 2024: Cash balance is not explicitly provided, indicating either minimal remaining cash or an error in disclosure.

This fluctuation suggests varying levels of cash generation capabilities. A declining cash position through 2022 and 2023 could imply that the company faced challenges in generating sufficient cash from operating activities to cover its immediate expenses and investments [[1]].

Capital Expenditures:

The presence of significant investments in fixed assets is notable, particularly in the increase of "Other Fixed Assets" reported in 2024 (from RM851.00 to RM4,572.00). This surge indicates considerable capital expenditures which are likely aimed at enhancing productive capacities or entering new operational domains to potentially increase future revenue [1]. However, it suggests a substantial outflow of cash, which should be monitored carefully to avoid liquidity pressures moving forward.

Debt Servicing:

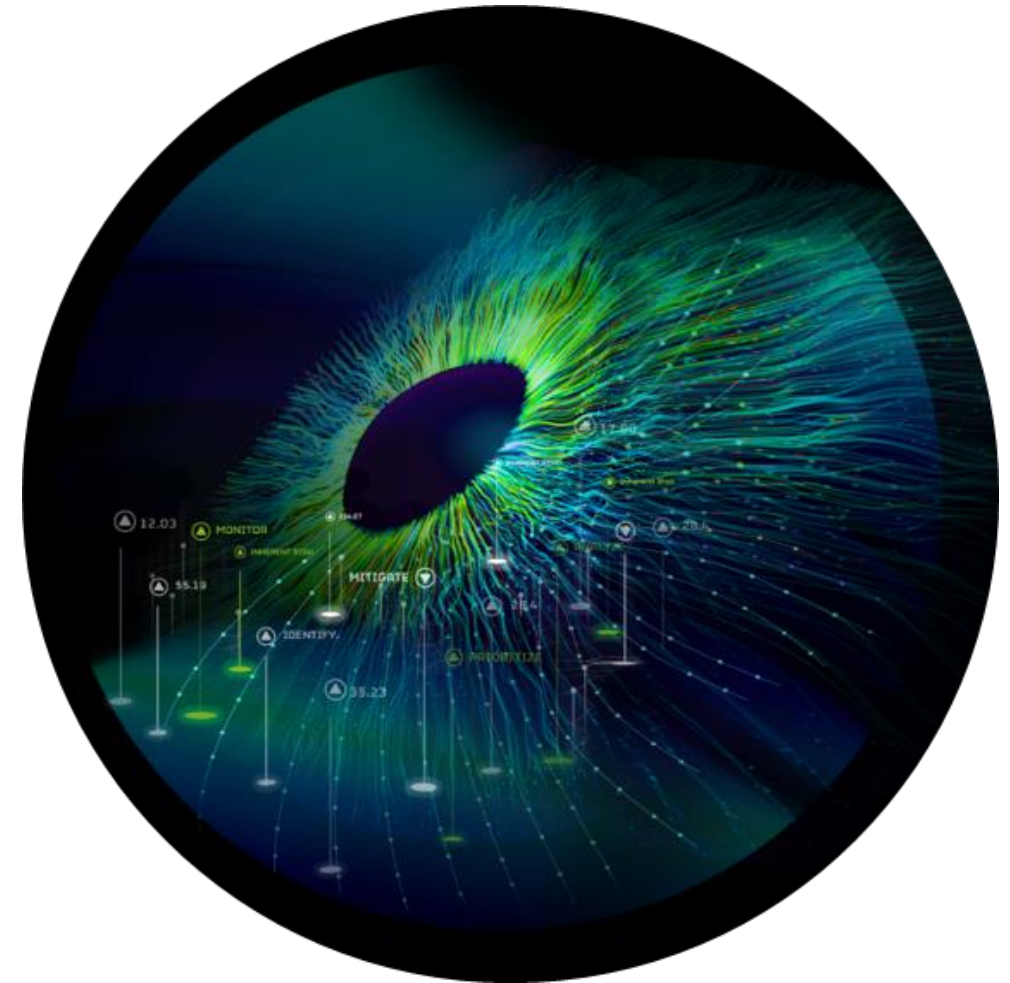
The company's debt levels have varied, reflecting its ability to manage and service debt:

- **Short-Term Debt:**
 - 2022: RM6,095.00
 - 2023: RM5,741.00
 - 2024: RM5,832.00
- **Long-Term Debt:**
 - 2022: RM4,471.00

Risk Intelligence

Risk Intelligence Illuminator

leverages GenAI to create a customized risk landscape in near real time, enabling organizations to identify and mitigate risk so they can move forward with confidence.



Risk Intelligence Illuminator Workflow

Public Events Feed



- AI curated events feed

Deloitte Risk IP



- Risks & disruptive factors by industry / sector



Large Language Model

Step 1: Explore Events **Step 2: Risk Analysis** **Step 3: Create RCM**



Identify and converge events
Retrieve relevant risk modules

Integrate risk knowledge
Preliminary analysis

GenAI enabled
Interactive, situational aspect
deep analysis

Generate RCM
Formulate final response and report



What About The People?

What about me and my role?

Some key questions

Is GenAI just a 'fad' and will go away?

Will my job change?

Do I need to re-skill?

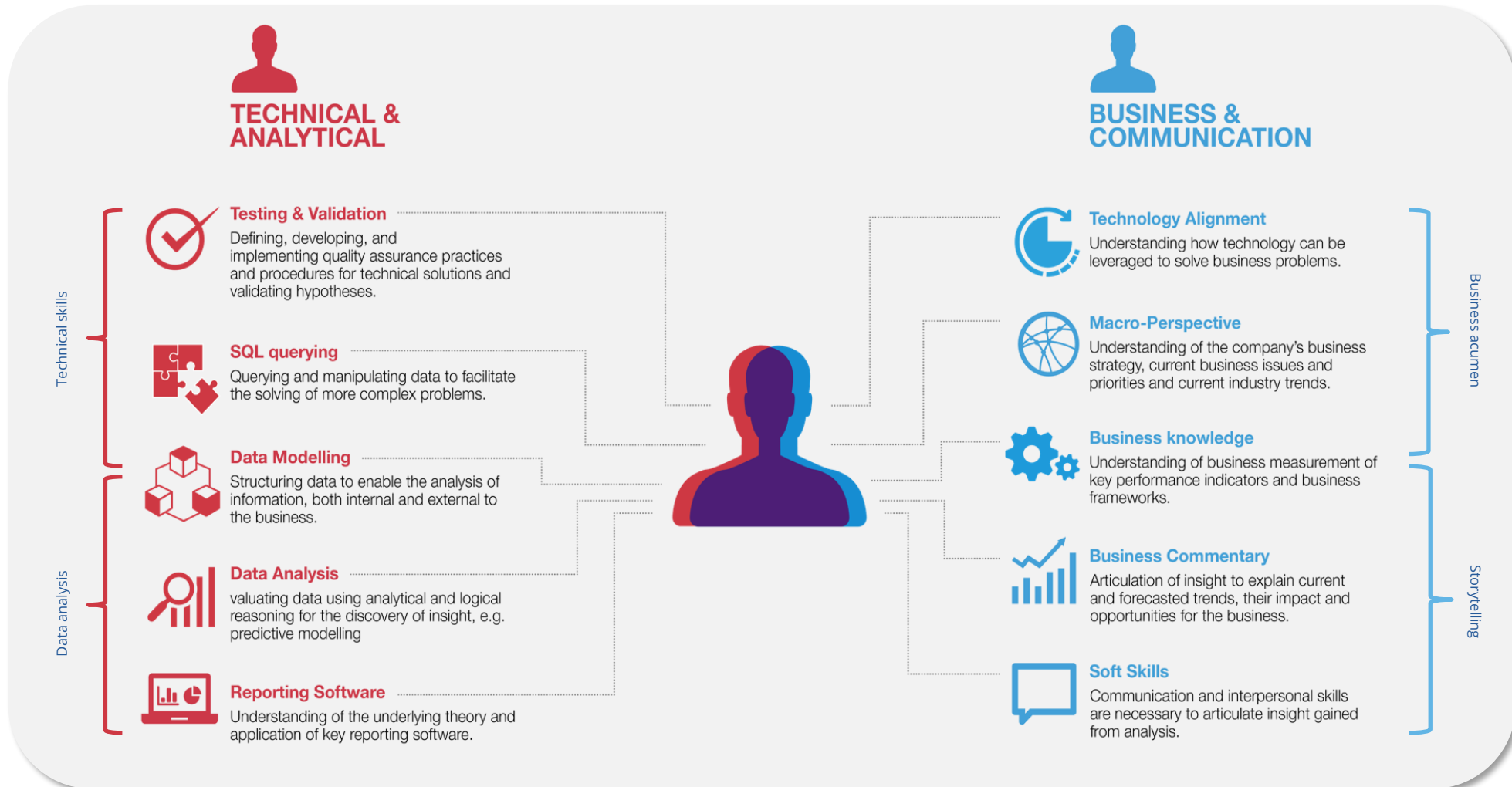
Will I even have a job?



'Purple' People

Core skillset:

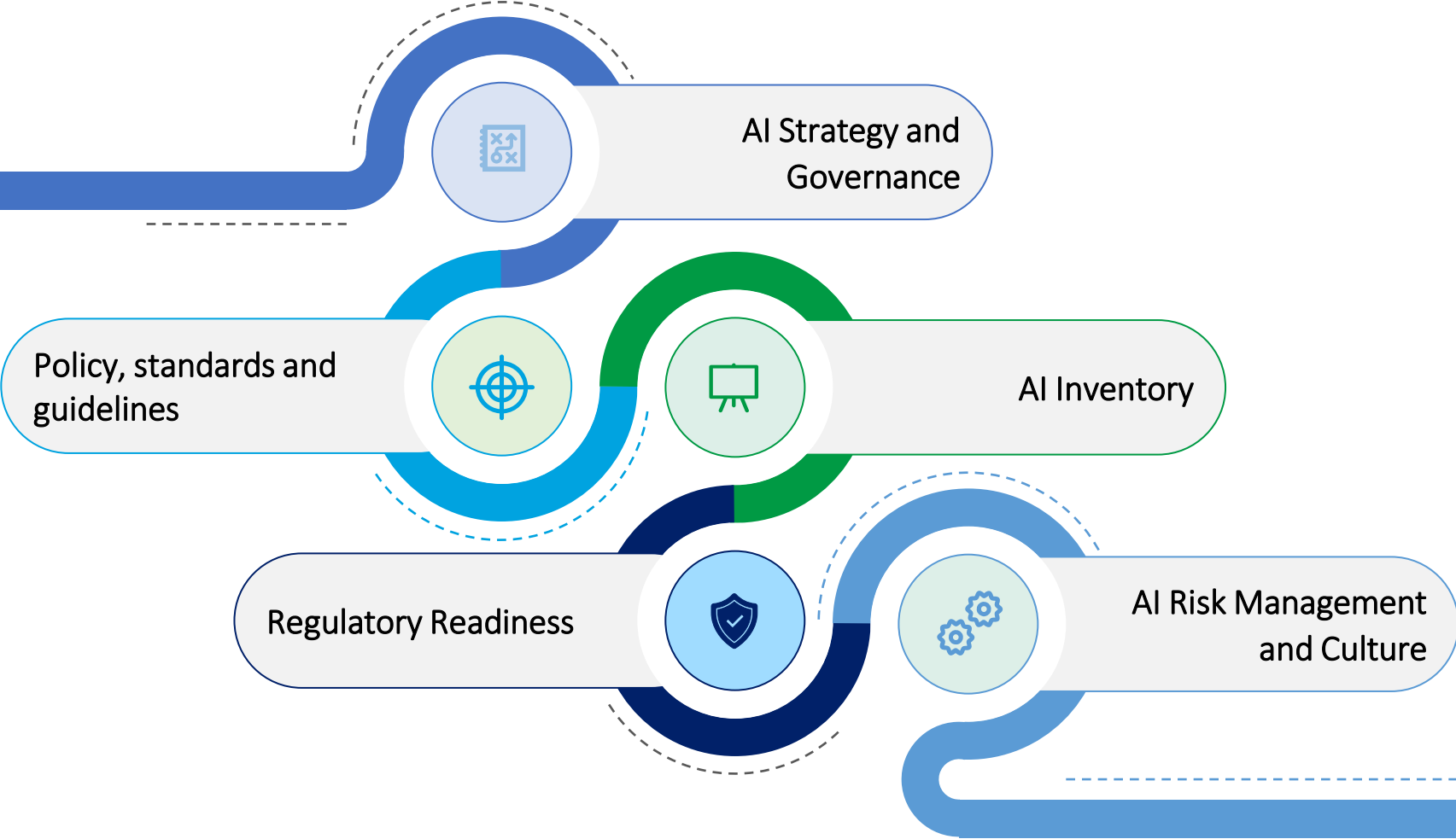
- Staff who possess a mix of business and technology skills (analytical tools, AI etc..)





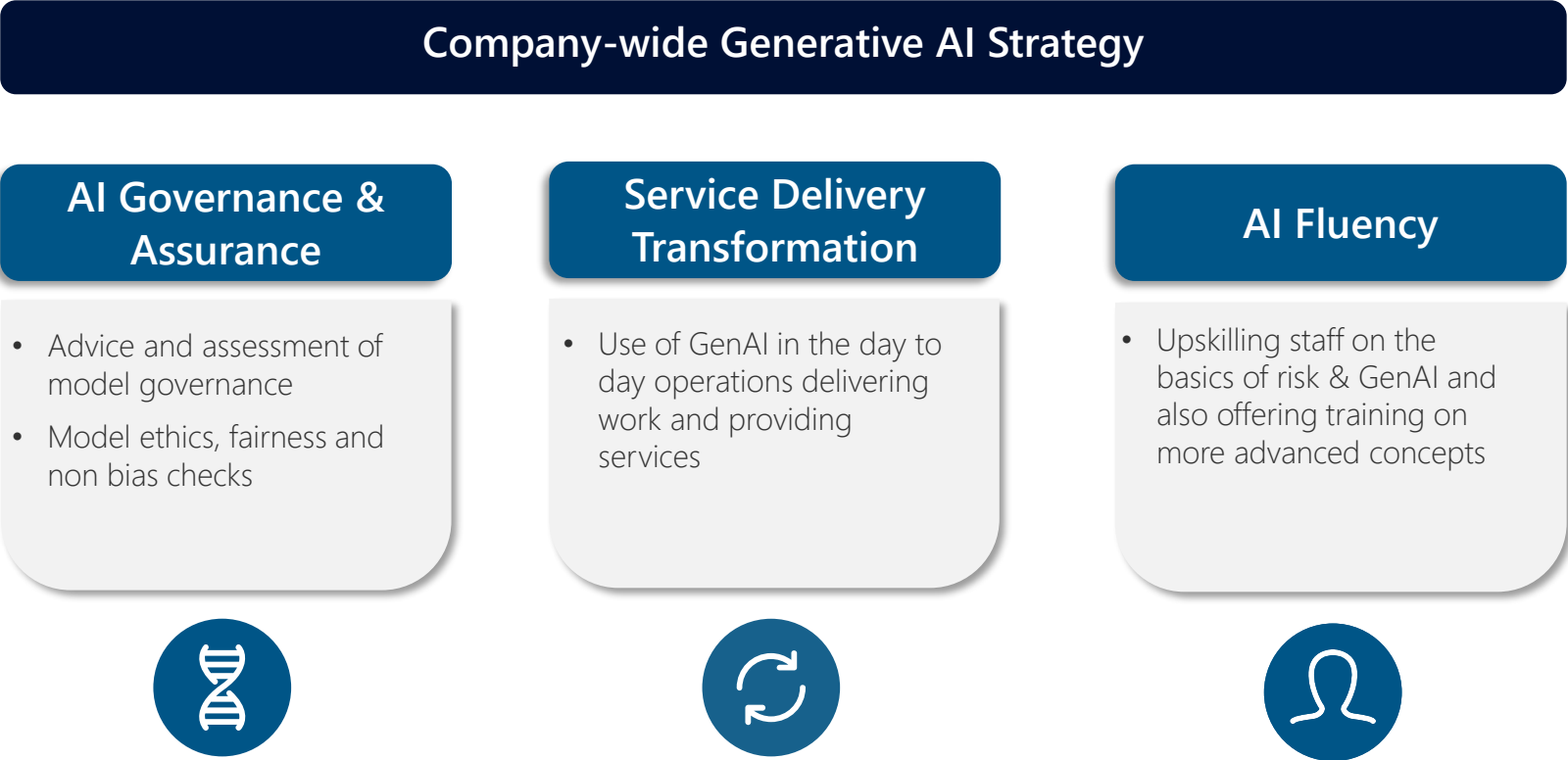
Where Do You Start?

How are Boards & Audit Committees Preparing?



GenAI Activation Pillars

Three activation pillars





Be Risk
Genius
Today!



Sharing Resources and Experiences

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About Deloitte Indonesia

In Indonesia, services are provided by PT Deloitte Konsultan Indonesia

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