Deloitte Insurance Week
Where Reinsurance Meets

Emerging trends in Technology, AI, & Data

Monday, May 12

Today's Panel

Matthew Lee (Panel chair)

Technology & Transformation Director

Deloitte Caribbean & Bermuda

Pieta Brown

Director & GenAI Leader

Deloitte Caribbean & Bermuda

Laurens Dols

CEO

OFi Services

Rob Stubbs

Director & FS Insights Leader
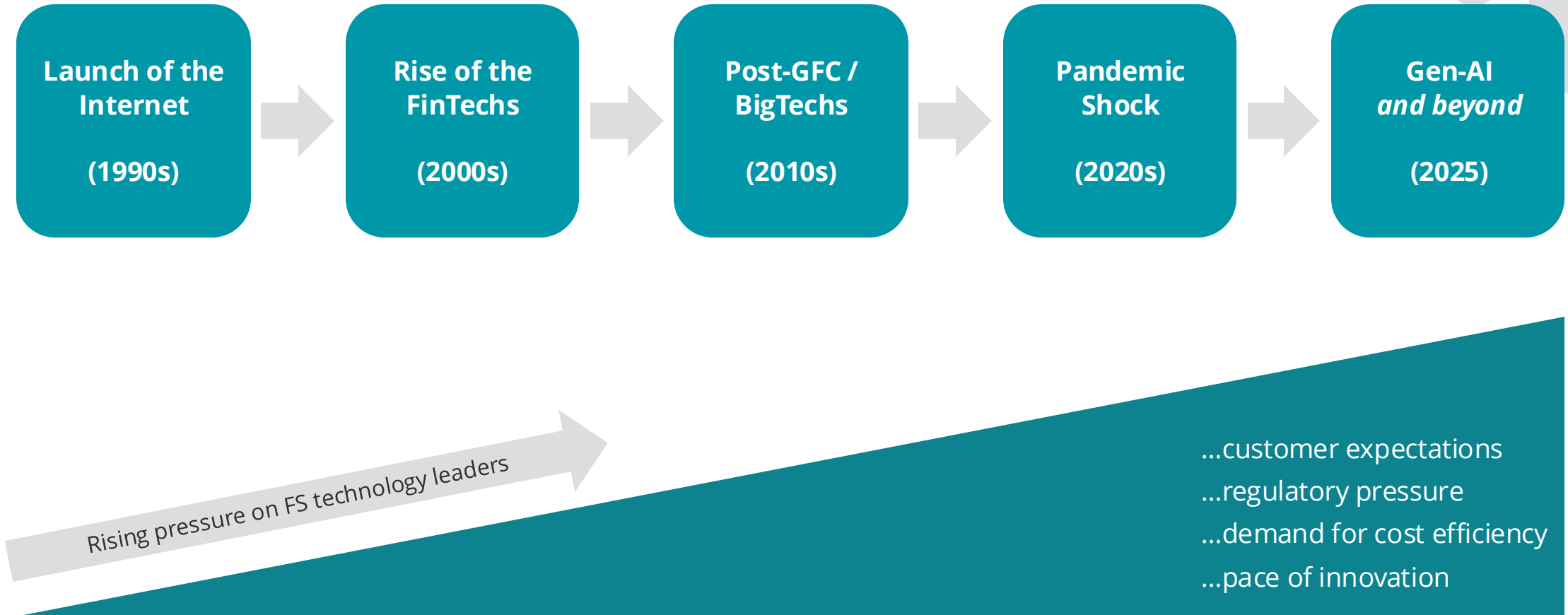
Deloitte UK

FS Tech Trends

Agenda

1 **A quick history lesson**
...where we are now and how we got here

2 **Digital maturity matters**
...but this isn't a race to the summit

3 **Budget isn't everything**
...vision and strategy are equally important

4 **A recipe for success**
...delivering with the right balance of resources, operations and talent

5 **The AI (r)evolution**
...the "oldest new technology" promises much – making it performant takes investment

6 **Key takeaways**
...plan for what you know (and for what you don't)

A quick history lesson
Dramatic change in a short space of time creates new pressures

Launch of the Internet

(1990s)

→

Rise of the FinTechs

(2000s)

→

Post-GFC / BigTechs

(2010s)

→

Pandemic Shock

(2020s)

→

Gen-AI *and beyond*

(2025)

Rising pressure on FS technology leaders

...customer expectations

...regulatory pressure

...demand for cost efficiency

...pace of innovation

Where we are now
Financial institutions focus their resources in different ways

Efficiency / Security / Compliance	Competitive Advantage	Business Value

Trade efficiently and securely while maintaining full regulatory compliance

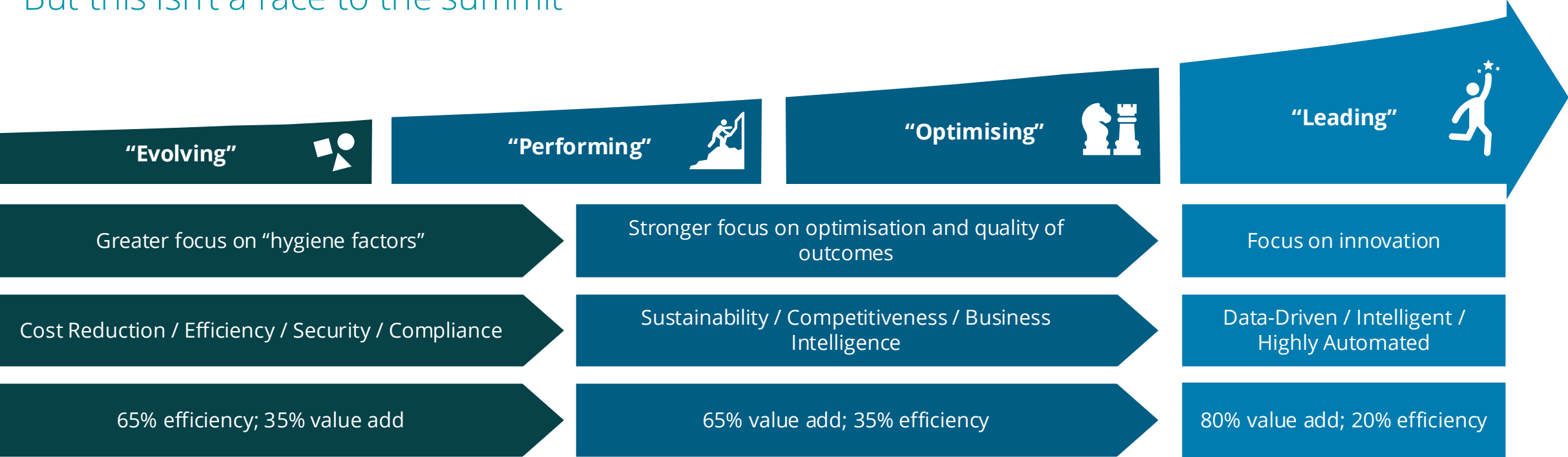Enhance effectiveness and attract and retain customers and talent through innovation

Position IT as a source of business intelligence supporting better decision making

Digital maturity matters
## But this isn't a race to the summit

"Evolving"	"Performing"	"Optimising"	"Leading"
Greater focus on "hygiene factors"	Stronger focus on optimisation and quality of outcomes		Focus on innovation
Cost Reduction / Efficiency / Security / Compliance	Sustainability / Competitiveness / Business Intelligence		Data-Driven / Intelligent / Highly Automated
65% efficiency; 35% value add	65% value add; 35% efficiency		80% value add; 20% efficiency

1 — 2 — 3 — 4 — 5

Budget isn't everything
Vision and strategy are equally important

Spend varies by FS sector

UK banks spend ~5% of their revenues on IT...

▲ ...**capital markets** firms spend more

▼ ...**real estate developers** spend less

▶ ...**IMs** and **insurers** spend about the same
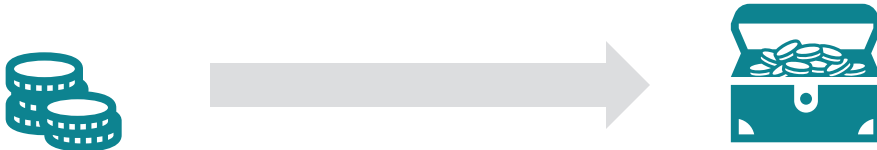
But outcomes are driven by other factors too

- Efficiency
- Compliance
- Security

- Effectiveness
- Sustainability
- Customer Experience

- Business Intelligence
- Organisational Value

Focus matters
Limited budgets don't have to constrain outcomes if backed by a clear vision and a winning strategy

A recipe for success
Delivering with the right balance of resources, operations and talent

Operating Model	**Budget Allocation**	**Talent Utilisation**

How is the IT team set up?

- **Purpose** – does IT support wider organisational strategy?

- **Cost** – are IT costs managed in a way that delivers business impact?

- **Alignment** – are IT services aligned to wider business goals?

- **Methodologies** – are delivery methodologies used routinely?

How are IT resources allocated?

- **OpEx/Capex –** how much is allocated to innovation and efficiency vs. maintenance?

- **Tactical vs. Strategic** – do you favour point solutions over integrated solutions?

- **Spending Priorities** – are you running projects in areas like data, analytics and AI?

Where is the IT team focused?

Run
...stability
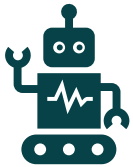...efficiency

Grow
...enhancement
...optimisation

Change
...innovation
...transformation

The AI (r)evolution
The "oldest new technology" promises much

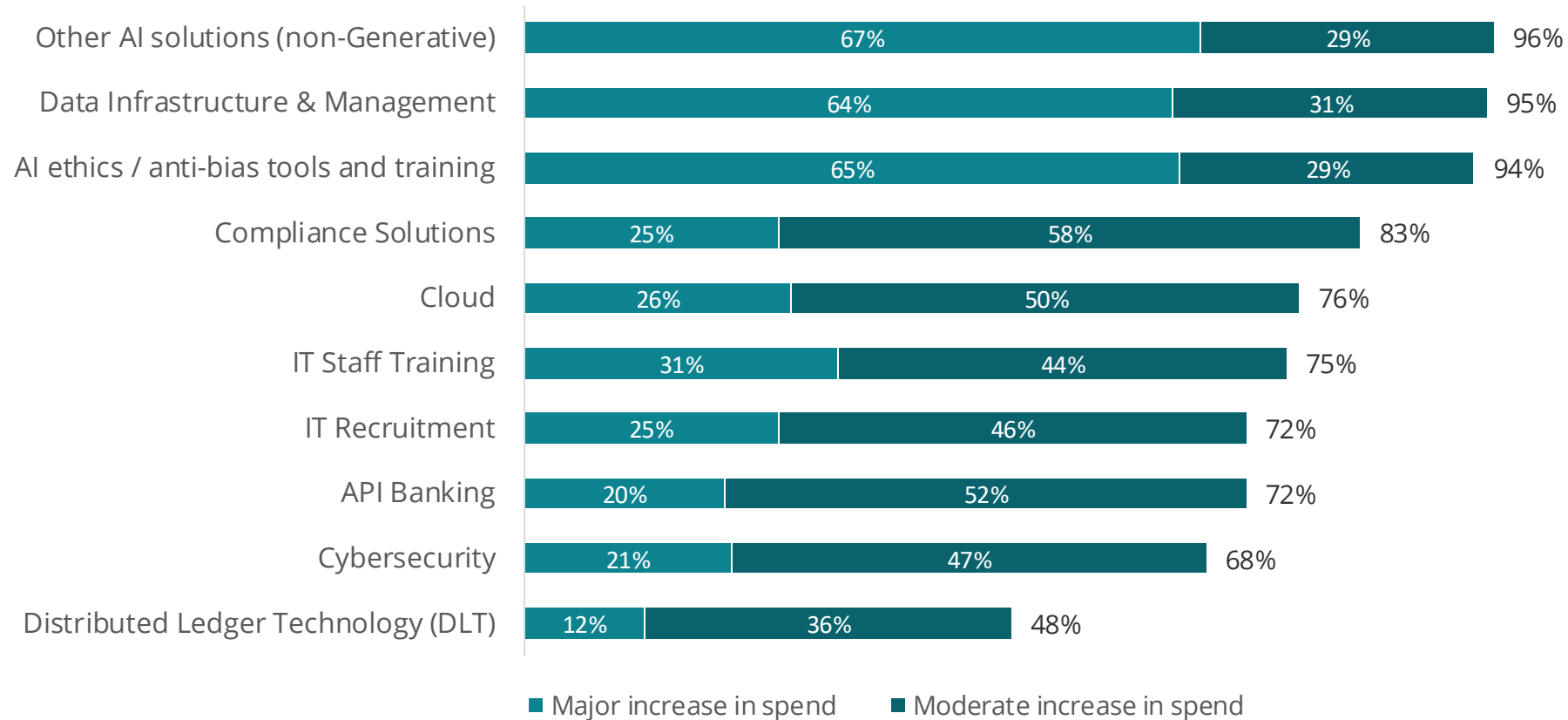| Legacy AI Programmes	Generative AI	Agentic AI
Automation	Customer chatbots	Structured tasks
Pattern matching	Efficient coding	Accelerate processes
Fraud detection	Content generation	Transform CX

The AI (r)evolution
Making Gen-AI performant is taking considerable investment

**Q. To what extent might your future investments in Gen-AI influence your investments in other areas of technology?**

Category	Major increase in spend	Moderate increase in spend	Total
Other AI solutions (non-Generative)	67%	29%	96%
Data Infrastructure & Management	64%	31%	95%
AI ethics / anti-bias tools and training	65%	29%	94%
Compliance Solutions	25%	58%	83%
Cloud	26%	50%	76%
IT Staff Training	31%	44%	75%
IT Recruitment	25%	46%	72%
API Banking	20%	52%	72%
Cybersecurity	21%	47%	68%
Distributed Ledger Technology (DLT)	12%	36%	48%

■ Major increase in spend   ■ Moderate increase in spend

Source: Deloitte UK Banking & Cap Markets Technology Survey, May 2024

Key takeaways
Delivering with the right balance of resources, operations and talent

Plan for what you know…

We are here!
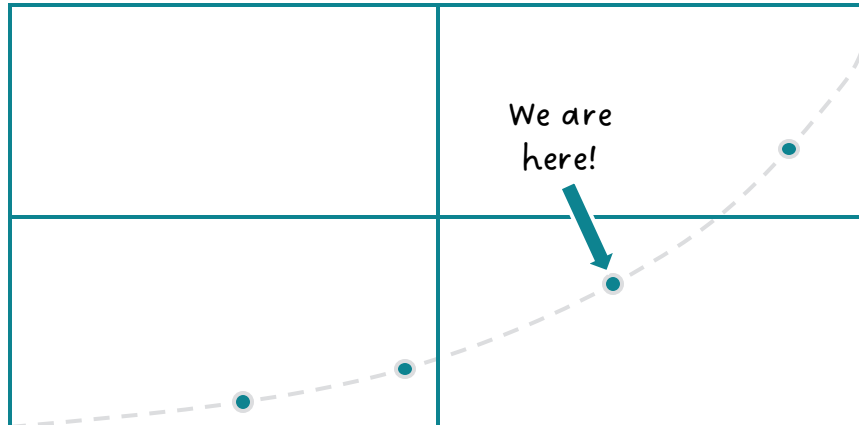
Understand that a maturity curve exists and *deliberately* target the spot along it that best suits your firm…

And as part of that planning, consider your AI strategy, ensuring you have the right supporting infrastructure to deliver your vision…

…that means driving alignment between IT, culture and wider business objectives to ensure you achieve your targeted outcomes.

…and for what you don't

And, with **black swan events** now seemingly much more common, it is essential for technology leaders to keep a close watch on resilience…

What are the technology impacts of global economic and geopolitical uncertainty?

Are you better able now to support the business in the event of another global pandemic?

Do you have a plan in place to recover from a catastrophic, country-wide loss of power?

Generative AI ("GenAI")

Practical insights for insurance and reinsurance

GenAI Powered Transformation Enables Organisations to Target Three Key Value Plays For Create Competitive Advantages

EFFICIENCY PLAY
Improve operational performance through improved productivity by doing more with less

- ☑ **Automate** processes
- ☑ **Optimize** costs
- ☑ **Drive** consistency
- ☑ **Reduce** FTEs
- ☑ **Remove** waste
- ☑ **Improve** speed

Profitability and Margin Improvement
Cost : Income Ratio

Stakeholder Value
EPS, EBITDA and Revenue

Product & Portfolio Performance
Profitability, P&Ls, Margins

EXPERIENCE PLAY
Provide fit-for-purpose and customized experiences to customers , partners and employees

- ☑ **Personalize** content
- ☑ **Differentiate** services
- ☑ **Enhance** Quality and Outcomes
- ☑ **Amplify** creativity
- ☑ **Knowledge** Shift

Engagement Centricity
Customer Journey Engagement

Outcomes & Indicators, Adherence
Banking Reported Outcomes, Adherence

New Digital Products & Services
New integrated offerings

CAPABILITY PLAY
Develop and enhance enterprise digital and data capabilities that are enabled by GenAI

- ☑ **Generate** new insights
- ☑ **Extend** Asset Utility
- ☑ **Expand** Workflow skills
- ☑ **Improve** decisioning
- ☑ **Improve** adaptability

Future Proof Technologies
Pivotal, Fit-for-Purpose Architectures

Business Model Agility
Time to Market

Workforce & Workplace of the Future
Virtual, Automated, Augmented Workforce

Generative AI Use Cases Themes in Insurance and Reinsurance

Customer Experience & Engagement

Fraud Assessment & Detection

Environmental, Social and Governance (ESG)

Digital Transformation and Innovation

Enabling Areas (IT and HR)
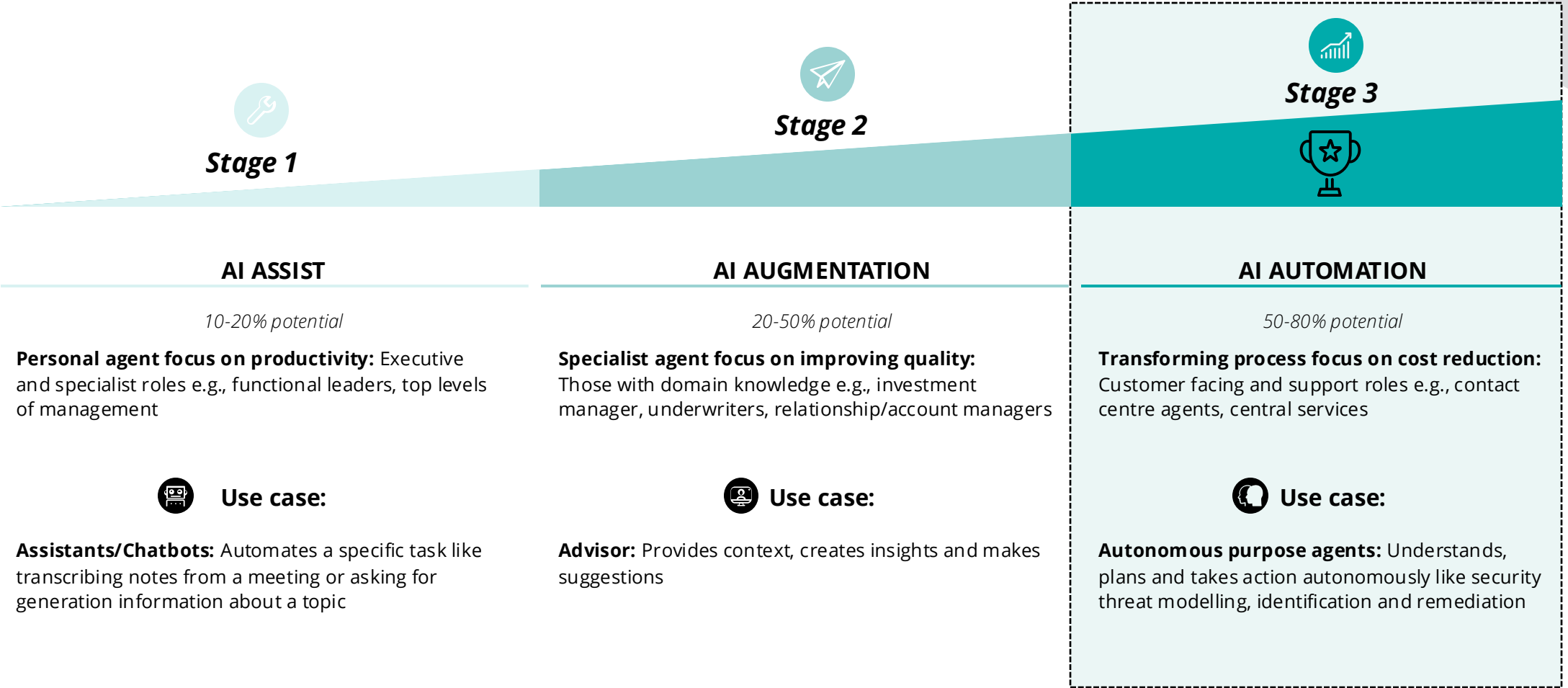
Risk & Regulatory Compliance

By 2028, machine customers will outnumber humans by **1.8 times** and make trillions of dollars in purchases. Digital commerce should upgrade their commerce technologies and processes, and operationalize new capabilities to capture the **machine customer opportunities**.

Gartner

Source: Gartner. For information source, visit:

AI solutions will rapidly evolve towards autonomous agents
AI's evolution will empower automated problem detection and resolution, enhancing efficiency and accuracy

Stage 1

Stage 2

Stage 3

AI ASSIST

10-20% potential

Personal agent focus on productivity: Executive and specialist roles e.g., functional leaders, top levels of management

Use case:

Assistants/Chatbots: Automates a specific task like transcribing notes from a meeting or asking for generation information about a topic

AI AUGMENTATION

20-50% potential

Specialist agent focus on improving quality: Those with domain knowledge e.g., investment manager, underwriters, relationship/account managers

Use case:

Advisor: Provides context, creates insights and makes suggestions

AI AUTOMATION

50-80% potential

Transforming process focus on cost reduction: Customer facing and support roles e.g., contact centre agents, central services

Use case:

Autonomous purpose agents: Understands, plans and takes action autonomously like security threat modelling, identification and remediation

What are AI Agents?

An Agent is a system that uses LLMs (or other models) to navigate through a problem by reasoning, leveraging external tools and drawing on past interactions to refine its approach, ultimately arriving at a solution.

Limitations and risks using GenAI along with Mitigation strategies

A famous statement is "LLMs are 90% correct and 100% confident" – and that's a problem

⚠ Limitations of GenAI

- **Limited data availability :** Only includes information up to the training cut-off date, lacking up-to-date data.
- **Bias in Outputs : :** Inherits biases from Training data, causing unfair or inappropriate results.
- **Context Awareness:** Gen AI may misinterpret nuanced instructions and struggle with complex contexts.
- **Token Limits:** Early LLM models are restricted in context window size - leading to incomplete responses and reduced context understanding.
- **Hallucinations:** May generate incorrect information as it has no fact checking mechanism.

☢ Risks of GenAI

- **Security Risk :** Financial data's sensitivity makes GenAI systems prime targets for cyberattacks.
- **Privacy Concern:** GenAI models' need for large datasets, including personal information, necessitates strict privacy regulation compliance to avoid legal and reputational risks.
- **Operational Risk** Implementing and maintaining GenAI systems can introduce operational risks, such as system failures or integration issues can disrupt operations and cause financial losses.
- **Ethical and Social Risk :** The deployment of GenAI can raise concerns like job displacement and societal impacts, necessitating responsible use.

☁ Mitigation Strategies of GenAI

- **Data Quality and Governance :** Ensure robust data management, including data cleaning, validation, and governance frameworks.
- **Bias Mitigation :** detect and mitigate biases in training data and model outputs
- **Regulatory Compliance:** Stay updated on regulations and ensure GenAI applications comply with legal and regulatory standards.

- **Security and Privacy Measures :** Adopt strong security protocols and ensure compliance with privacy regulations to protect sensitive data.
- **Ethical Guidelines :** Follow ethical guidelines considering societal impact.
- **Risk Management Framework :** Establish a framework to manage GenAI risks.

Governance

Comprehensive AI risk management principles serve as the cornerstone of a sound AI practices. Deloitte's Trustworthy AI framework provides the backdrop for responsible AI-use.

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
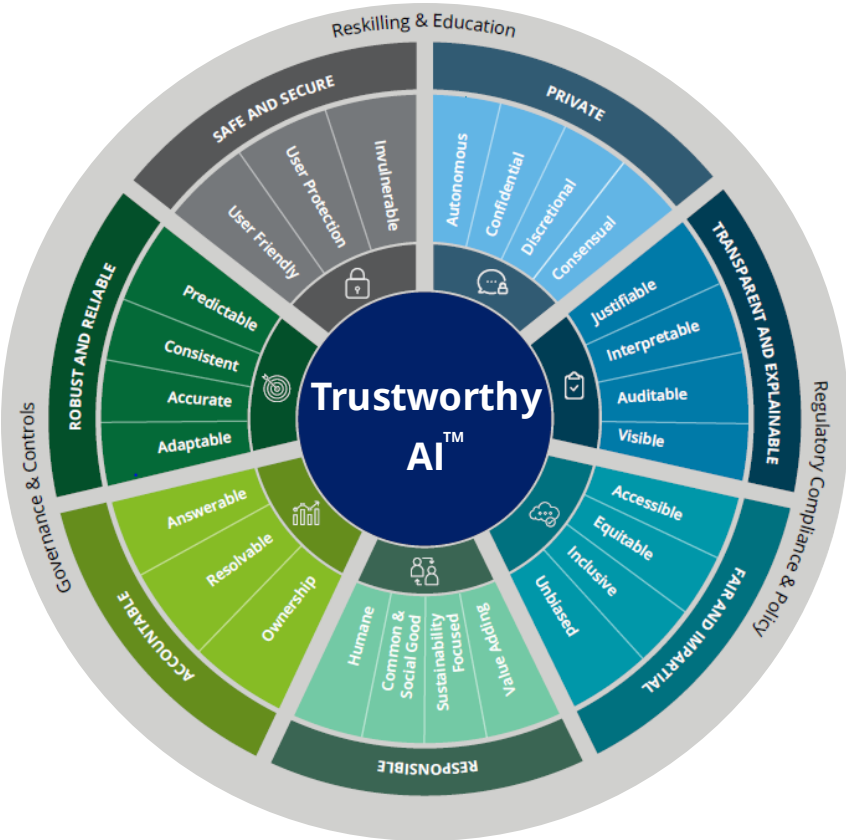
Private

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

From our experience, several key factors contribute to successful Generative AI adoption

Establish a Purposeful Evaluation Approach to Use Cases

Ensure that functions approach GenAI with discipline and pursue use cases that provide value and are tied to key business objectives

Build On Existing Enterprise AI Investments

New GenAI technologies and structures should be setup to complement existing AI talent, capabilities, and tools

Make Risk, Privacy, & Ethics Front & Center

Ensure proper and compliant use of GenAI within the organisation to ensure risk and compliance protocols are followed

Achieve Quick Wins With Text Oriented Efficiency Plays

GenAI initiatives that focus on text summarisation of structured data provide fast and impactful wins

Internalise GenAI before Externalising

Master the use of GenAI within internal operations before exposing outputs to external customers and partners

Amplify Value Through Productivity Plays

Implement private enterprise instances of GenAI tools like ChatGPT to deliver immediate value by boosting workforce productivity
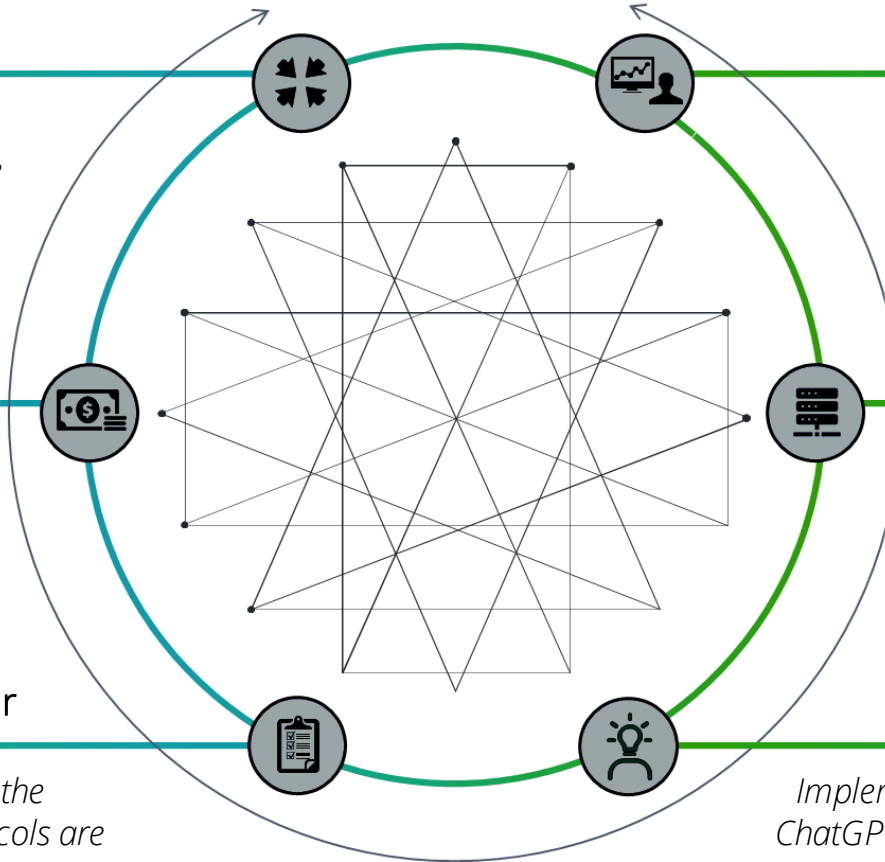
AI needs business data that is coming through various systems

The process intelligence layer will be key to give AI the context it needs

Digital Twin – Supply Chain Knowledge Model

Transactional Systems							
Supplier ERP	Global Supply ERP	Factory ERP	Global Trade System	Warehouse Mgmt. System	Transportation Mgmt. System	Regional / Local Sales ERP	CRM / Project Management

External Supplier — **Source Factory** — **Warehouse / Consolidation Site** — **End Customer**

Processes
Procurement — Production — Replenishment — Sales Order
Transport — Logistics — Delivery

Functions

Goods
Stock @ Supplier — In-transit — Raw Materials & Components — Work in Progress — Finished Goods — In-transit — Distribution Stock — In-transit — Delivered Goods

Target Process: Order Management
View on key improvement opportunities and execution gaps
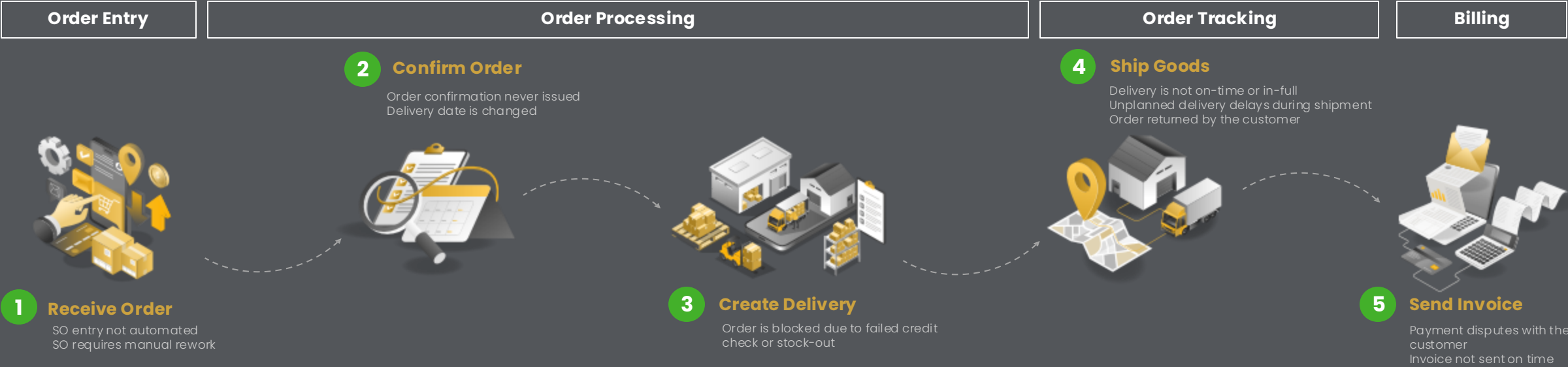
OFi

Order Entry	Order Processing	Order Tracking	Billing

2 **Confirm Order**
Order confirmation never issued
Delivery date is changed

4 **Ship Goods**
Delivery is not on-time or in-full
Unplanned delivery delays during shipment
Order returned by the customer

1 **Receive Order**
SO entry not automated
SO requires manual rework

3 **Create Delivery**
Order is blocked due to failed credit check or stock-out

5 **Send Invoice**
Payment disputes with the customer
Invoice not sent on time

A selection of opportunities with process mining

Business Objectives	Labor Productivity	Customer Satisfaction	Revenue Growth	Working Capital Optimization	Compliance & Sustainability
Improvement Opportunities	Order Changes	Late Deliveries	Rejections	Late Deliveries	Seg. of Duties
	Automation	Delivery Date Confirmations	Returns	Late Billing	Expiring Contracts
	Credit Blocks	Incomplete Deliveries	Discounting	Payment Term Mismatches	Fraud Detection
	Order Bundling		Cancellations	Late Delivery Creations	Internal Controls
	Delivery Blocks		Unbilled Orders		Route Optimization
					Rush Orders

Target Process: Procurement
View on key improvement opportunities and execution gaps

OFi

② Create Purchase Order

④ Receive Order Confirmation

① Create Purchase Requisition

③ Send Purchase Order

⑤ Record Goods Receipt

A selection of opportunities with process mining

Business Objectives	Labor Productivity	Supplier Reliability	Spend Reduction	Working Capital Optimization	Compliance & Sustainability
Improvement Opportunities	Free-Text Requisitions Manual Rework Automation	Late Deliveries Lead Time Accuracy Returns Delivery Date Changes Damaged Goods	Contract Leakage Unfavorable Prices Supplier Consolidation Purchasing Aggregation	Early Deliveries Preferred Term Usage	Retrospective POs Sustainability Rating Coverage Air Freight Order Bundling Seg. of Duties

Questions?

Deloitte.