Digital Transformation: Demystifying the Buzzwords

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April 21, 2023

Featured Presenter

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|BDO

ima®

The Association of
Accountants and
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in Business

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NETSUITE

Agenda

1. Introduction

2. Data Governance

3. Cloud Strategy

4. Generative AI

5. Robotic Process Automation

6. Machine Learning

7. Q&A

About BDO Canada

BDO

REVENUE

CAD $871 MILLION

100+ offices

484 Partners
4,800 + Personnel
100+ Years Experience

MID-MARKET FOCUSED

ADVISORY SERVICES

CONSULTING
Technology Consulting | Management Consulting | Risk Advisory Services

FINANCIAL ADVISORY
Transaction Advisory | Valuations & Models | Due Diligence | Forensic Accounting

FINANCIAL RECOVERY
Viability Reviews | Debt Restructuring | Cash-crisis Management Bankruptcy Services

WEALTH
Financial Assessments | Financial Planning | Wealth Management Insurance Integration

LEGAL
Incorporations | Partnership Formations | Share & Asset Transactions M&A, Windups, Liquidations

ASSURANCE & ACCOUNTING

ASSURANCE

ACCOUNTING

BOOKKEEPING

PAYROLL/ CFO SERVICES

TAX

CORPORATE

PERSONAL

BDO Digital Advisory Services

To maximize value delivered to our clients, Digital Strategy engagements lead by our Digital Advisory strategists often include SMEs from our Technology Consulting, our Management Consulting and our Risk Consulting groups

BDO

Challenge

Technology Enabled Revenue & Growth

Scalable & Sustainable Technology

Effective & Efficient IT Operations

Outcome

Technology Enabled Revenue & Growth
- Target high value customers
- Drive customer experience
- Effective marketing automation
- Realize client engagement

Scalable & Sustainable Technology
- Technology enables business goals
- Effective platforms & applications
- Manage technology risks
- Effective integration & automation

Effective & Efficient IT Operations
- Technology return on investment
- IT operating model
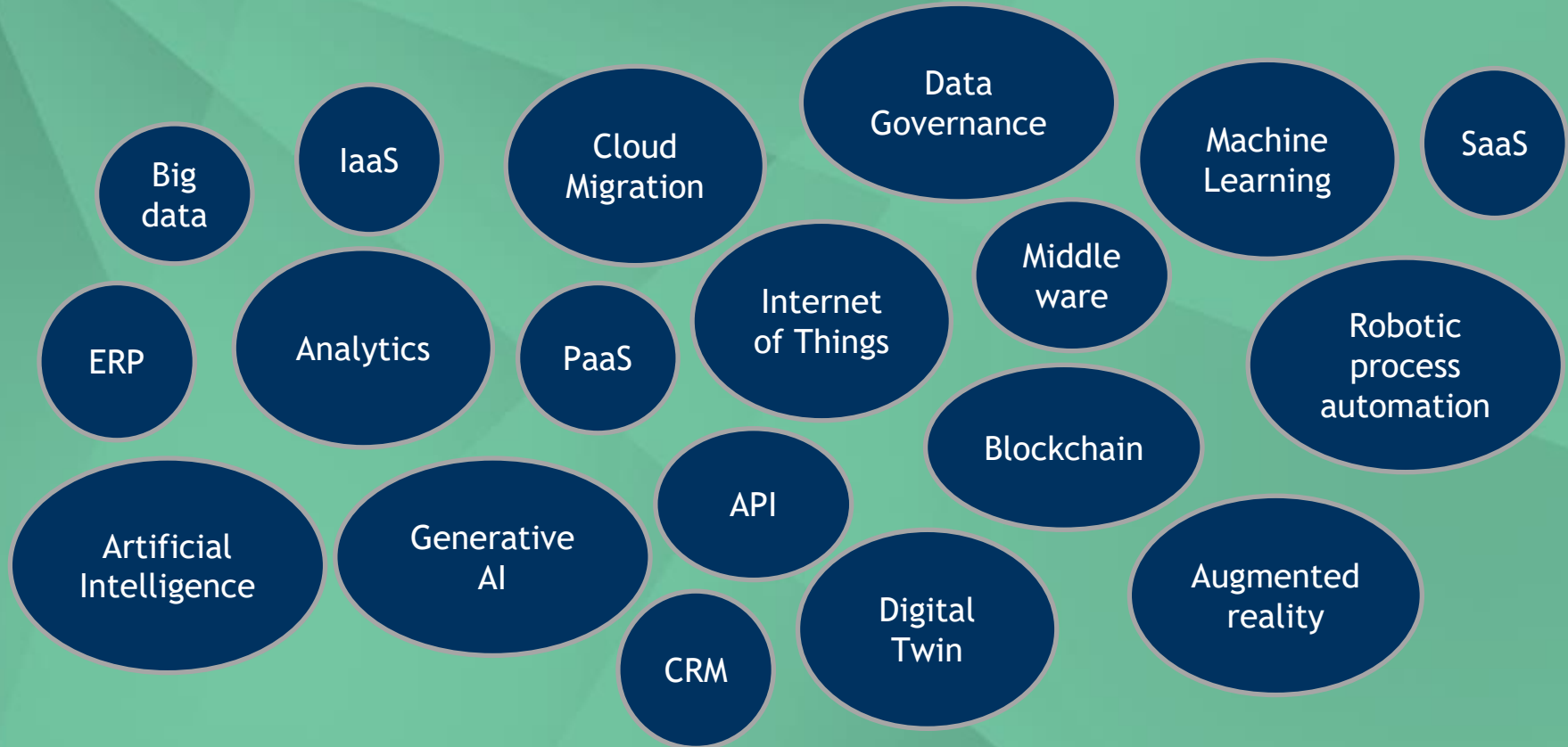- IT people & processes
- Vendor selection & performance

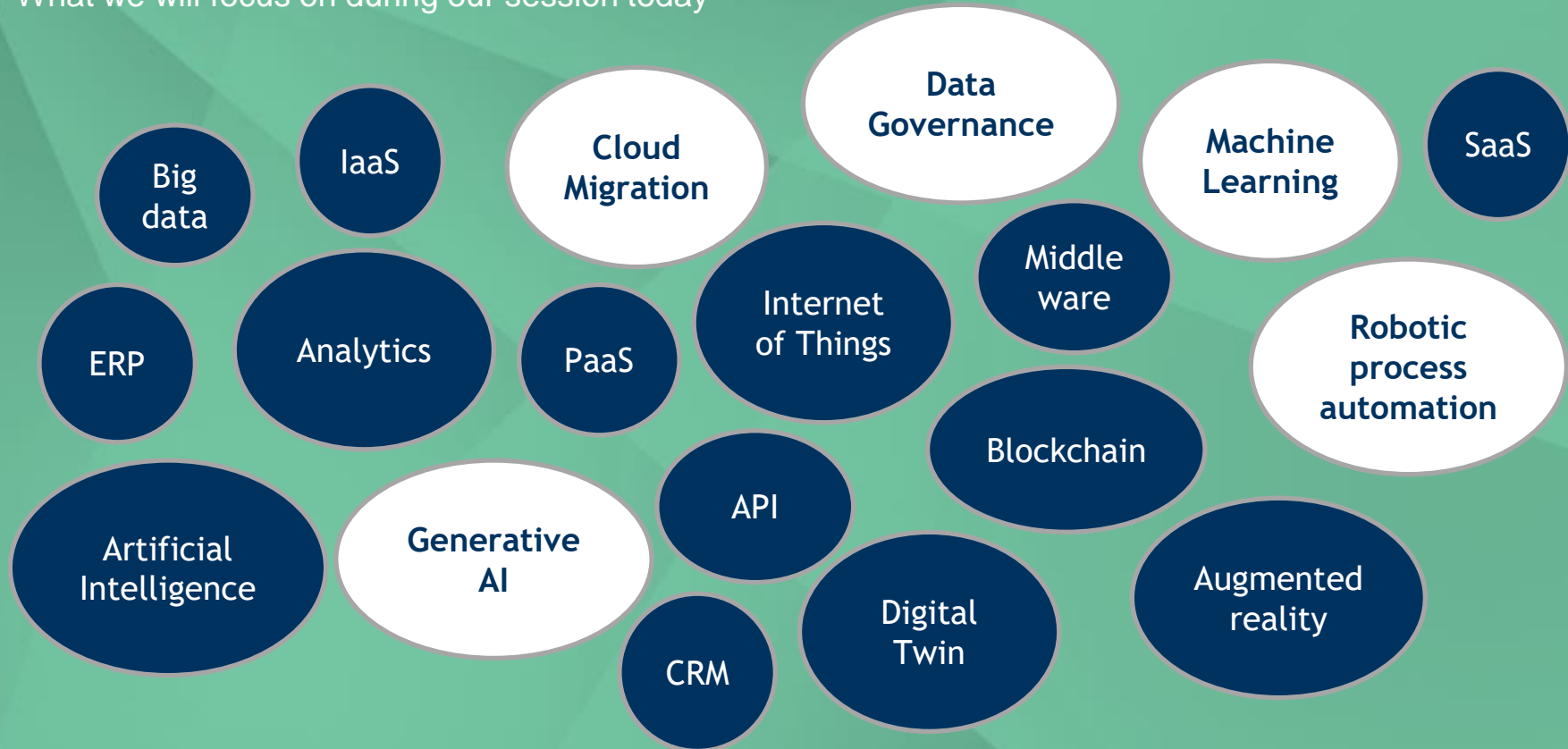| Technology Enabled Revenue & Growth	Scalable & Sustainable Technology	Effective & Efficient IT Operations
Grow	Evolve	Perform
Cloud Strategy		
Digital Strategy & Roadmap	Data, Analytics & AI Strategy	Digital & Agile Governance
Digital Marketing & Channel Strategy	Applications & Technology Diagnostic	IT Operating Model Transformation
E-commerce & Monetization Strategy	Target Architecture Design & Roadmap	Business Solution Project Health Check
Customer Experience & Digital Experience Platforms	Business Solutions & Systems Integrator Selection	Outsourcing Opportunity Assessment & Partner Selection
Innovation / Prototype New Product	Software Quality Assessment & Modernization Strategy	IT Due Diligence
Cyber Security Strategy		

MODULAR SERVICES

Buzzwords in Digital Transformation Journeys

Big data

IaaS

Cloud Migration

Data Governance

Machine Learning

SaaS

Middle ware

ERP

Analytics

PaaS

Internet of Things

Robotic process automation

Blockchain

Artificial Intelligence

Generative AI

API

Digital Twin

Augmented reality

CRM

Which Ones
Have You Come Across?

Buzzwords in Focus

What we will focus on during our session today

Big data

IaaS

Cloud Migration

Data Governance

Machine Learning

SaaS

Middle ware

ERP

Analytics

PaaS

Internet of Things

Robotic process automation

Blockchain

Artificial Intelligence

Generative AI

API

Digital Twin

Augmented reality

CRM

Data Governance

State of Data Within Orgs Today

Organizations are finding it harder to get a handle of their data

- **Siloed processes** that are not fully optimized

- **Significant efforts** are required **for connecting the data together** to make day-to-day planning and decisions, and management decisions

- **Data** may **not** always be **trustworthy** and/or **available** on a timely basis

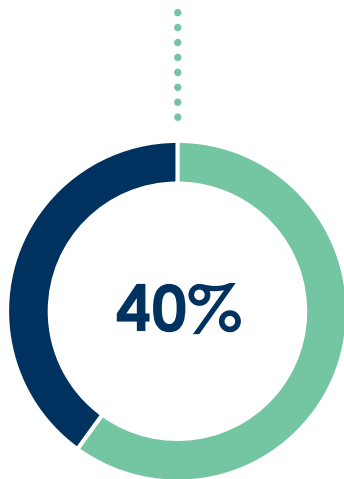- Application spaghetti that could result in **stifled growth and productivity**
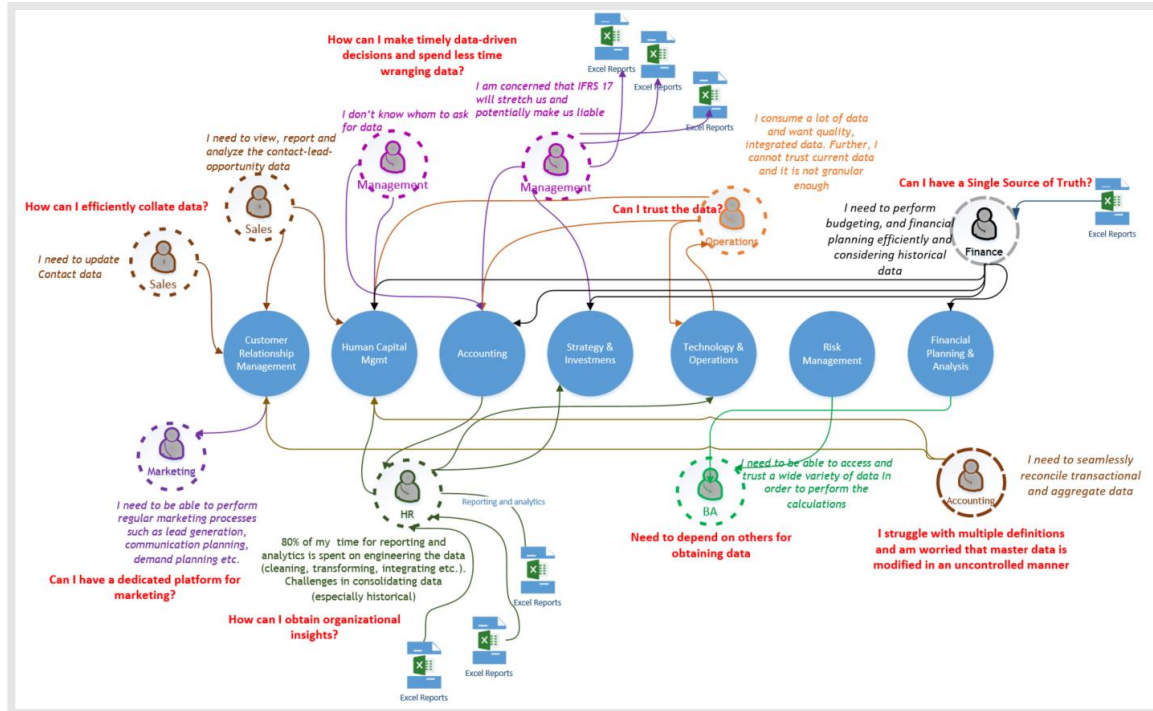
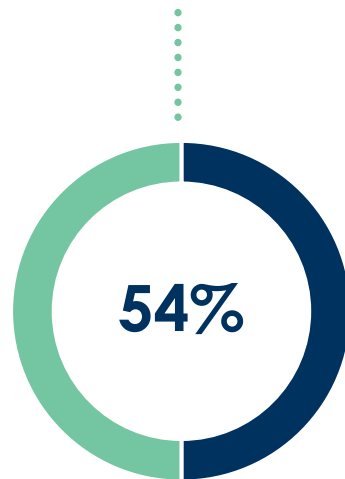# How Does it Impact Organizations?

Over 60% of Data in an organization is never successfully used for any strategic purpose (Forrester)
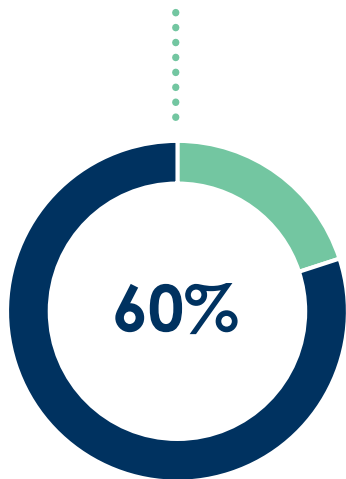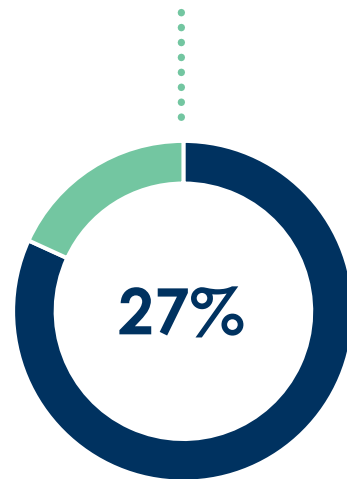
An average user spends 3+ hours per day looking for the right data (McKinsey)

54% of organizations cite data quality and completeness as their largest data management challenge (Gartner)
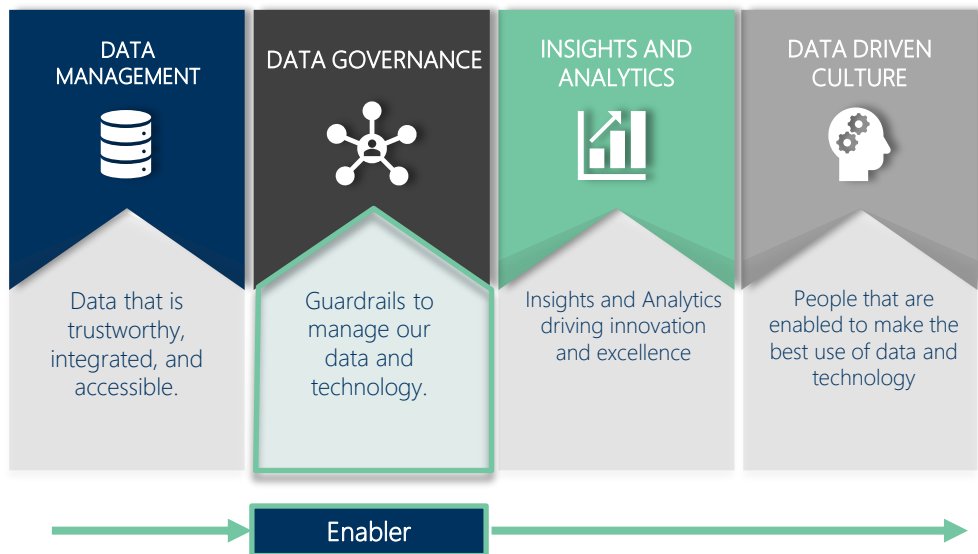
27% of Data in the world's top organizations is flawed (Gartner)

60%

40%

54%

27%

Data Governance: An Overview

What is it? At its core, Data Governance is a framework that defines the roles, responsibilities and processes/policies for the successful management of an organization's data assets in order to guarantee correct, complete, trustworthy and discoverable data

Data & Analytics Strategy Framework

DATA MANAGEMENT	DATA GOVERNANCE	INSIGHTS AND ANALYTICS	DATA DRIVEN CULTURE
Data that is trustworthy, integrated, and accessible.	Guardrails to manage our data and technology.	Insights and Analytics driving innovation and excellence	People that are enabled to make the best use of data and technology

Enabler

Why is it required?

- Confidence in data

- Better reporting capability

- Ease of day-to-day tasks

- Limited to no manual workarounds

- Increased visibility

- Increased traceability

Poll Question 1:

What is Data Governance?

a. It is a framework that defines the roles, responsibilities and processes/policies
b. It is a framework for the successful management of an organization's data assets
c. It represents the guardrails for effective management of data and technology
d. All of the above

Poll Question 1 Results: (Placeholder)

Poll Question 2:

Why is Data Governance Important?

a. It increases confidence in data and enables accurate and reliable reporting

b. It simplifies your day-to-day tasks so you can focus your efforts on what you are truly good at, instead of gathering data

c. It enables traceability of data

d. All of the above

Poll Question 2 Results: (Placeholder)

Cloud Strategy
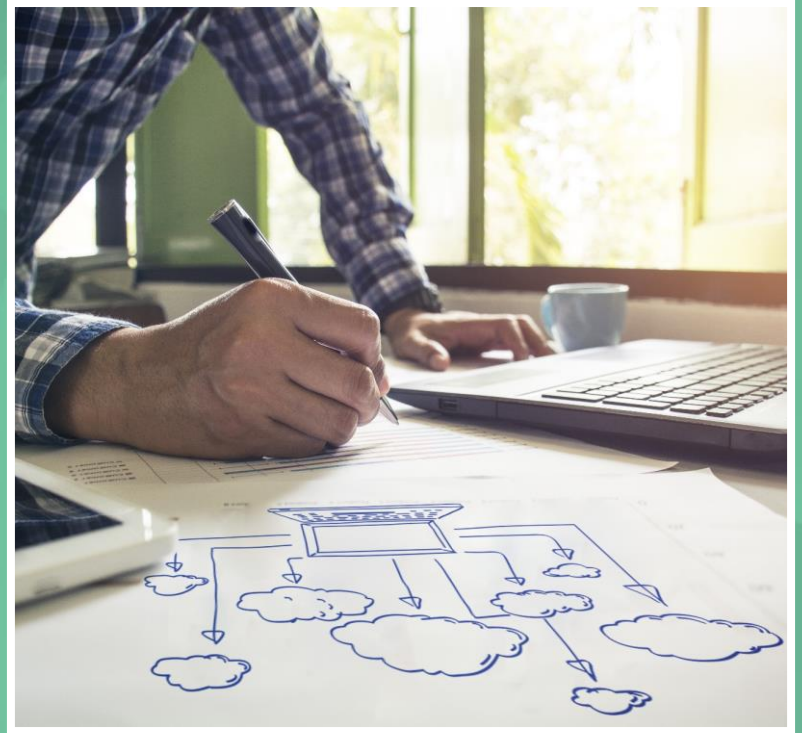
Cloud Strategy: An Overview

What is Cloud Strategy? It is a strategic document – framework – of interlinked technology and business decisions and time-bound actions to transition your organizational information and systems to cloud, and in turn enable your organization to realize strategic business outcomes, such as:

Save

- Spend on technology (maintain, scale)
- Cost of innovation, experimentation, product/service launch

Strengthen

- Core functionality / value creation
- Agility
- Scalability
- Security, Disaster recovery

Improve

- Accelerate innovation
- Accelerate product/service launch
- Ability to respond to change
- Environmental impact

Difference between Cloud Strategy and Cloud Transformation: Strategy leads to transformation

What All Does Cloud Strategy Entail

Activities leading up to cloud transformation in a systematic manner keeping long-term business objectives and financial drivers in sight.

Methodology
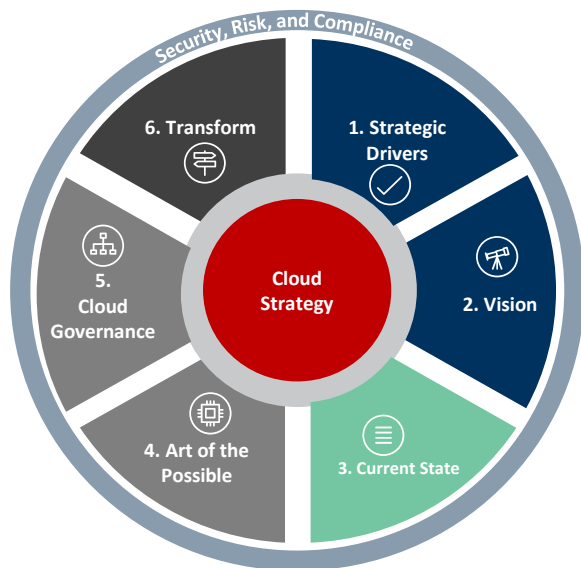
Strategic Drivers
- Transformation approach
- Multi-Cloud Strategy & Fit
- Cloud Use Cases

Vision
- Business Objectives & Goals
- Architectural Vision
- Pace of adoption

Current State
- Current state assessment
- In-flight projects / constraints
- Cloud Readiness

Security, Risk & Compliance
- Regulatory compliance
- Cloud Control Objectives
- Cloud Security Policies

Art of the Possible
- Guiding Principles
- Future State Model
- Reference Architecture

Cloud Governance
- Governance Model
- Organizational Impact
- DevSecOps

Transform
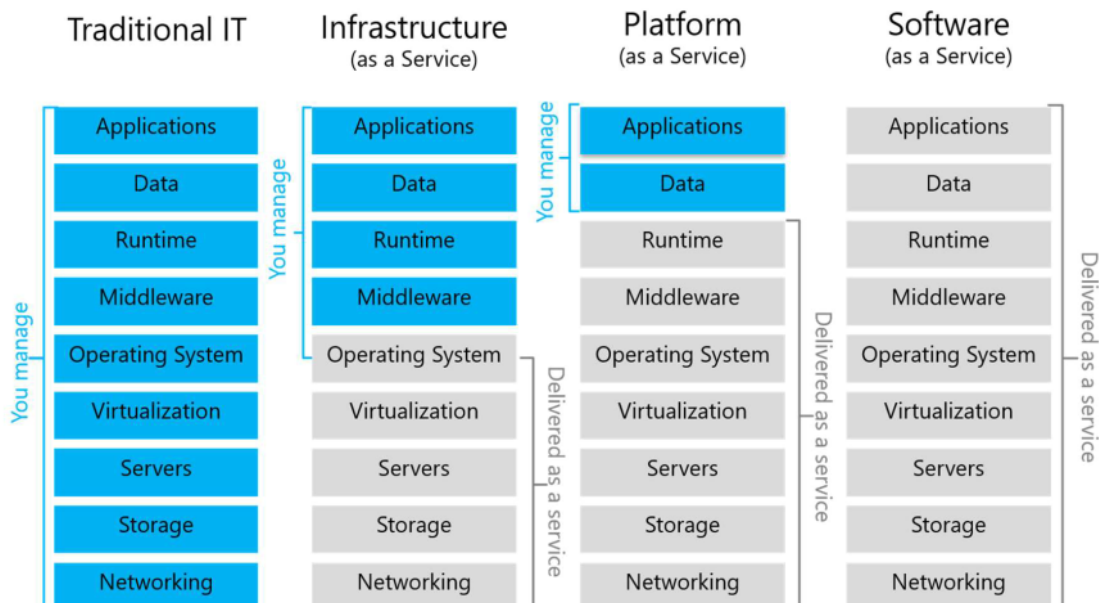- Quick Wins
- Quarterly Objectives
- Roadmap

Financial Impact
- Rollout Cost
- Cloud Consumption
- Capex and Opex impact

Who do you engage in these decisions?

- Leadership

- Technology stakeholders

- Functional users (e.g., finance, operations, HR, other user groups)
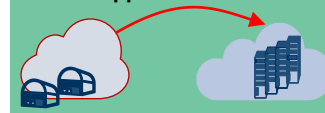
What Can The Migration to Cloud Look Like

Cloud Service Models

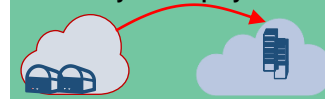| Traditional IT	Infrastructure (as a Service)	Platform (as a Service)	Software (as a Service)
Applications	Applications	Applications	Applications
Data	Data	Data	Data
Runtime	Runtime	Runtime	Runtime
Middleware	Middleware	Middleware	Middleware
Operating System	Operating System	Operating System	Operating System
Virtualization	Virtualization	Virtualization	Virtualization
Servers	Servers	Servers	Servers
Storage	Storage	Storage	Storage
Networking	Networking	Networking	Networking

Cloud Future State Roadmap

Cloud (Rehost)

Move Application to Cloud

Hybrid Deploy

On-Premises IaaS (Retain/Retire)

Application Remains On Premises

*Retire within 12 months stays on-premises

Poll Question 3:

What are the disadvantage(s) of traditional IT, I.E., On-Premise solutions? (Select all that apply)

a. It slows down an organization's ability to respond to change and security threats
b. It is not at all scalable
c. It does not allow for adequate data storage
d. It is relatively difficult to manage and maintain

Poll Question 3 Results: (Placeholder)

Generative AI

Generative AI: What's The Hype?

2022 was the year of generative AI:

- **DALL-E 2**: an image generating AI – disrupting the worlds of art, design, photography, and creative work.

- **ChatGPT**: an AI that generates text based on prompts - with the potential to disrupt the way original written content is generated in virtually all industries.

Generative AI provides a faster and cheaper way to arrive at solutions and is revolutionizing how we will experience the internet and the world around us.

The cost to train AI models will decline at **an annual rate of 70% through 2030**

AI could lead to a **10-fold increase in coding productivity by 2030**

AI could increase knowledge worker productivity **by more than 4 fold by 2030**

GenAI apps will be reach the scale of Google **processing 8.5 billion searches a day by 2030**

Generative AI

> " Improvements in artificial intelligence are the **most important** innovation at the moment. This will **change our world.**

- Bill Gates

CNN
Real estate agents say they can't imagine working without ChatGPT now
ChatGPT may help save brokers time when writing listings or responses, but automating client responses may not be the best tactic because...

CNN
ChatGPT passes exams from law and business schools
"These mistakes can be massive in magnitude," he wrote. Ad Feedback. The test results come as a growing number of...

Mashable
3 job interviews ChatGPT has passed so far. See how much ...
3 high-paying jobs where ChatGPT has successfully interviewed, and how much they pay ... Cover letters are a hassle. ... ChatGPT, OpenAI's advanced...

Above the Law
ChatGPT Is Scarily Good At Answering Legal Questions
Advances in artificial intelligence might be able to make lawyers even more efficient in their jobs.

AI is the most **profound technology** we are working on today.
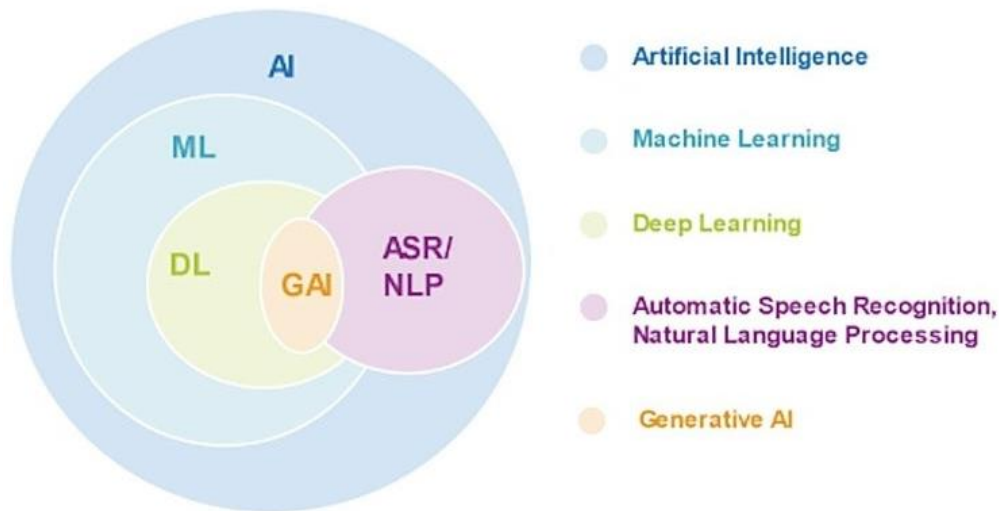
- Sundar Pichai (Google CEO)

A golden age of AI is under way and will **redefine work as we know it.**

- Satya Nadella (Microsoft CEO)

Behind The Apps: How It Works

Generative AI uses a type of deep learning called **generative pre-trained transformers (GPTs).**

- Neural network learning model
- Trained on a vast amount of data to self-learn context and meaning by observing relationships within sequential data, such as the words of a phrase
- When asked a question, a text predictor creates the most likely output in response

- Artificial Intelligence
- Machine Learning
- Deep Learning
- Automatic Speech Recognition, Natural Language Processing
- Generative AI

Common Generative AI Applications

Generative AI has applications across all business functions, service lines, and client industries. For example, all services lines could gain efficiency in common tasks including:

- Generating content for marketing, thought leadership, sales and proposals

- Developing strategies and workplans

- Completing research to inform any kind of analysis

- Ideating from different perspectives

- Completing analyses and generating content for client deliverables

- Writing code

Generation
Create original content (text, images, audio and video)

Insight
Understand patterns and trends in large datasets

Ideation
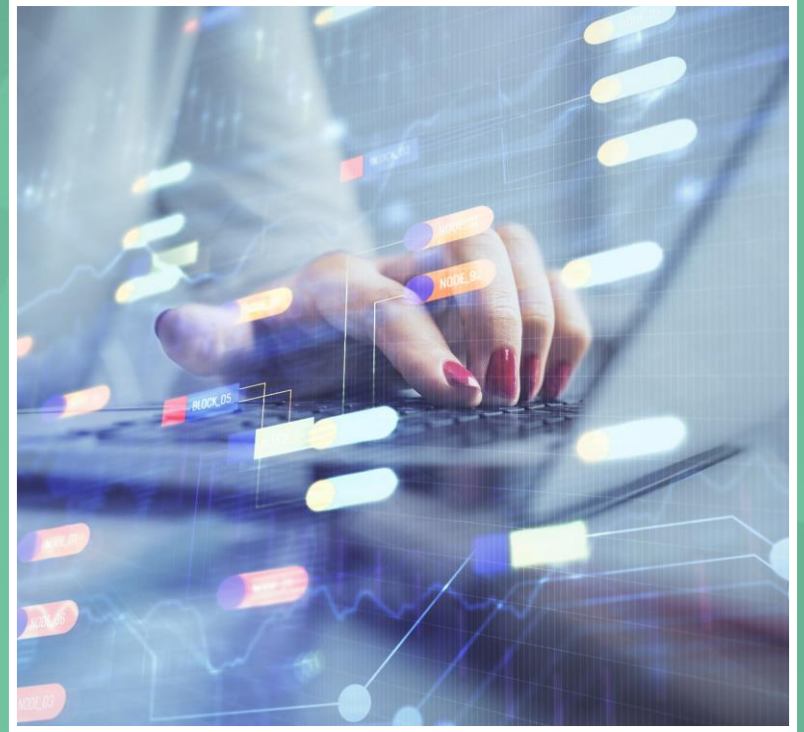Brainstorm, research, and challenge ideas

Analysis
Rapidly analyze and synthesize information

Empathy
Tailor content for targeted audiences according to needs and preferences

Robotic Process Automation

Introduction to RPA

What is Robotic Process Automation (RPA)?

Software robots that emulate human actions interacting with digital systems to automate repetitive and rule-based business processes.

How does it work?

RPA technology consists of bots that are trained to perform high-volume low-value tasks (like data entry), these bots can also be paired with AI, machine vision, and natural language processing to become more powerful.

Why is it important?

RPA streamlines workflows which can make organizations more profitable, flexible, and responsive.

According to Gartner, 80% of finance leaders have implemented or are planning to implement RPA

The RPA market size is expected to increase from $1.4 B to $11B between now and 2025

According to a study, 95% of organizations using RPA say it has improved productivity

One robot can do 30X the work of a human FTE

Behind The Tech: How It Works

RPA leverages software robots to replicate the way a human interacts with a screen.
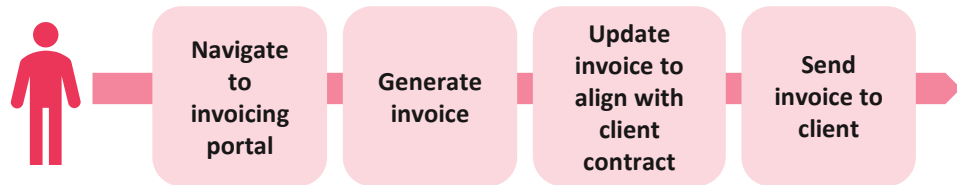
The robot follows rules based on how it is coded / programmed. To leverage RPA an organization must:

- Identify a process to automate
- Design the workflow and identify what steps the bot will take to complete the task
- Train the bot to perform the task
- Configure the bot to perform the tasks according to a desired schedule
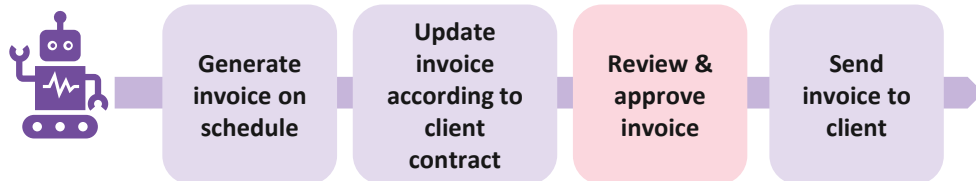
Once the bot is in place, it can be monitored and managed.

Invoicing Example

Human manually develops invoice

| Navigate to invoicing portal | Generate invoice | Update invoice to align with client contract | Send invoice to client |

Bot automatically develops invoice for human approval

| Generate invoice on schedule | Update invoice according to client contract | Review & approve invoice | Send invoice to client |

What Are Some Other Applications of RPA?

In your day-to-day life:

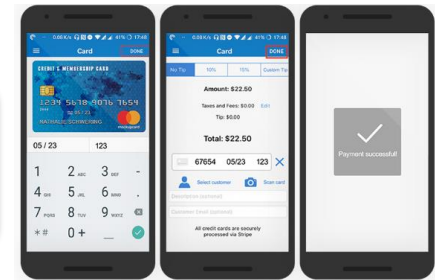|			
Scan a credit/debit card	Customer care support (client detail tracking/verification)	Auto-fill forms	Quick refunds (retail)

At your workplace:

- Banking – customer due diligence, identity verification
- Reading documents and uploading into systems, such as, ERP
- Extracting information from your receipt and creating an expense report
- Identifying emails in your inbox as spam
- Writing your pay cheques

DATA ENTRY

INVOICE PROCESSING

DATA EXTRACTION

PAYROLL

DATA SORTING
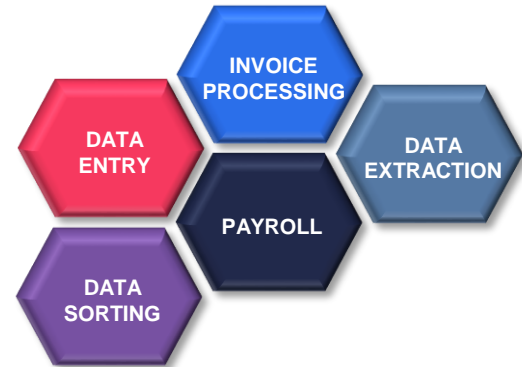
Poll Question 4:

"If you set RPA on a folder, the moment you enter a file in the folder , it will get triggered – it will read the file and perform intended functions, e.g., entering data from file to a webform"
Is this a correct example for RPA?

a. Yes
b. No

Poll Question 4 Results: (Placeholder)

Machine Learning

Introduction to Machine Learning

What is Machine Learning?
Machine learning is a branch of artificial intelligence that involves training machines to learn from data without being explicitly programmed.

How does it work?
Machine learning leverages algorithms and statistical models to enable computers to iteratively learn from data.

Why is it important?
Machine learning processes large amounts of data efficiently and accurately – it is a powerful tool to automate tasks and make recommendations and predictions with the potential to transform businesses and industries.

DESCRIPTIVE
Explaining what happened

PREDICTIVE
Predicting what will happen

PRESCRIPTIVE
Suggesting what actions to take

Machine Learning

> *"We invest heavily in machine learning to continually improve our member experience and optimize the Netflix service end-to-end"*
> **– Netflix**

- "ML has wide-ranging applications in financial services and, when combined with increasing computational power, has the ability to analyse large data sets, detect patterns and solve problems at speed. The use of ML has the potential to generate analytical insights, support new products and services, and reduce market frictions and inefficiencies." – Bank of England

- Biggest users of ML? Banking, Insurance, Fintech companies.

The global market for machine learning is expected to grow **from $17.1B in 2021, to $90.1B by 2026**

According to a survey, 67% of companies are using machine learning, **and 97% are planning to use it in the next year**

AI improves productivity in business **by an estimated 54%**

70% of drug discovery costs can be cut **with the appliance of AI and ML**

MRI Example – Supervised Learning

Machine learning can be used to examine MRIs and identify abnormalities.

Model Training

This is normal

This is abnormal

ML Model

Trained Model

ML Model

Abnormal
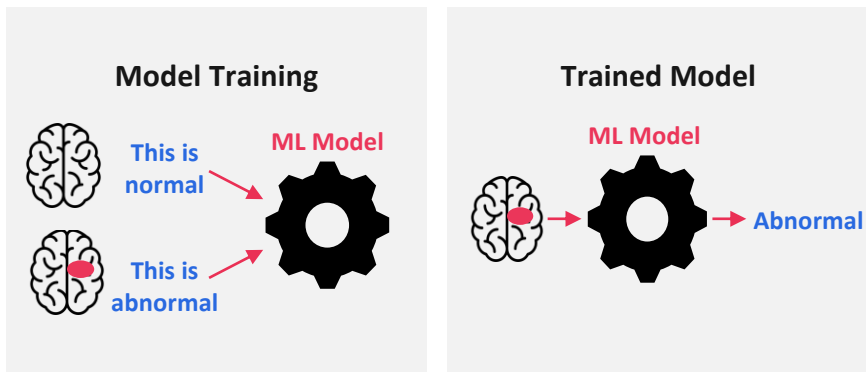
Behind The Tech: How It Works

Machine learning enables computers to learn from data using either supervised or unsupervised learning:

- **Supervised learning** uses labelled datasets to train the model – these models can be used to classify data, or make cause-effect predictions
- **Unsupervised learning** uses unlabeled datasets to train the model – they are able to cluster data based on differences or similarities, and identify relationships in data

What Are Some other Applications of ML?

In your day-to-day life:
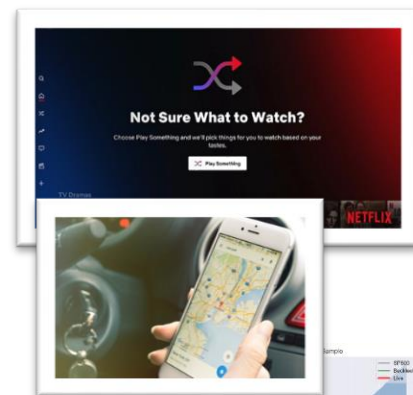
Netflix recommendations and content creation

Google Maps – fastest route recommendation

Voice Assistants – Siri, Alexa, Google

Facebook – face recognition and tagging

E-commerce / shopping recommendations

Dynamic pricing – Uber (surge)

At your workplace:

- Banking – fraud detection & triggering account freeze, loan eligibility prediction
- Trading – recommendations for stock (variable assessment)
- Cyber protection – email monitoring
- Risk management and compliance

Thank you!

Oracle NetSuite

www.netsuite.com