Deloitte.
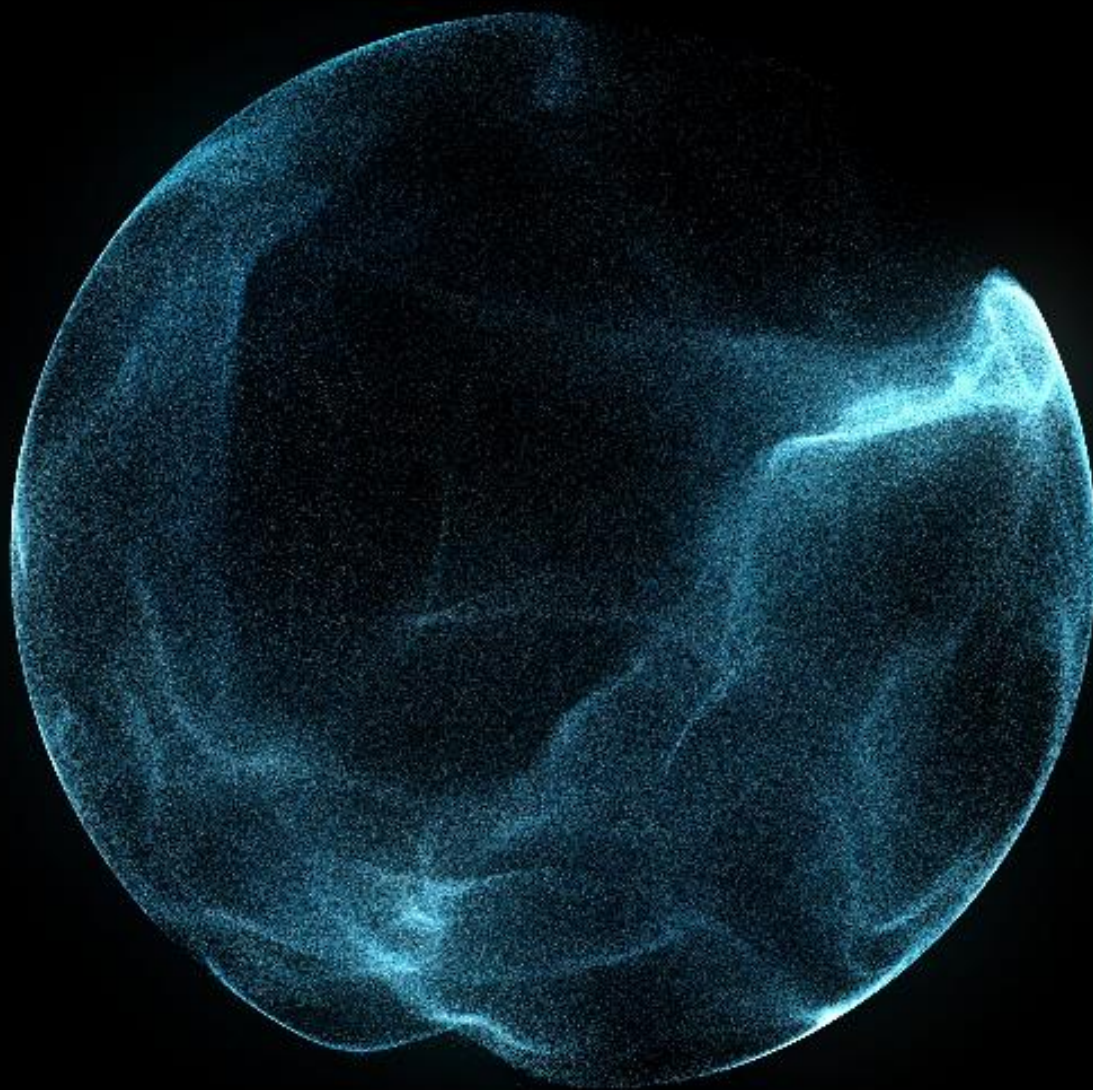
2021

Alchemy

The Strategic Data Transformation

2021

"In the midst of chaos, there is also opportunity."
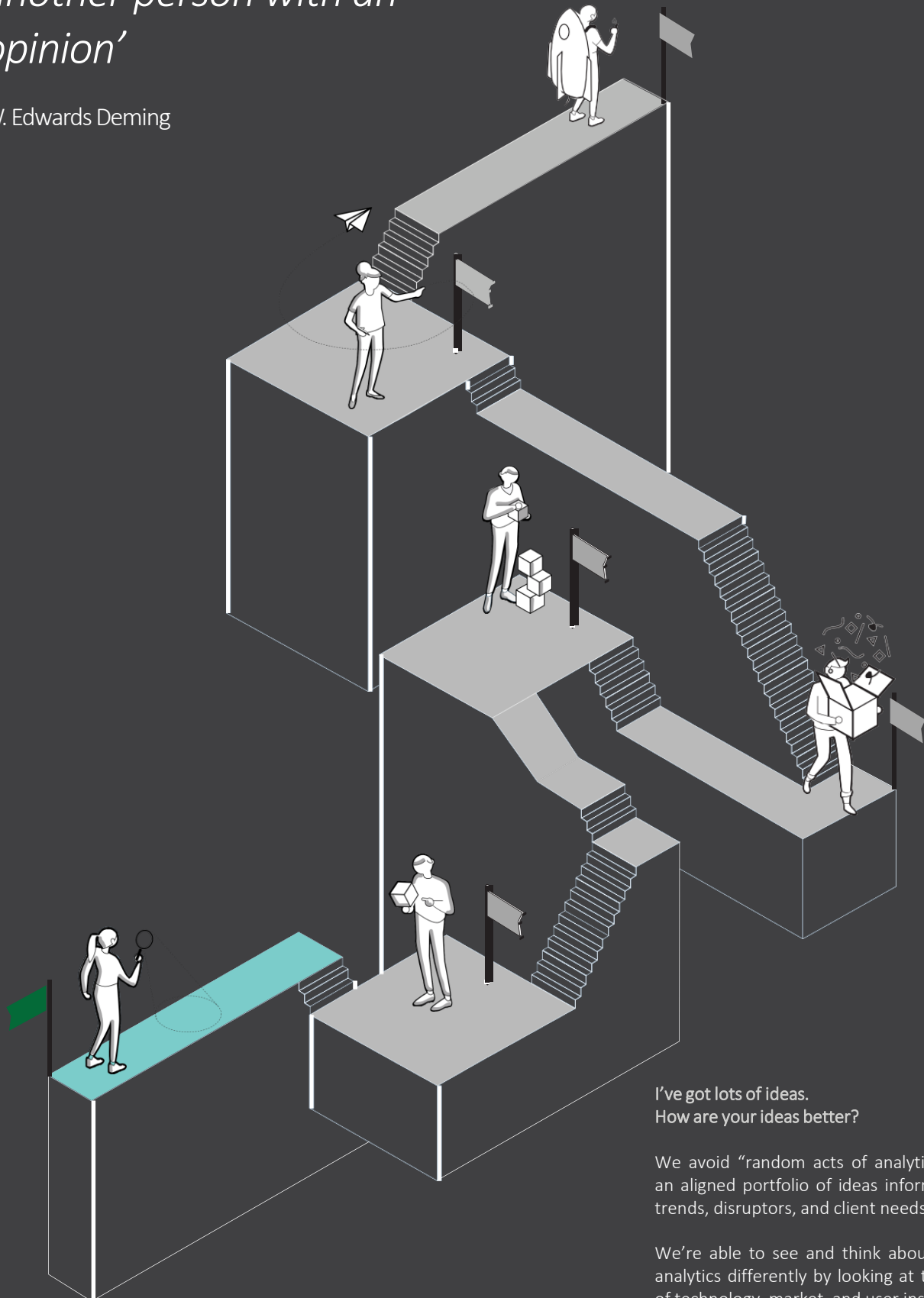
SUN TZU

Index

ALCHEMY

'Without data you're just another person with an opinion'

W. Edwards Deming

I've got lots of ideas.
How are your ideas better?

We avoid "random acts of analytics" by creating an aligned portfolio of ideas informed by current trends, disruptors, and client needs.

We're able to see and think about the future of analytics differently by looking at the intersection of technology, market, and user insights.

WHO WE ARE

Deloitte is one of the few global organizations where strategies, services, and experiences – both physical and digital – are developed from ideation to implementation without ever leaving the same building.

Coordinated collaboration within the Deloitte group, from professionals operating in the change management field to big data and analytics scientists, allows us to shape and deliver projects that respond to the challenges our clients face.

THAT'S THE ALCHEMY

We develop the perfect formula for you, and the results are pure gold:

- Using data as the metals,
- Solutions to combine the elements,
- And imagination to bind them!

WHY IT MATTERS NOW

Companies in virtually every industry are feeling the heat from more discerning—and often less loyal—consumers. Chalk it up to globalization, digitalization, economic uncertainty, or product commoditization, to name a few of the most challenging trends. Consumers are more informed, more demanding, more fickle, and more tuned in to one another's opinions.

Bottom line: Companies should have a more complete, intimate understanding of what data strategy and data culture mean, in order to face these new challenges.

YOUR GOAL IS OUR MISSION

We turn our clients into modern, data-driven, creatively-focused organizations by supporting their business transformation with a data-driven and analytics-based approach.

We help clients transform insights into actions, offering businesses and c-levels a blueprint for higher returns on investments by harnessing data and promoting a data-driven culture throughout their organization.

Your Value Our Scope

From a mishmash of data and solutions towards the key to unlocking the winning strategic approach.

We leverage the power of data, analytics, robotics, and AI to uncover hidden relationships from vast troves of data, create and manage large-scale organizational intelligence, and generate insights that catalyze growth and efficiencies.

Companies are seeing what it really means to harness the disruptive power of data and its potential. For driving inefficiency out of every business process; for minimizing and mitigating risk; for promoting a new customer experience; for increasing revenues and returns on investment. Leveraging your data no longer just supports the business—it's the future of the business.

Why we should work together

What is the value added that we bring to the table?
What makes the difference?
What are the benefits of a data strategy?

All business strategies and all choices made can be improved when they are associated with a solid analytics-driven approach. The strategic evolution of a company, associated with purely analytics drivers, brings you levers and distinctive edge over your competitors. A silos company where technology and business do not communicate is not effective.

We believe that strategic business choices must be the core, the pivot, of decisions that guide the company's transformation process. We are all good at talking about technologies, data, tables, integrations, etc. and we do almost all the same things. This approach, putting business decisions at the center and using a specific methodology and data-driven approach in every step, is what truly sets us apart.

Analytics-driven companies make **better business choices** in **building** capabilities, **achieving** efficiencies, **reducing** risks, and **generating** revenues

OUR STAKEHOLDERS

We want to create "Alchemy" among C-level executives working together to ensure a company stays true to its established plans and policies. Specifically, we assist:

- Chief executive officers
- Chief financial officers
- Chief operating officers
- Chief information officers
- Chief technology officers

- Chief data officers
- Chief digital officers
- Chief privacy and compliance officers

UNDERSTANDING THE VALUE OF INSIGHT STRATEGY

'The goal is to turn data into information, and information into insights.'

Carly Fiornina
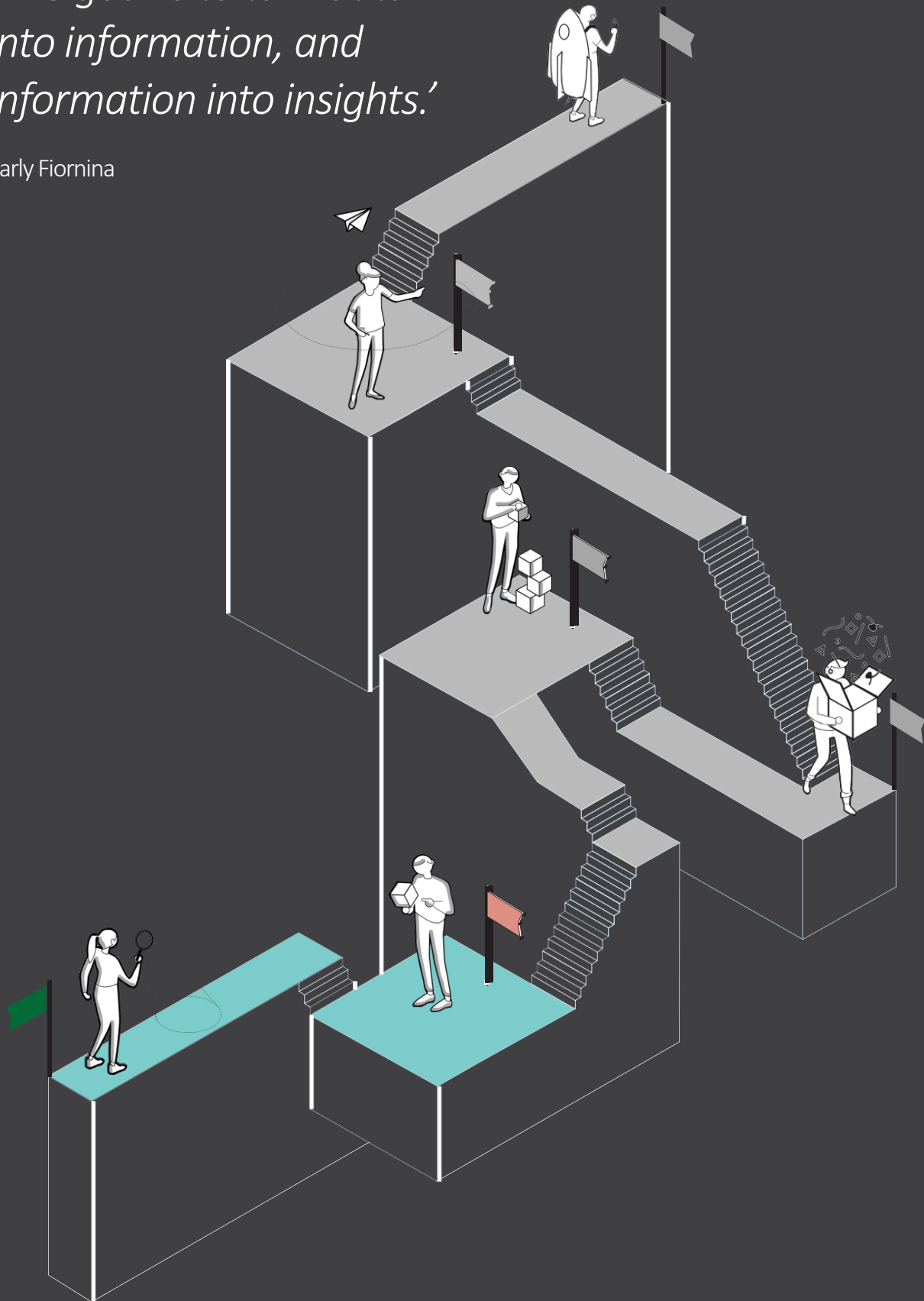
Data Strategy.
What's really behind it?

Leading critical elements while running an effective data transformation program

Your data needs

In order to find the right data to reach your target, the first step is to define how you want to use data. You may need certain types of data for some goals and different types of data for others.

How you will source and gather the data

Source and gather the best data to meet your needs. Use internal data, implement new collection methods, access or purchase external data.

How to turn data into insights

Apply analytics to your data. Extract business-critical insights for decision-making, improve operations, and generate value.

Technology and infrastructure requirements

Technology and infrastructure. Choose the software or hardware that will take your data and turn it into insights.

Data competencies within the organization

Cultivate the appropriate skills. Boost your in-house talent and outsource data analysis

Data Governance

Data ownership, privacy, and security. Collect, store, and manage data. Trace and monitor use to fully exploit data value.

STRATEGIC MOVES FOR BUSINESS ADVANTAGE

The availability of data, advances in AI, lower data processing costs, the need for regulatory compliance and transparency with internal and external stakeholders have made data so important that it is now a vital asset for every type of business.

Although most companies grasp the importance of data, many have not yet maximized its full potential and implementation is still a concern for many businesses.

DATA STRATEGY: A pervasive strategy in which data is a core company value that enables the enterprise to define business objectives, processes, and vision.

"The key is to balance offense and defense."
T. H. Davenport

DATA STRATEGY PILLARS

Data strategy sets the pace and direction of the organization's approach and helps in communicating its scope and impact.

Data strategy should:

- Shape the company's long-term vision

- Drive the company's development with a synergic approach

- Support the company's strategic vision-generating insights

- Be actionable in the short term, identifying quick value-added returns, and in the long term

- Change people's mindset to enhance processes and technologies

DATA STRATEGY OUTCOMES

Data culture spread at any level

Data-driven decision-making

Increase revenues and the bottom line

Improve efficiency and effectiveness

Generate value from data-driven insights

Unlocking the hidden value of data

A company's ability to succeed will increasingly be driven by how it leverages data

As the world becomes "smart" and data becomes the key to gaining competitive edge, companies will be forced to adopt and apply data solutions like AI and data analytics by implementing new emerging technologies.

Successful data transformations can yield enormous benefits.
Many organizations are struggling to capture real value from their data programs, with some seeing scant returns from investments totaling hundreds of millions of dollars.

Defining and implementing a data strategy

The aims of an organization's data strategy should align with its overall mission and goals.

It's easy to be overwhelmed by the challenge of turning data from an afterthought into a core facet of business operations.

But any company can take comfort in knowing that change doesn't happen overnight.

The best data strategies are generally tailored to the organization's needs and help the Executive, Transformation and Innovation Officer drive a strategic mindset:

- Engaging necessary stakeholders
- Planning for the future
- Implementing strategic projects
- Developing partnerships across the organization
- Emphasizing successes.

A data strategy provides an organization with direction. A new data strategy can be used to organize disparate activities, consolidate siloed data, and orient the organization toward a cohesive and unified goal.

The aim is to set the stage for treating data as an asset, resulting in improved decision-making, enhanced user insights, and greater mission effectiveness.

Successful data strategies come in many shapes and sizes, tailored to each organization's strengths and weaknesses.

Source: *Data as an asset*, Deloitte Insight, 2019

Where do we start when we are defining a successful data strategy?

The aim is to set the stage for treating data as an asset:

- Resulting in Improved decision-making

- Enhanced user insights

- Greater mission effectiveness

There is no definitive checklist for a data strategy. Successful data strategies come in many shapes and sizes, tailored to each organization's strengths and weaknesses, and entail understanding those strengths and weaknesses and molding the strategy to build upon organizational data opportunities while being cognizant of limitations.

On one hand, the key people driving the transformation and innovation benefit from an assessment of their data maturity. To be effective, a data strategy should consider the human side: owners, stakeholders, analysts, and other users.

On the other hand, an understanding of all relevant areas of the organization is essential. You should engage all parts of the organization from day one.

THE MAKING PHASE

Implementing a data strategy is a challenging task. One common threat is that many organizations are hesitant to change legacy processes. Changing processes requires a deep understanding of the company's needs and a process design that harnesses the opportunities of new technologies. It's not uncommon for processes and IT systems to be imperfectly harmonized and for IT systems to be the "real" process owner. Moreover, transformation and innovation put the focus on processes, re-establishing the right way to manage the business.

STRATEGY INTO ACTION

Every company should identify and prioritize key business issues that the data strategy is designed to address or solve. It is important to prioritize issues that will add the most value to the organization.

ACTION INTO SUCCESS

Improve the chances of a project's success by developing partnerships across the organization. The best partnerships are those that are mutually beneficial, where all parties are invested in the project's outcome.

SUCCESS IS THE NEW MINDSET

Every victory counts. After one victory, find the next. Find another project, make it a success, and publicize it appropriately. Engage energetic participants and continue to work on the less-than-enthusiastic ones.

Source: *Data as an asset*, Deloitte Insight, 2019

DATA STRATEGY AS A DRIVER FOR BUSINESS EVOLUTION

'In God we trust; all others must brings data'

W. Edwards Deming
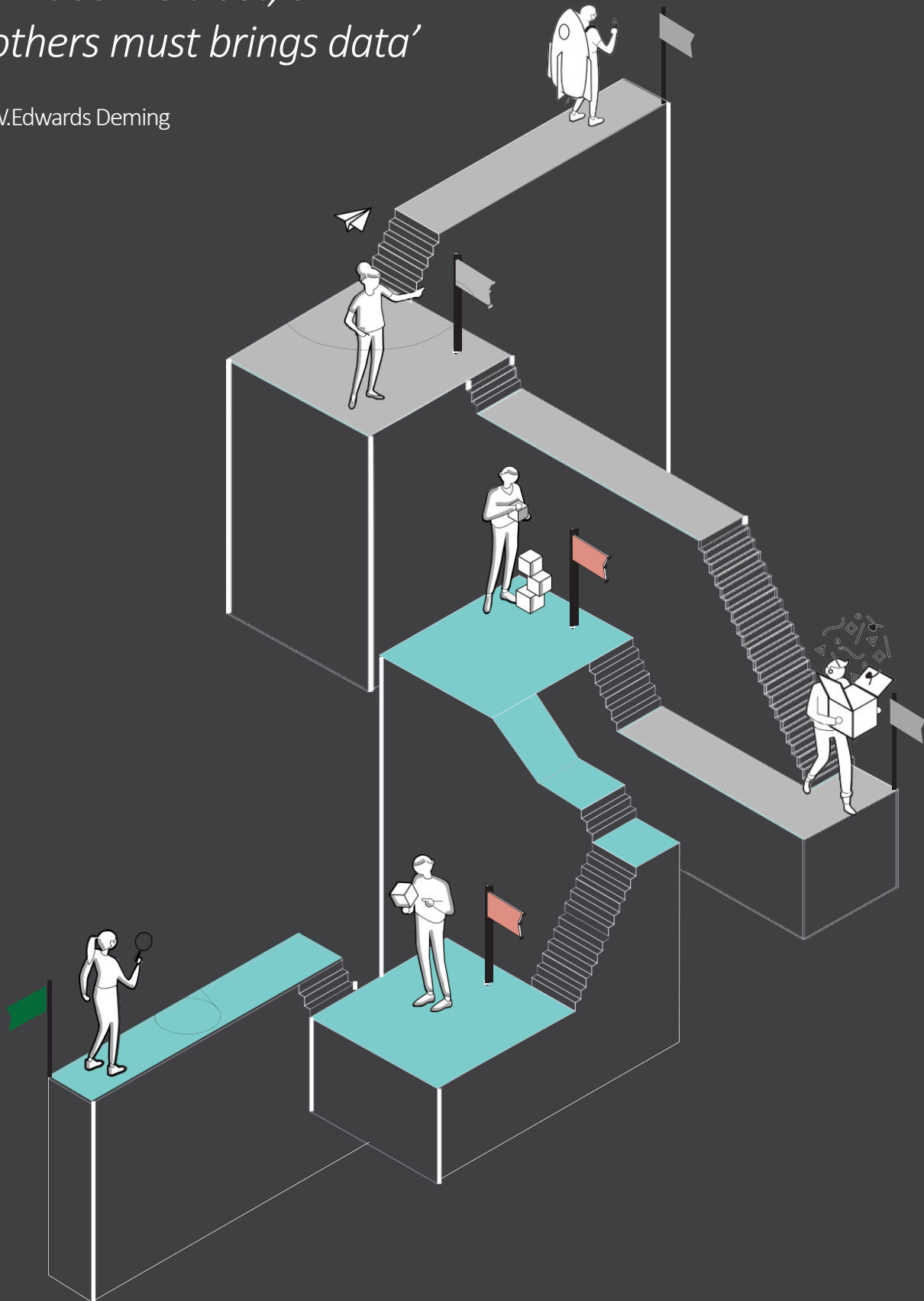
Data strategy as the opening gambit

The first steps in addressing business strategy through data

To stand out in the crowd, companies often devise strategies by thinking about their mission and frequently develop approaches based on their values, vision, and purpose.

Data strategies can be either 'defensive' or 'offensive'. Data defense is about minimizing risks and focusing on data management areas such as data privacy, data security, data quality, and data governance.

Alternatively, data offence focuses on increasing the organization's competitive position, resulting in increased revenues, profit, and customer satisfaction.

Hence, an organization that has a business strategy more focused on revenues and profit might develop a data strategy that is more offensive.

All organizations need both defensive and offensive data strategies, but the balance of where emphasis is placed depends on the business model.

It is important for a data strategy to align with the business strategy and to prioritize its goals around the most pressing operational needs of the organization.

Each business is likely to have a different strategy, and in each case, the strategy is likely to be significantly aided by data.

Source: *What's your data strategy?*, HBR, Dalle Mule, L. & Davenport, T., 2017

Because data strategy ultimately touches everyone in the company, the collaboration between business and IT has to be about solving problems together, from the very beginning and throughout the journey. Business stakeholders bring domain expertise. They own the targets, and they understand the business processes that come together to deliver those targets. Business stakeholders know their customers, and they know the most important questions that need answering.

Today IT owns the enabling technology stack, the existing processes, and systems, as well as the potential for new technologies to enable new processes. IT can determine how to apply these technologies to get those answers, accelerate decision-making, and optimize those processes.

DATA SERVICES

I want to ensure proper monitoring of current activities and how data and tech can support business optimization, development and transformation

DATA CONSUMER

I want to access data and run and share analyses with an easy-to-use data visualization tool

C-LEVEL EXECS

*I want a **quick** data **project linked to business strategy**. I want the project to have a **positive and measurable ROI***

BUSINESS FUNCTION

I want data project(s) to solve my problems and make my job easier

DATA USER

I want to be contacted by the company only when I need it. Everything should be easy to use

DATA DEMOCRACY

I want to know who has the responsibility of accessing data in the company

Together, they can map the data.

A data strategy must start with outcomes: What do you want to achieve?

Then you work out where the relevant data resides, who has access to it, and how it flows through the processes and the organization.

Successful data strategies are always an ongoing, iterative collaboration between IT and business stakeholders.

STRATEGIC MOVES FOR BUSINESS ENHANCEMENT

'The world is now awash in data and we can see consumers in a lot clearer way'

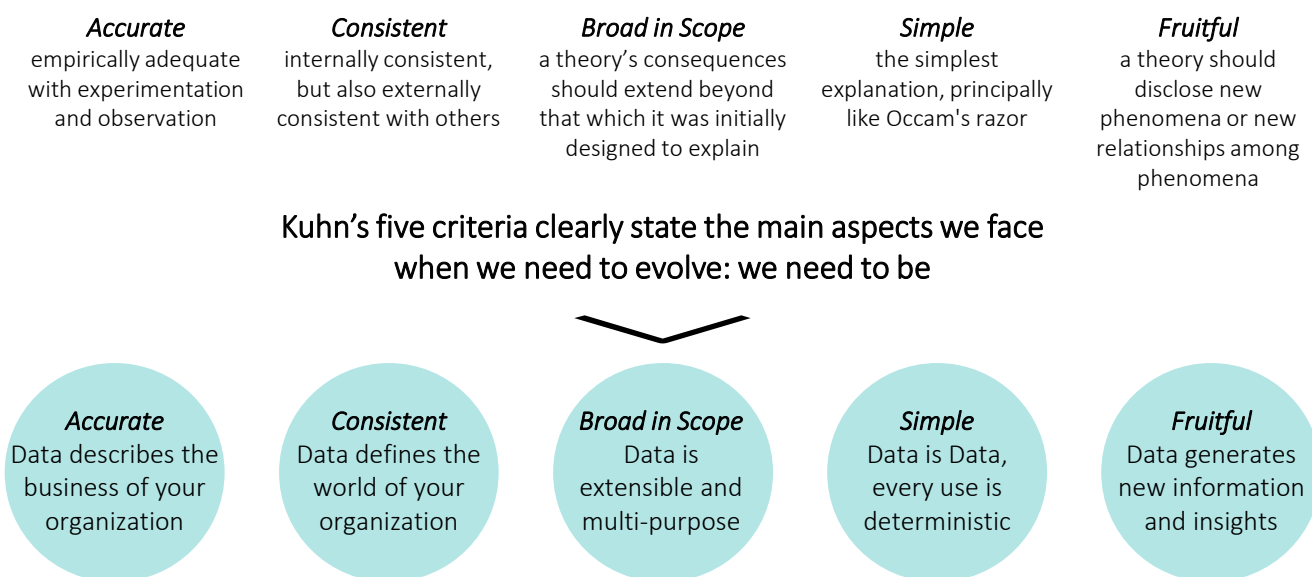Max Levchin
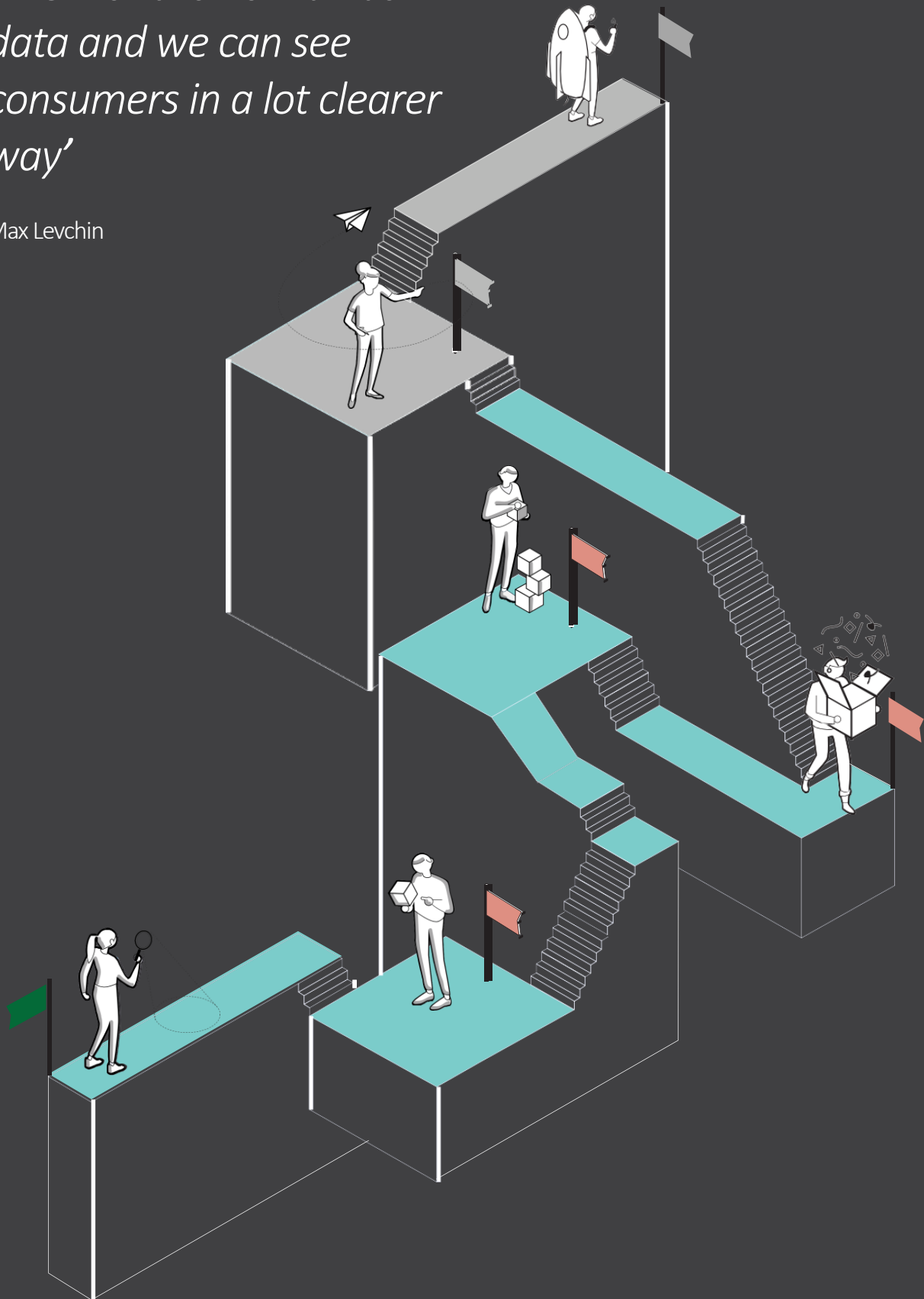
The shift of the data paradigm

The art of creating a successful data strategy is informed by your organization's data assets, but you should also carefully consider the data culture of your people, cultivating it continuously to increase knowledge and awareness about the value of your data, which is not always visible to the naked eye.

The emerging paradigm of this new data-driven era is based on building your business vision and data strategy together, as parts of one cohesive whole, with an increasingly unbalanced focus on data, its use and management. Data is the engine behind this new paradigm, driving transformation, evolution, and new value.

The paradigm shift gives us a clear picture of what we mean when we say data revolution and what we need to execute it. A paradigm shift occurs when the dominant paradigm is no longer compatible with new trends, driving the adoption of a new paradigm.

For the paradigm shift[1] to occur, the new paradigm must be:

Accurate	*Consistent*	*Broad in Scope*	*Simple*	*Fruitful*
empirically adequate with experimentation and observation	internally consistent, but also externally consistent with others	a theory's consequences should extend beyond that which it was initially designed to explain	the simplest explanation, principally like Occam's razor	a theory should disclose new phenomena or new relationships among phenomena

Kuhn's five criteria clearly state the main aspects we face when we need to evolve: we need to be

Accurate	*Consistent*	*Broad in Scope*	*Simple*	*Fruitful*
Data describes the business of your organization	Data defines the world of your organization	Data is extensible and multi-purpose	Data is Data, every use is deterministic	Data generates new information and insights

The new paradigm is essentially data-centric and data-driven.

Data and Business Strategy must necessarily be synchronized, and technical solutions should be designed and implemented with a true understanding of the business problem in a broad perspective:

- Try to avoid following the hype in the tech world and instead focus technological advances on real-life business cases

- Make wise decisions based on business needs.

Source[1]: *The Structure of Scientific Revolutions* (1962), Thomas Kuhn

The main benefits of a solid data strategy approach

Most C-level executives are already familiar with data-driven approaches and how data can drive their company's value.

Digital giants like Amazon, Google, and Facebook have skyrocketed to incredibly high values because of the data they gather, store, and manage and their ability to leverage that data.

Data is now an asset. Managing and leveraging the right data can deliver more value to stakeholders. For data-driven companies, the data strategy is a means to many ends, including:

Accelerating digital transformation
Making faster, better decisions to execute business strategies

Focusing resources on value creation
Streamlining and automating processes to free up talent

Improving business agility
Allowing the business to pivot fast in response to change

Becoming a customer-centric company
Using data to better understand customers

Earning continued commitment from business partners
Promoting the endgame while showing value every step of the way

Management's responsibilities vary widely from one company to the next, but any member of the board is responsible for driving alignment across the organization and finding the most valuable ways to leverage data for the business.

They take ownership of strategies and with the right "alchemy" they can formulate the perfect solution for success.

Our blueprint

The key pillar to focus on when building a data strategy and spreading a data culture throughout your organization.

Extracting insight value from your data to serve the business purpose means being aligned with the business strategy. The business and data must be focused on results, with clear knowledge of your existing and future data assets. They must also focus on the need to be closer to customers, the people at the core of any initiative, long-term planning, and vision. This is what it means to have a solid data strategy.
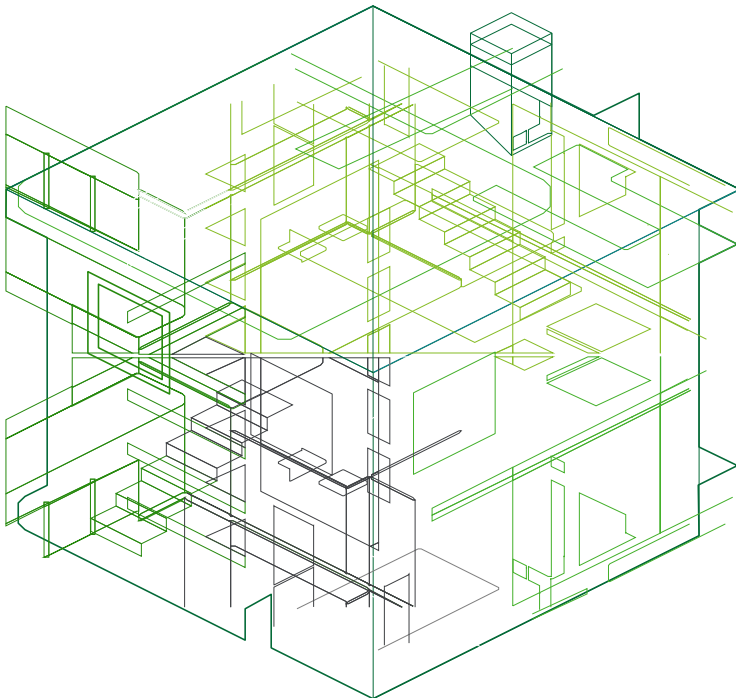
DATA ECOSYSTEM
Data should be integrated and organized to support and guide the business strategy, also considering legal and compliance

DATA CAPABILITIES
Data can generate insights by leveraging several approaches and techniques

DATA ARCHITECTURE
Depending on the company's size and needs, data should be organized according to different architecture (the cloud, distributed computing, data layers)

TARGET OPERATING MODEL
Data projects, input/output, dependencies, process roles and responsibilities, and deliverables based on business needs
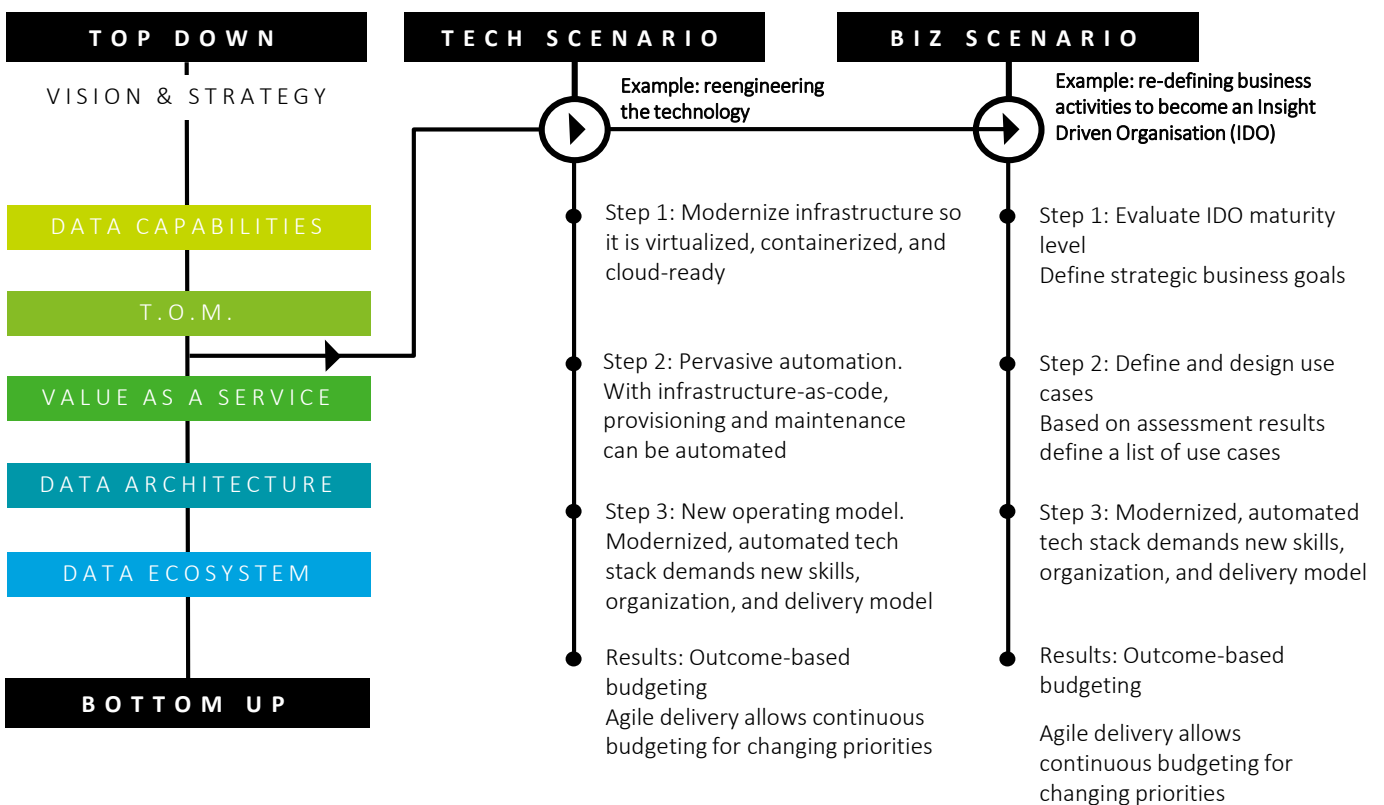
VALUE AS A SERVICE
Data must be interpreted. This is the key to making sure your end users understand what they're looking at

Bottom-up and top-down snapshot

Apply data strategy principles to granular problems, while building toward a wider data culture that spreads across the company.

Top-down capabilities are amplified by a revamped bottom-up architecture, and bottom-up efficiency gains become more strategic and impactful when coupled with top-down transformation.

Data strategy is the link between a strategic vision and how to leverage data to accomplish goals.

TOP DOWN	TECH SCENARIO	BIZ SCENARIO
VISION & STRATEGY	Example: reengineering the technology	Example: re-defining business activities to become an Insight Driven Organisation (IDO)
DATA CAPABILITIES	Step 1: Modernize infrastructure so it is virtualized, containerized, and cloud-ready	Step 1: Evaluate IDO maturity level. Define strategic business goals
T.O.M.	Step 2: Pervasive automation. With infrastructure-as-code, provisioning and maintenance can be automated	Step 2: Define and design use cases. Based on assessment results define a list of use cases
VALUE AS A SERVICE	Step 3: New operating model. Modernized, automated tech stack demands new skills, organization, and delivery model	Step 3: Modernized, automated tech stack demands new skills, organization, and delivery model
DATA ARCHITECTURE		
DATA ECOSYSTEM	Results: Outcome-based budgeting. Agile delivery allows continuous budgeting for changing priorities	Results: Outcome-based budgeting. Agile delivery allows continuous budgeting for changing priorities
BOTTOM UP		

BUILDING FOUNDATIONS

'With data collection, "the sooner the better" is always the best answer'

Marissa Mayer
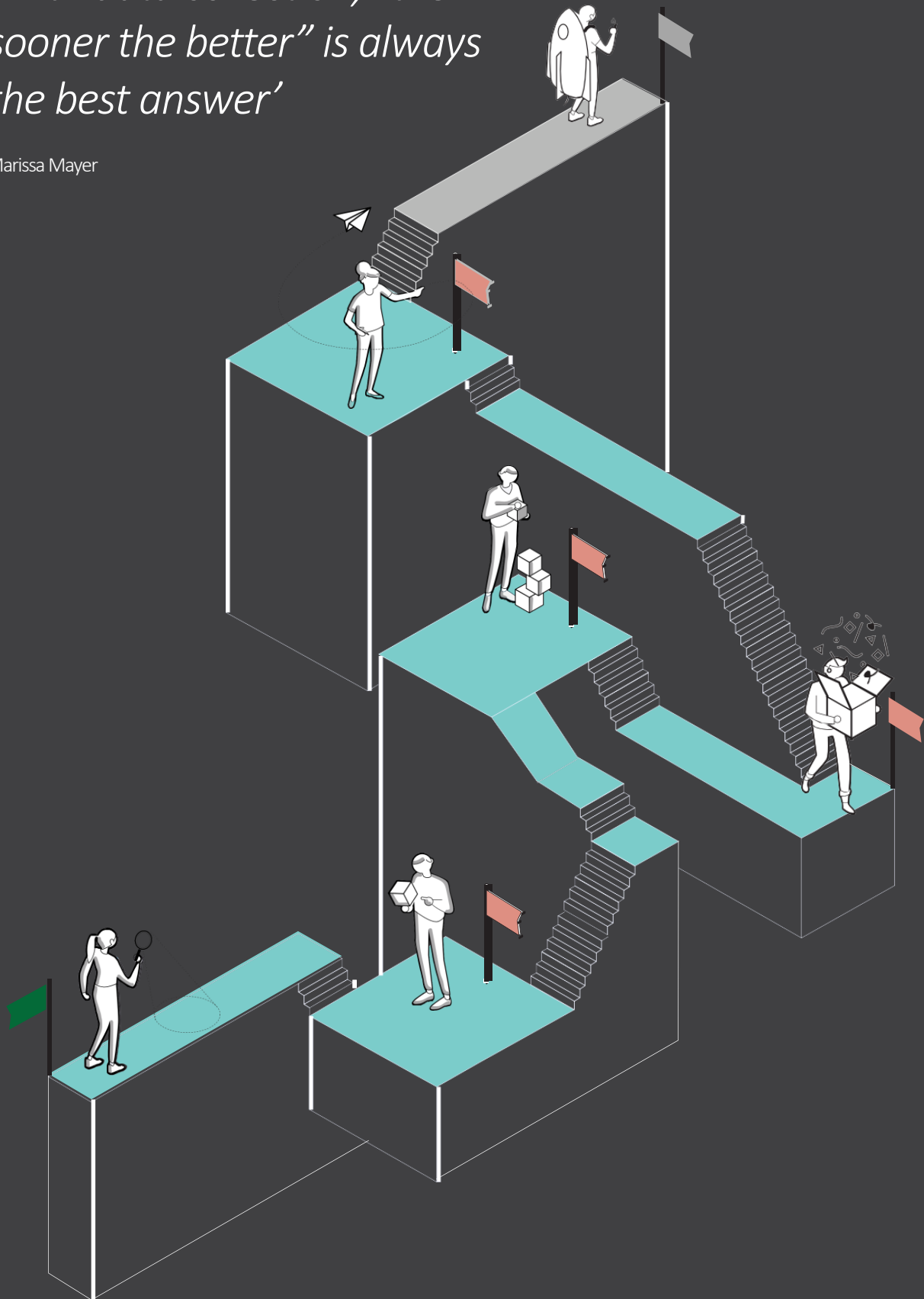
Business vision and data strategy: a two-part solution

Build a successful data strategy from the ground up:

A successful data strategy means developing a clear view and vision for each of the following pillars. We offer three recommendations and have identified five core assets to deliver a data-driven insight strategy and help clients face new challenges from a broader perspective.

Business objectives and strategies should revolve around the results that need to be achieved for customers and not be limited to potential technical solutions.

1

2

Business people should state the business problems focusing on data and the desired business results and they should avoid defining which technologies to use.

Technical solutions should be designed and implemented with a valid understanding of the business problem and data from a broad perspective.

3

Data ecosystem

Data and analytics strategies as levers for a successful business

Digital business success is fueled by data and analytics strategies on scale with business ambitions. As a result, data and analytics leaders are the drivers behind applying data and analytics to the market-making and market-differentiating strategies that create and sustain new business value.

Companies are increasingly seeking better insights by tapping into third-party data.
Outside data can offer a slew of opportunities but using it effectively can be challenging.
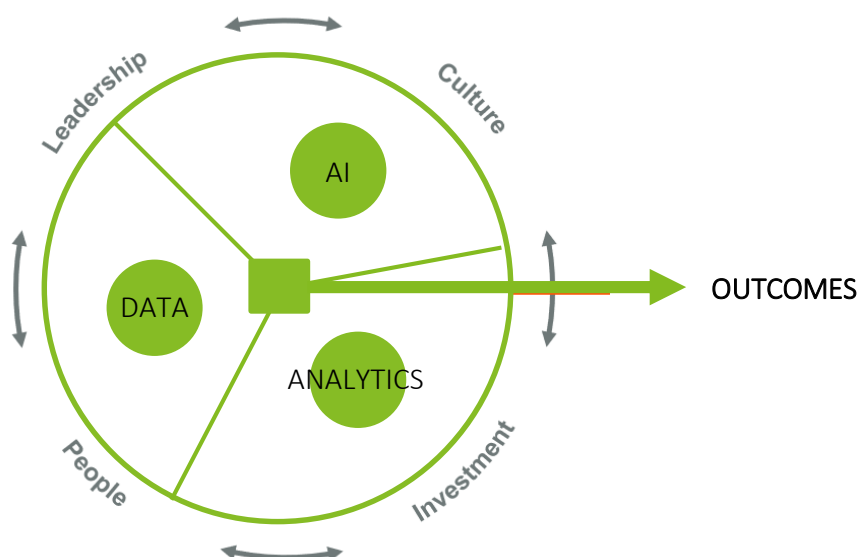
The new mindset of moving data from the company's periphery to its core is critical and this radical change involves both IT and business areas. This is why each business area and its underlying IT ecosystem must be consistently organized in order to support and guide the business strategy.

As most business and technology professionals know, the volume of data being created, shared, and stored is increasing at an exponential pace. According to one study, the data stored in data centers will nearly

quintuple by 2021 to reach 1.3 zettabytes globally by 2021. It's not surprising then that companies on the leading edge of data and analytics are more likely to make use of external data. Research suggests that most companies haven't yet developed the capabilities necessary to use external data effectively. To close this gap, companies may find it helpful to think of themselves as participants in a data ecosystem, which some have defined as a network of actors that directly or indirectly consume, produce, or provide data and other related resources.

A variety of ways to connect to the ecosystem

Organizations looking to connect to a data ecosystem can turn to a wide and growing variety of data and insights providers. Data services may be categorized, for instance, by the level of insight they provide:

	Simple Data Services	Data brokers collect data from multiple sources and offer it in collected and conditioned form. The data is used as additional input for a decision-making process by a person, an application system, or a device in an IoT ecosystem.
	Smart Data Services	Data is enhanced by applying analytical rules and calculations. The results often take the form of scores or the tagging of objects, as in services from marketing data providers and credit rating agencies.
	Adaptive Data Services	Customers submit data pertaining to specific analytical requests. Providers combine that data with data from other sources.

Establish an analytics ecosystem that drives value throughout the enterprise

The debate over adding analytics capabilities to the enterprise's decision-making arsenal was settled long ago. And the winner? The business. Today's organizations are winning with analytics, maximizing the value of data to transform information into insights and better business outcomes.

Any analytics organization requires a set of overriding goals that are typically set as benchmarks for success. These goals include:

- Supporting business decision makers with analytical capabilities

- Providing leadership and a "critical mass" home for analytical people, and the ability to easily share ideas and collaborate on projects across functions

- Fostering visibility for analytics throughout the organization and ease in finding help with analytical problems and decisions

- Creating standardized methodological approaches, tools, and processes

- Researching and adopting new analytical practices

- Reducing the cost to deliver analytical outcomes

- Building and monitoring analytical capabilities and experience

Different priorities for these goals may lead to different organizational models. The key is to keep the organization flexible enough to meet changing needs and expectations.

Data capabilities

Building data analytics capabilities by delivering hindsight, insight, and foresight

Analytics is not a project with a nice deliverable that you put on a shelf. It is a continuous cycle of understanding and improving business process performance. It should focus on high-impact areas and ask smart questions. Organizations that have mastered applying analytics to support enterprise decision-making tend to focus on seven analytics principles as they strive to accelerate workforce adoption and capture more value.

Today's great competitors are increasingly those that are able to seize the advantage of insight. They recognize the potential value of the tremendous amount of data they are collecting, creating, and curating. And they're using deep analytics capabilities to translate that potential into real business results.

As more and more organizations pursue analytics as a business tool, those that can effectively use analytics insights to inform high impact processes and decisions have the opportunity to outperform those that lag behind.

A range of specialized roles will be required to provision analytics & cognitive services and create a high-performance organization. These roles will be filled by a mix of new and existing talent introduced into the organization progressively over time as part of a phased approach.

	Analytics Lead	Responsible for the overall management and performance, accountable for tracking goals and achievements, performance measurement and chairing the data governance function
	Data Steward	Partner with functional areas to leverage data to increase performance, prioritizing ideas, planning business cases, design solutions and supporting the delivery of insights
	Data Scientist	Responsible for using advanced visualization and modelling techniques to identify forward-looking insight from data and to provide one-off or repeatable insights
	Data Engineer	Own models and algorithm engineering; transform data into a format that can be easily analyzed. They will do this by developing, maintaining, and testing infrastructures
	Data Architect	Accountable for defining the information architecture to support the delivery of actionable insights and identified use cases, and developing conceptual and logical data models
	BI & Reporting Specialist	Supporting data management and governance activities as well as the development of BI solutions. Develop effective insight solutions that visually showcase data and insights
	Performance Analyst	Identifying what "good looks like" and developing hypotheses. Sourcing data from the data warehouse, providing analyses and actionable insight through effective storytelling
	Analytics Trainer	Enhancing the analytics and data management capability of the organization as a whole. They will need to conduct and manage training sessions for all required data users

People capability considerations

Creating balanced teams whose members represent both the arts and sciences helps drive the analytics agenda forward on all fronts. There are certain roles that have a logical fit with the Purple People concept – the guide below will help to inform and support the acquisition of this talent.

Domain and sector expertise
- Strong business and process skills
- Understand content and context

Statistics/quantitative skills
- Strong quantitative skills
- Research, develop, and correctly apply statistical models

Data manipulation skills
- Strong data modelling and management skills
- Understand structure and lineage

Tech integration/apps/ automation
- Strong IT skills
- Ability to integrate and automate

Visualization/graphic design
- Strong creative design skills
- Can visualize and design user experience

	Domain and sector expertise	Statistics/ quantitative skills	Data manipulation skills	Tech integration/ apps/ automation	Visualization/ graphic design
Data Steward	●	●	●	●	●
Data Scientist	●	●	●	●	●
Data Architect	●	●	●	●	●
BI & Reporting Specialist	●	●	●	●	●
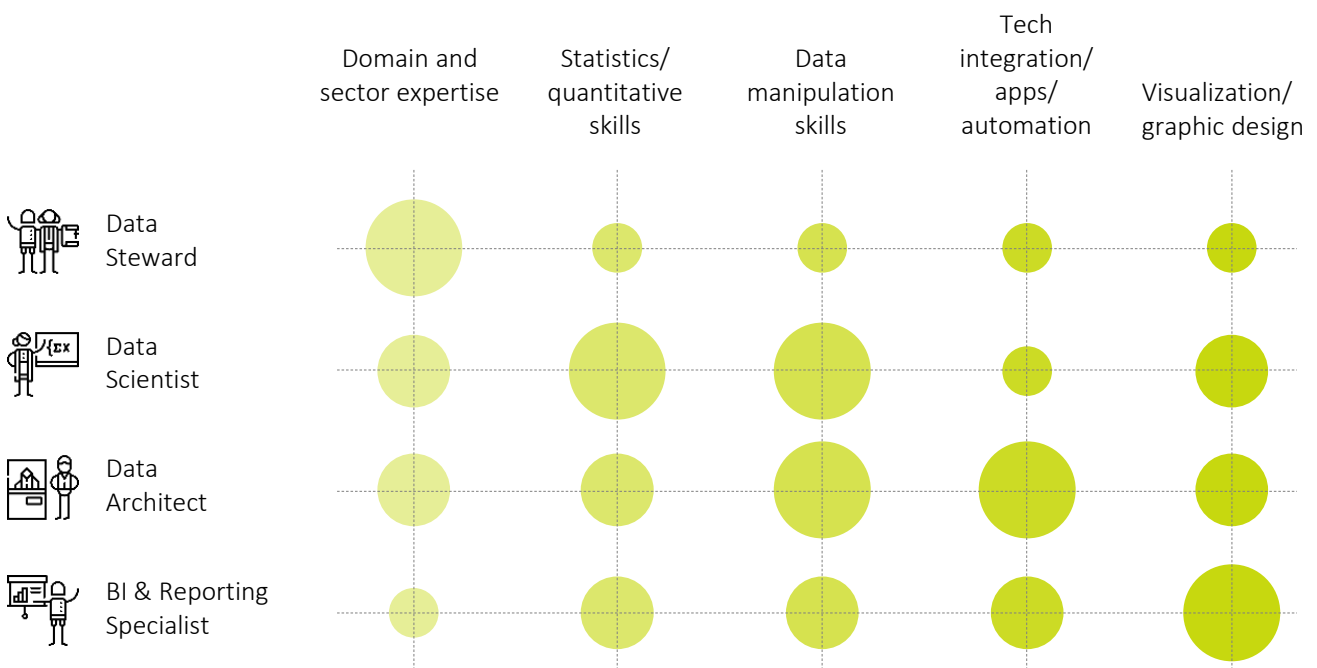
Data framework

Scalable, integrable, and sustainable data processing pipeline to enable long-term growth

A data architecture should set standards for all its systems as a vision or a model of the eventual interactions between those systems.

Data integration, for example, should be dependent upon architecture standards since it requires interactions between two or more solutions.

The data architecture breaks a subject down to the atomic level and then builds it back up to the desired form. The architect breaks the subject down by going through 3 traditional architectural processes:

- **Conceptual** - represents all business entities
- **Logical** - represents the logic of how entities are related
- **Physical** - the realization of the data mechanisms for a specific type of functionality

Questions

What type of business issues do data-driven solutions solve?

What are the typical use cases?

What's the volume growth in 3 to 5 years?

Data Platform – Reference Architecture

A reference architecture provides an environment that enbles the management of the information belonging to one or more domains. It also provides a common vocabulary with which to discuss and manage the implementations, a template to quickly move from a high-level design to a detailed and specific solution.

Adopting a reference architecture within an organization accelerates delivery through the re-use of an effective and tested solution and provides the basis for governance that will ensure the consistency and applicability of technology within the organization.

Capability	Identification of a logical architecture capable of meeting the client's needs
Data BI & Analytics Framework	The analytics framework will serve as a layer between source and services, and will be built to support several kinds of data and enable several capabilities
Source & Process	Data collection will be based on all the client's processes, which will produce several kinds of data

DATA CENTRICITY
FRAMEWORK APPROACH

User Needs

- Decision-Making
- CRM & Marketing
- Finance & Controlling
- Sales & Customers
- Supply Chain & Procurement
- Analytics & Dashboard

Capabilities

- Insight & Exploration
- Process Mining
- Data Services
- Dashboarding
- Marketing Automation
- AI & Cognitive

Data Platform

- Information Delivery
- Data Integration
- Data Quality
- Governance & Metadata
- Data Storage/Consolidation

Data Sources

- Digital Channels
- IoT/Devices
- Batch/Real Time/Event
- DBMS/Hadoop
- Cloud Storage/Services

Business Purposes

- Value addition
- Prediction
- Business Monitoring
- Sales Forecasting
- Optimization
- Products/Services Innovation

User Needs

Capabilities

Data Platform

Data Sources

Business Purposes
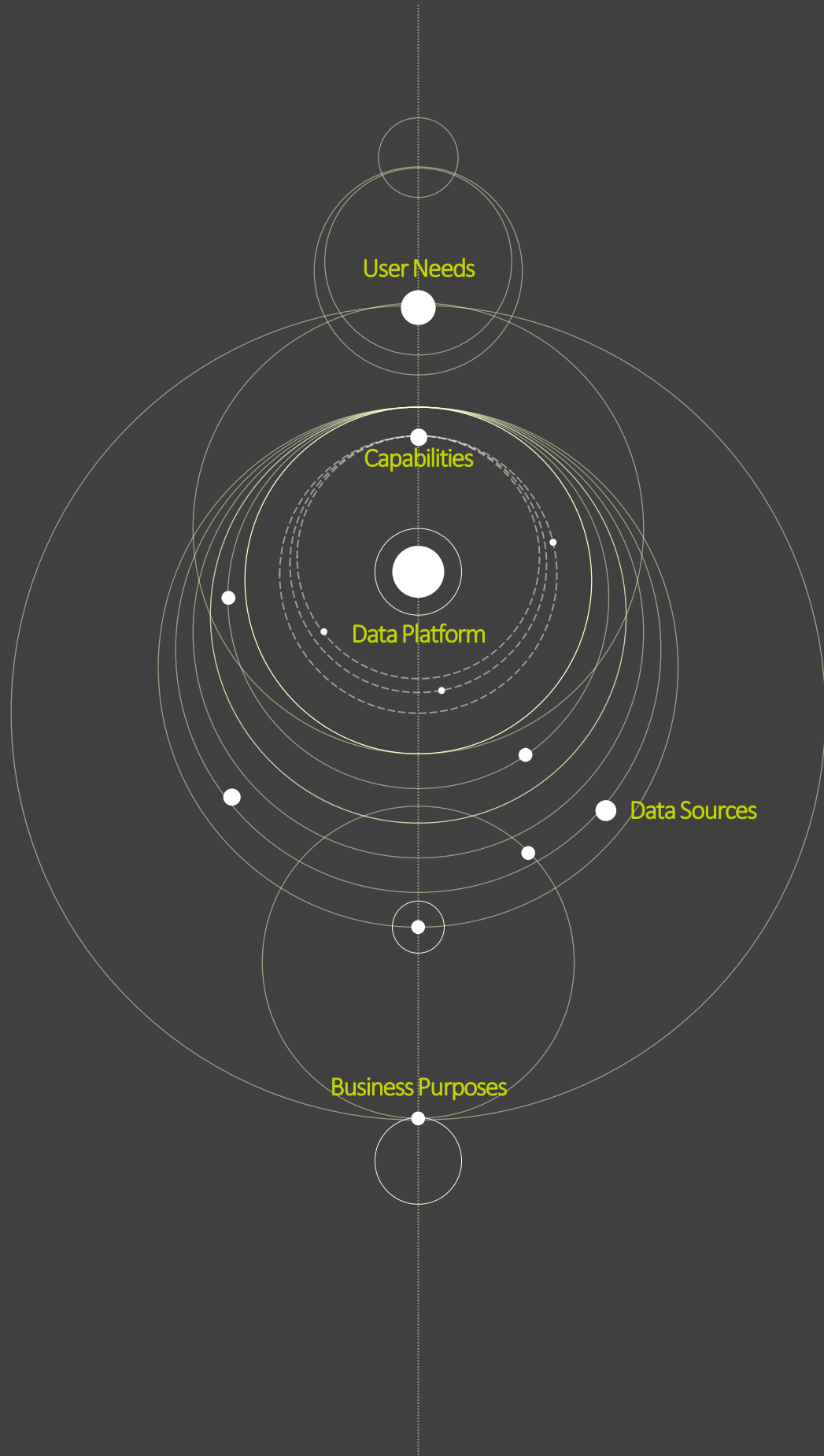
Target Operating Model

Do we have the right cultural tool to use and understand data?

The most common question for an organization is often about its people's skills and interactions at every level.

An organization basically needs:

- The operating model that best fits the organization so it can perform at its best, better serve its customers, and expand its business;

- The right people engaged and ready to carry out the right actions.

It often occurs that new ideas and innovation are sparked in the business departments because they are closer to customers, while IT or centralized data technology groups have the expertise in change management, scalable production systems, process automation, and enterprise-level solutions.

The reason for this is evident: IT has centralized resources that often cannot meet the business requirements of being fast and nimble to satisfy customers' needs.

On the other hand, the business department has neither the capability for a large production environment nor the budget for enterprise-level software solutions.

Data Strategy

Strategy is dynamic. Outcomes and value propositions can change or augment the business model via feedback loops.

Value Proposition

Stakeholder outcomes

Data-driven vision

Data Ecosystem

Architecture

Delivery model

Operating Model

The operating model is the structure that understands all the actors and all the elements for effective execution

Area of opportunities

Operating models must be:

- Consistent with the company's key characteristics

- Defined considering the actual strategic importance of BI

- Aligned with the BI & analytics maturity level of the company's ecosystem

In order to improve business competitiveness and performance efficiency, the ability to set up and organize a BI team is strongly recommended.
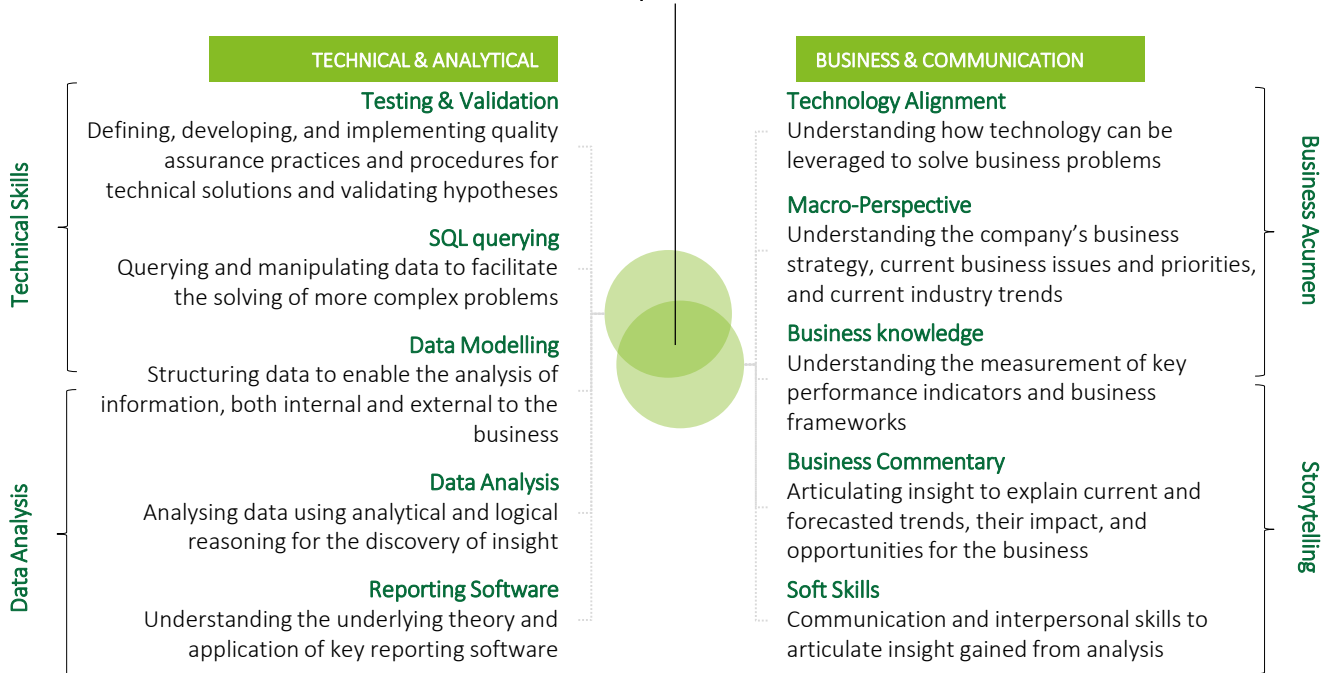
Best practice leads to 4 models

Centralized Model
Ability to work on cross-functional projects and easily share ideas between analysts. High level of security and dependability

Distributed Model
Analysts are spread throughout an organization with no mechanism in place that facilitates collaboration

Functional Model
This model places analysts primarily within the specific function that dominates analytical activity within a company

Center of Expertise Model
Most appropriate for large businesses with a variety of analytical needs and issues because it mirrors the organizational structure of these companies

People Talent and Culture

The assessment of current talent and the training plan or roadmap for the pipeline of new talent are extremely critical for a successful data strategy:

- Building teams with diverse and complementary skill sets and multiple levels of experience should be a key aspect of a successful data strategy

- Developing data competency and data culture in the organization

- Creating a balanced Purple Team with backgrounds in both the Arts and Sciences helps drive the IDO agenda forward on all fronts.

Analytics talent present a combination of technical skills, analytical skills, storytelling, and data visualization skills. These kinds of professionals are hard to find, and companies face difficult challenges in filling positions in analytics fields.

TECHNICAL & ANALYTICAL

Technical Skills

Testing & Validation
Defining, developing, and implementing quality assurance practices and procedures for technical solutions and validating hypotheses

SQL querying
Querying and manipulating data to facilitate the solving of more complex problems

Data Modelling
Structuring data to enable the analysis of information, both internal and external to the business

Data Analysis

Data Analysis
Analysing data using analytical and logical reasoning for the discovery of insight

Reporting Software
Understanding the underlying theory and application of key reporting software

BUSINESS & COMMUNICATION

Business Acumen

Technology Alignment
Understanding how technology can be leveraged to solve business problems

Macro-Perspective
Understanding the company's business strategy, current business issues and priorities, and current industry trends

Business knowledge
Understanding the measurement of key performance indicators and business frameworks

Storytelling

Business Commentary
Articulating insight to explain current and forecasted trends, their impact, and opportunities for the business

Soft Skills
Communication and interpersonal skills to articulate insight gained from analysis

Value as a Service

Leverage availability and actionability

As companies are collecting more and more data, it is crucial to be able to access all information content and, especially, to be able to interpret it to gain insights.

Data Democracy

Data Democracy refers to a corporate culture based on an open model where liberty goes hand in hand with responsibility. Its main objective is to make a company's data widely accessible to the greatest number of people, if not to all. In practice, any employee is able to pull data values at any level.

In this case, the mantra of Data Democracy is to open up the potential offered up by data to as many people as possible. This freedom of access offers a maximum of opportunities to create value for the company; it provides every employee with the ability, at their level, to use all accessible and compatible resources within their needs in order to produce value locally.

This freedom only works if the regulations and the basic tools are implemented and the rights are counterbalanced with a certain number of duties.

DATA CITIZEN RIGHTS		DATA CITIZEN DUTIES	
Know data mining and context			Comply completely with regulations
Judge data sensitivity and evaluate usage limitations			Contribute to the improvement of data knowledge
Know where to find data and how to access it			Share all produced data within your organization

Data visualization

Traditional BI tools provide data presentation features and UX elements that, with difficulty can provide the optimal solution in terms of data interpretability and usability.

These capabilities can be extended by integrating an advanced analytics / machine learning engine and by developing a mash-up solution to customize the users' interactions.

Designed correctly, a dashboard increases productivity for all users:

The '5 Second' rule

Glance at your BI dashboard for 5 seconds, then look away. If you remember the specifics of what was important, you're good. If not, it's time for a dashboard rethink.

The inverted pyramid

Display the most significant insights on the top part of the dashboard, trends in the middle, and granular details in the bottom.

Minimalism: less is more

Each dashboard should contain no more than 5-9 visualizations. Cognitive psychology tells us that the human brain can only comprehend sequences of around 7 +/- 2 at a time, so this is the amount of items you want in your dashboard.

Choosing the right data

Select the appropriate type of data visualization according to its purpose. When thinking about how to design a dashboard you need to also take into account who will be the end user of the dashboard in the first place.

What should you consider when creating visual analytics solutions?
A good BI dashboard design is one that makes the complex simple: we have lots of information, lots of data that changes all the time, and different analytical needs and questions.
We want to take all this complexity and make it simple. So what are the steps to follow?

DISCOVER — Clarify the purpose of the project and the requirements for the visual analytics solution. It is important to gather all the relevant information and identify key end users

DESIGN — Develop a clear picture of what the visual analytics solution will look like and how it will be implemented. Define functional specifications, follow guidelines, and calculate technical KPIs

DEVELOP — Build a solid visual analytics solution that meets the requirements, involve stakeholders in the process, and prepare for deployment

DEPLOY — Publish the visual analytics solution to end users and provide support to optimize solution acceptance

OUR ACCELERATORS

'In the end you should only measure and look at the numbers that drive action, meaning that the data tells you what you should do next'

Alex Peiniger
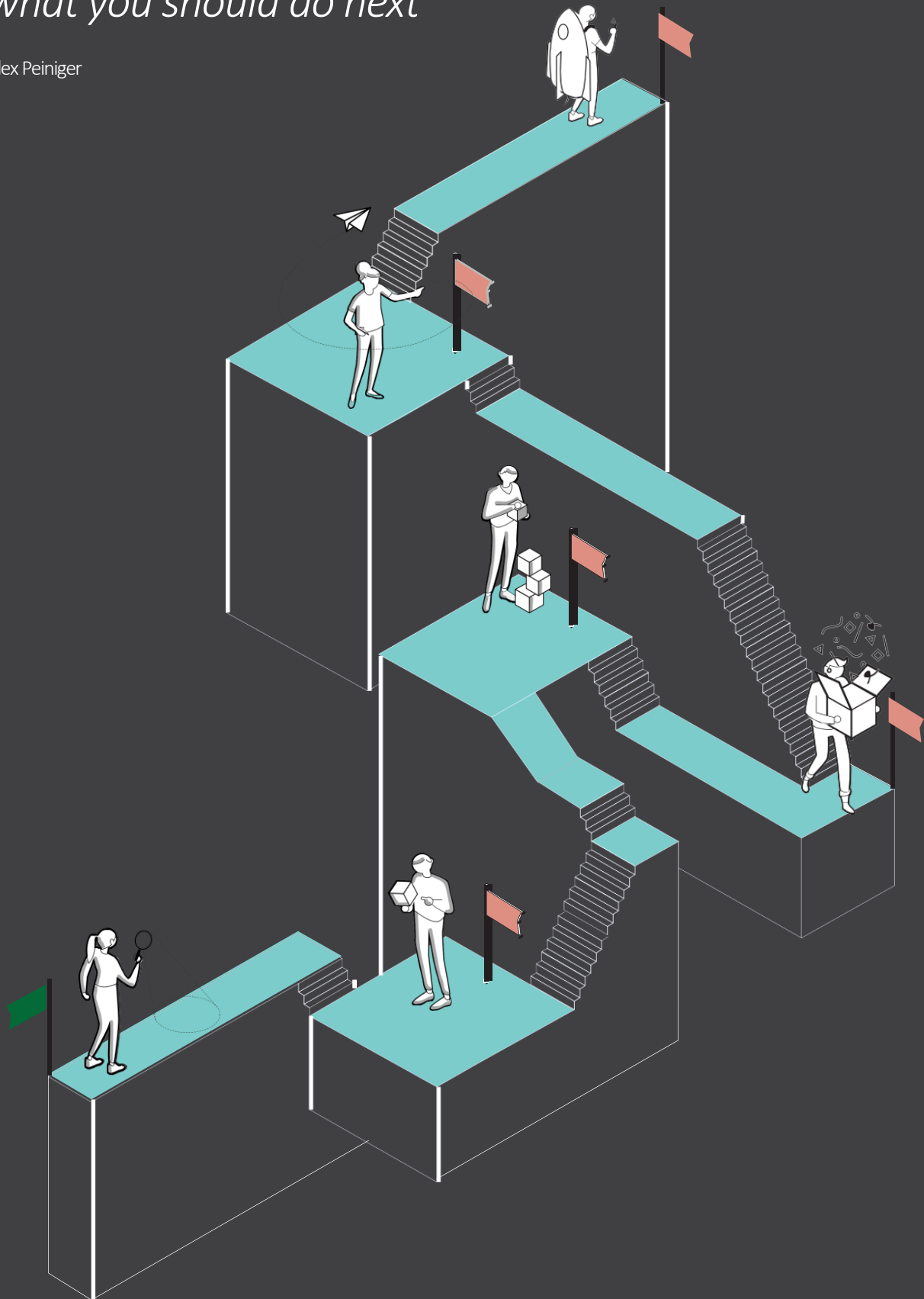
Insight Lab Workshop

STARTING POINT

An Insight Driven Organization (IDO) is an organization driven by Intelligence, Insight, and Information, in order to be Innovative at an Industrial scale.

It is an accelerator to grasp real business needs.

In an IDO Lab, content is not delivered but experienced. It is about doing and not just listening.

During the day, IDO Labs help you generate consensus and commitment to a comprehensive and tactical plan which can be used to drive momentum for the next steps in becoming an Insight Driven Organization but what matters most is maintaining momentum after leaving the room.

APPROACH

What do we want to be?

- Explore the "Art of the Possible". Articulate the executive leadership team's vision for the role of analytics and explore stakeholders' expectations

What should we focus on?

- Understand global best practices and explore real-life case studies
- Assess and be aware of current analytics capabilities and challenges
- Identify and prioritize key opportunities for adoption of analytics

OUTCOMES

The Goal: *Engagement*

The Results: *Alignment*

How do we get there?

- Develop hypotheses to address capability gaps
- Prioritize pilot projects to enable quick wins
- Create a tactical action plan with timelines and accountability

The Benefit: *Commitment*

IDO Maturity Model

STARTING POINT

IDOs see AI and analytics as core capabilities across their organization, to provide improved products and services, to support the decision-making process, to tackle their most complex business problems, and to address growing analytical trends.

APPROACH

Maturity can be measured across 5 areas:

INFORMATION | Robust, secure and reliable data storage, good quality data with strong ETL, reporting and BI capabilities.

INSIGHTS | Strong analytical capabilities, leveraging descriptive, predictive, and prescriptive analysis.

INTELLIGENCE | Leveraging intelligent automation, cognitive analytics, and AI to supplement and augment human decision-making

INNOVATION | A culture of knowledge sharing, with a strategy that leverages the latest technologies and stays ahead of the competition.

INDUSTRIALIZATION | Enterprise-wide collaboration, integrated architectures, robust processes and workflows.

IMPACT

An organization can assess its current analytical competencies against the Insights Maturity Curve which has 5 key stages:

DATA-DRIVEN		INSIGHT-DRIVEN	
01	02	03	04	05
AWARE	ADOPTING	EXPANDING	INDUSTRIALIZING	TRANSFORMING
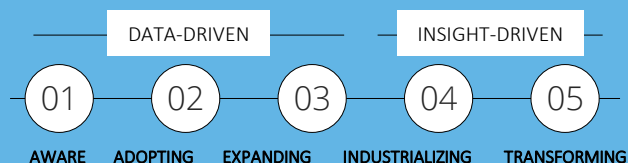
• Aware of analytics, but little to no infrastructure and poorly defined analytics strategy.

• Adopting analytics, building capability and articulating an analytics strategy in silos.

• Expanding ad-hoc analytical capabilities beyond silos and into mainstream business functions.

• Industrializing analytics to aggregate and combine data from broad sources into meaningful content.

• Transforming analytics to streamline across all business functions.

Technological transformation

STARTING POINT

Deloitte continuously searches for and proposes new technology trends through market, customer and advanced research, providing a contextual way to approach technology, integrate it in your business, and launch effective, strategic, tactical, actionable realization.

APPROACH

Exploring intersections of the macro technology forces can drive purposeful, strategic, and transformational change. The Deloitte Tech Trend '20 highlights a meaningful data-centric approach to innovate and add value to business and retain competitive edge.

Deloitte Tech Trends 2020

IMPACT

It all comes down to the fact that technology is relevant but it's no longer perceived as the unique driver to evolve and innovate. Technology is moving towards a deep understanding of business and is proposed as a value creation enabler.

Architecture is not only a technological theme; it pervades the business, placing the emphasis on process transformation, culture and collaboration, information governance, and problem solving. The data platform is the core of the transformation that enables the enterprise to control and leverage its data to generate insights.

The underlying data architecture of an Insight Driven Organization enables a digital simulation of physical systems, resources, and processes. Physical/digital twins are supported by data science and machine learning and provide optimization and insights for actions in the physical world.
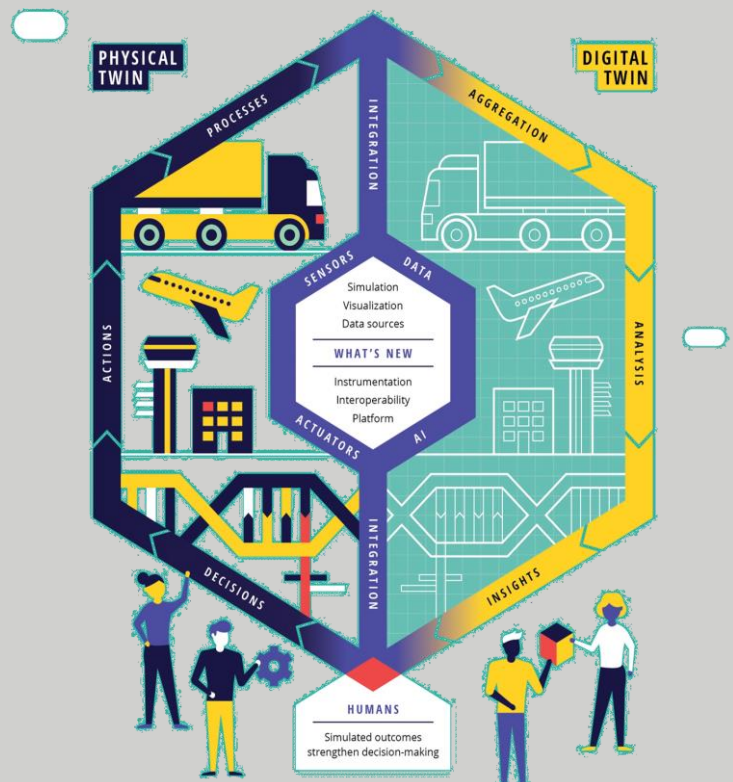
Change management and data culture

STARTING POINT

Creating a data culture is one of the keys to becoming a data-driven firm, according to Howson, chief data strategy officer at the analytics platform provider ThoughtSpot.

The ability to derive meaningful insights from data is about acquiring – or developing – the right talent. From leadership to performance management; data scientists to change specialists, becoming an Insight Driven Organization means relying heavily on people.

APPROACH

While the right technology is not an easy shortcut to a data culture, technology and culture are two sides of the same coin, as both depend on being open to new ways of doing things.

IMPACT

Culture is usually set by company leadership, grassroots culture changes bubbling up from lower-level employees are possible, but more difficult.

As Wilkinson says, in 2016, we believe that a good starting point will be following FAIR principles:

- Findable

- Accessible

- Interoperable

- Reusable

Once a company has generated great data, it is important to ensure it can be used to its full potential.

Markets and Data-Driven Insights Observatory

STARTING POINT

Knowing the markets, trends, and needs of our society helps us gain **a broad perspective**, essential for the success of strategic initiatives for companies.

Crossing the boundaries of our day-by-day operating perimeter, wondering what our clients and competitors have done and are doing, means looking to **new potential opportunities**, **optimizing investments,** and **minimizing business risks**. Knowing our clients' opinions is the basis for **improving their experience.**

APPROACH

We are a **global network** with a **strong multidisciplinary approach**. We manage **hundreds of projects** on innovative topics around the world. We do all this with a strong **spirit of collaboration and synergy**, sharing skills, assets, and experiences to create an alchemy with exceptionally high value added. **We invest in research** and harness the power of tools that **optimize knowledge sharing**.

IMPACT

In addition to the continuous support we offer clients in projects, our work includes activities and deliverables such as:

- **Community of Practices** organized nationally and globally, in which our professionals collaborate by conducting research on topics such as Data Strategy, Artificial Intelligence, IOT, etc.

- **Cross-functional research and projects:** our multidisciplinary approach enables us to support our clients with highly specialized professionals on business and technical sides in end-to-end initiatives

- **Surveys**: questionnaires distributed to our clients on a large scale to gain an understanding of their opinions and if and how they use data.

- **Point of View** and **Proof of Concept**: studies and prototypes on innovative themes and tools such as image recognition, text mining, etc.

This background allows us to offer our clients a **broad-spectrum vision.**

Our mission goes beyond analytics

Serve our partners

with distinction, collaborating from their perspective, offering innovative insights, and thinking outside the box to define a vision and achieve the defined goals
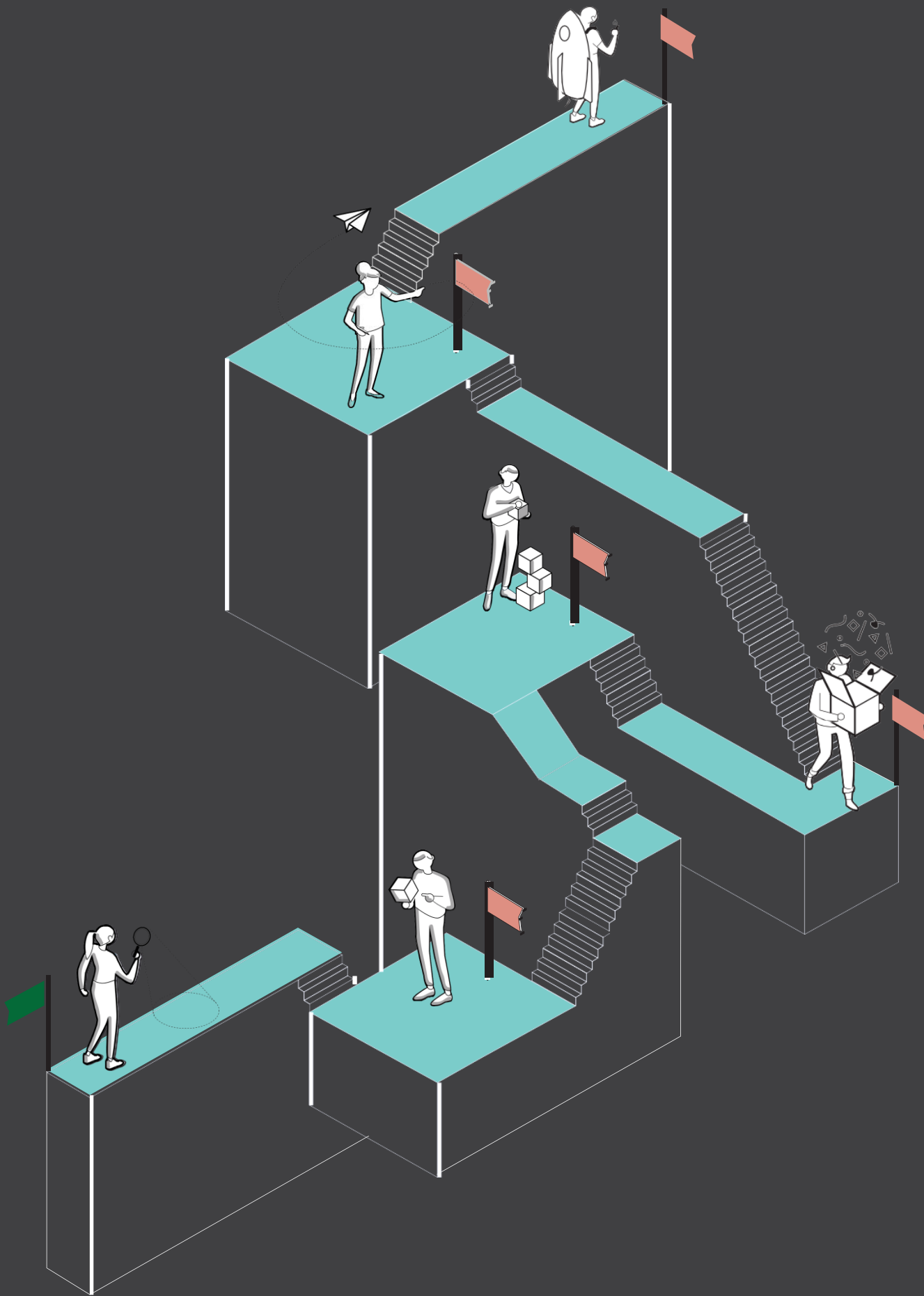
Inspire our people

to offer exceptional value, significant professional experience, and an inclusive and collaborative

culture

Contribute to society

strengthening trust in markets, safeguarding the integrity of organizations, and supporting our communities

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