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Digital in Finance
Crunch Time
Timothy Ho | 20 July 2017

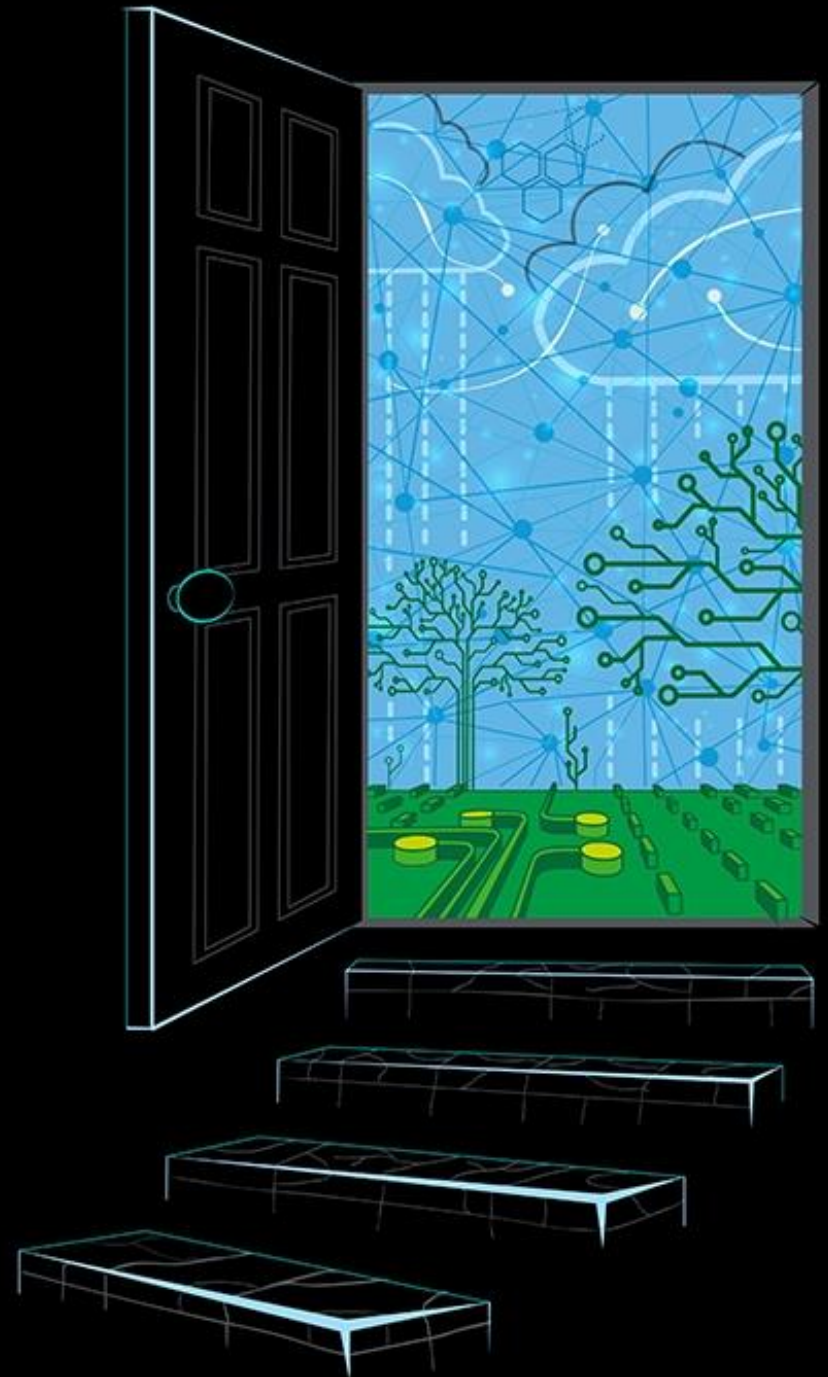
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The CFO Program

Framing the future

A new class of digital tools are reshaping almost every aspect of business....

What do they mean for the future of finance?

“Everyone says they’re a strategic CFO these days.”



Crunch Time

- Data volumes are exploding
- Unstructured is different
- Finance doesn't have a corner on analysis
- Business cycles are up for grabs
- The talent crunch is real

Deloitte.



Crunch time
Finance in a digital world



Crunch time, too.
CFOs talk off the record about
Finance in a digital world.

The Finance Toolset

Seven technologies have growing relevance for how the work of finance gets done.

Core Modernization



Cloud



**Process
Robotics**



Visualization

Exponentials



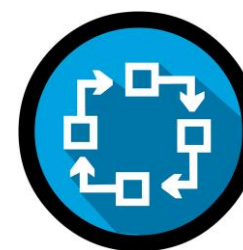
Advanced Analytics



**Cognitive
Computing**



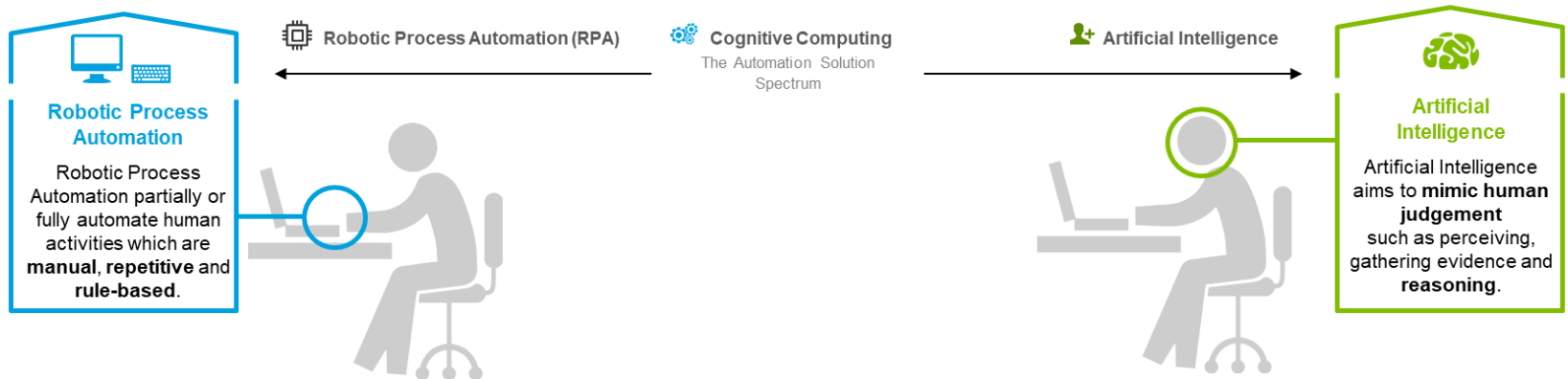
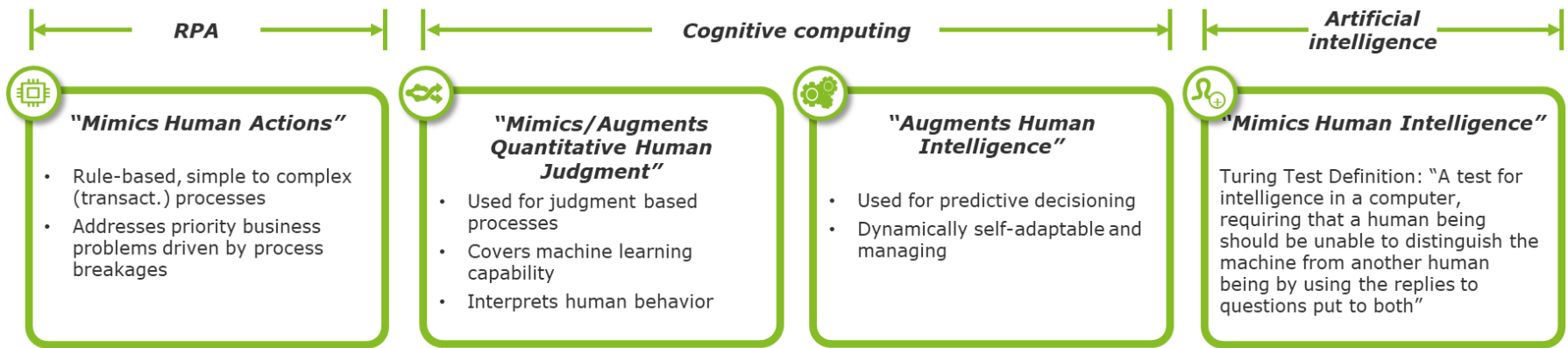
**In-Memory
Computing**



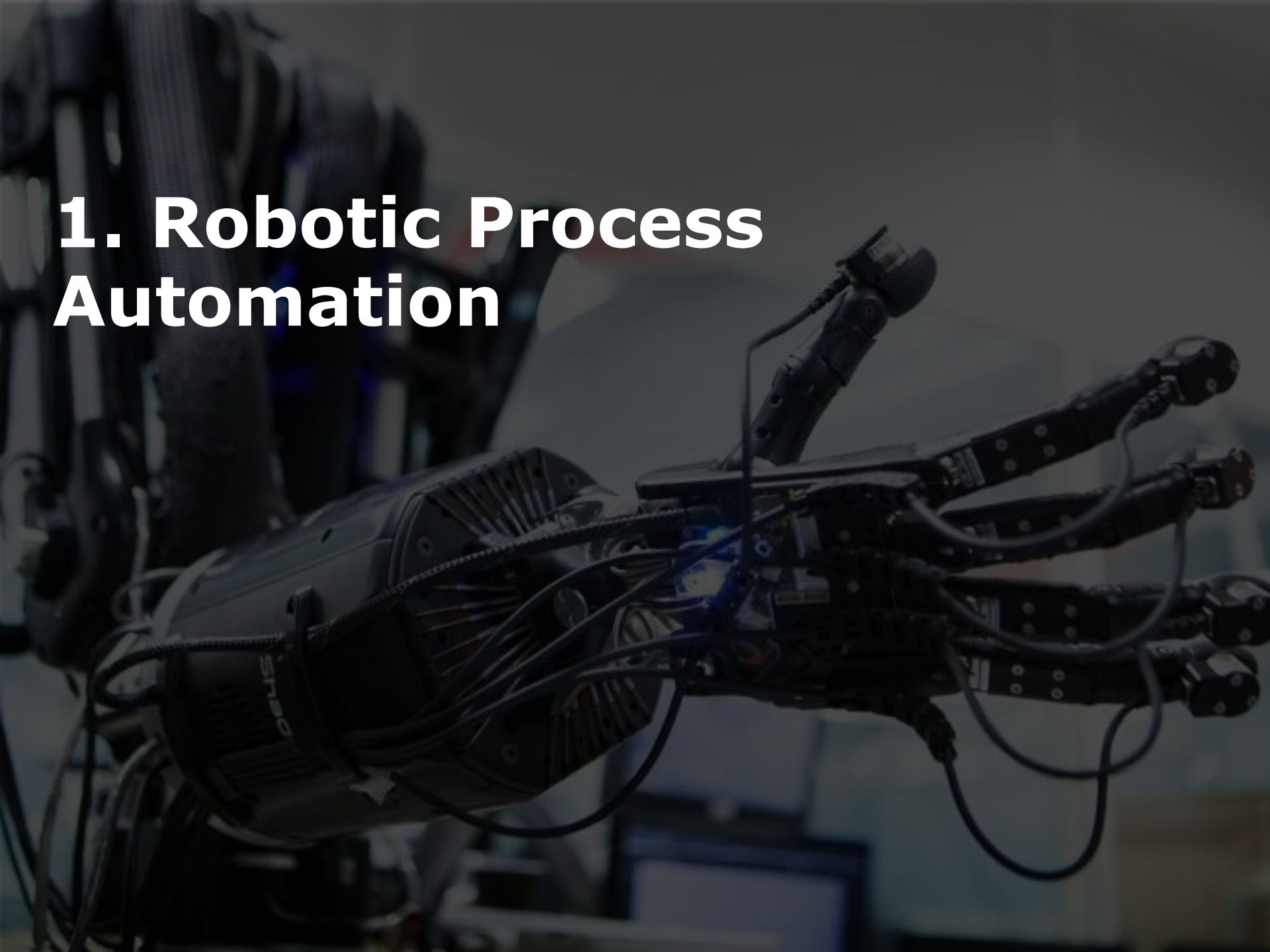
Blockchain

Automation Spectrum

Enable machines to replicate human actions and judgement with robotics and cognitive intelligence



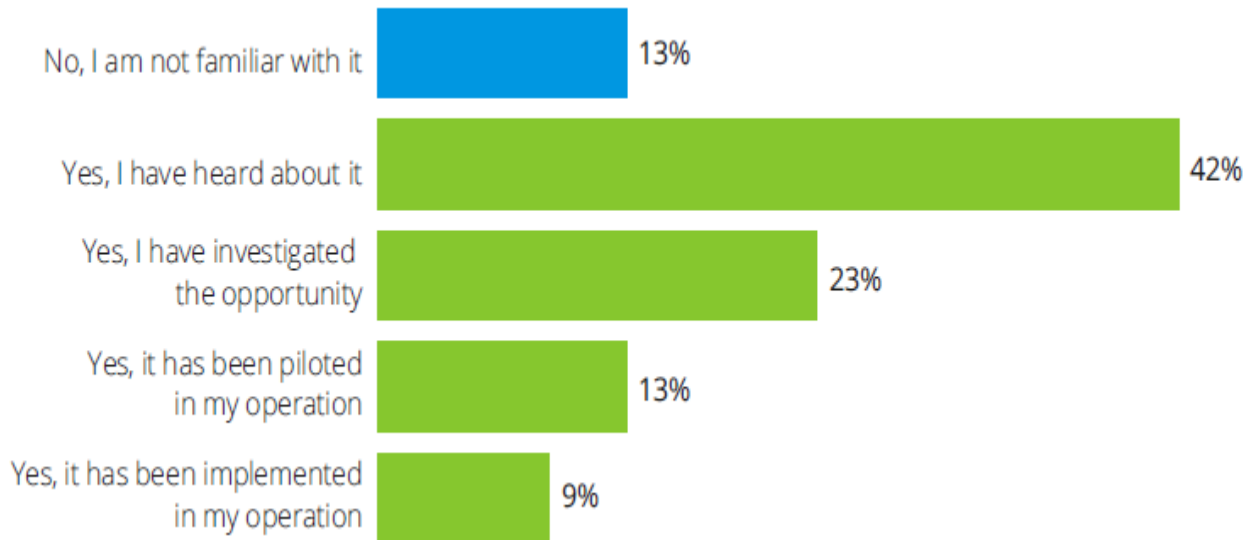
1. Robotic Process Automation



Robotic Process Automation – Gaining Traction

While focus on RPA is intense, we like to say 2016 as the “RPA year of Pilots”; and “2017/2018 as year of Implementations”

Are you familiar with RPA?



Gap between those that have heard about RPA and those that have implemented will fall given that **76% claim they plan to explore the potential of RPA** in the coming year

Interestingly in 2016, among ~140+ companies that we surveyed **9% have implemented** RPA while in 2015 it was , **less than 1%**

Robotic Process Automation – Overview

RPA software provides advanced macro-like capabilities that can be deployed at an enterprise or business unit level

RPA is...



Computer-coded software



Programs that replace humans performing repetitive rules-based tasks



Cross-functional and cross-application macros

RPA is not...



Walking, talking auto-bots

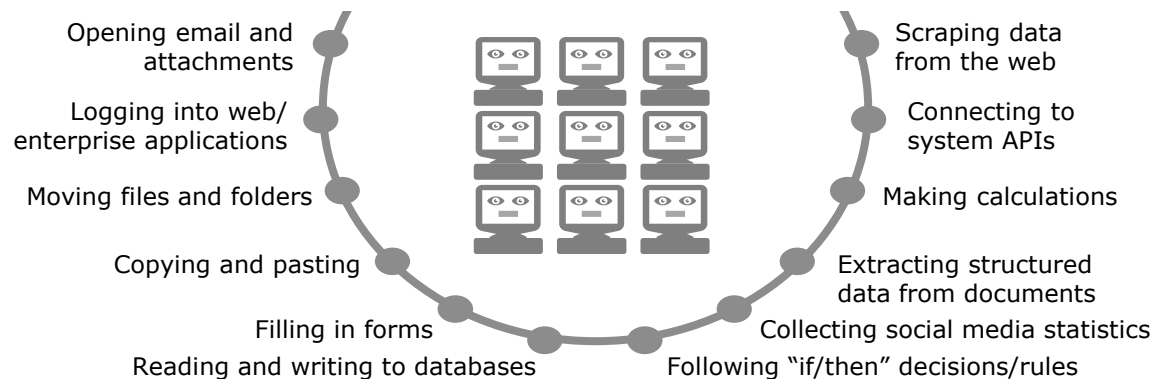


Physically existing machines processing paper



Artificial intelligence or voice recognition and reply software

What it can do



RPA Benefits

RPA can deliver significant strategic benefits that will help to transform business processes going forward



Cost reduction

- Processing costs reduced by up to 80%
- Fast payback period (~4-6 months)
- Improved margins



Productivity boost

- Increased throughput
- 24/7 activity
- Quickly scalable
- Allows focus on value add activities



Quality & service

- Accurate processing & reduced errors
- Faster processing
- Improved transparency and data quality



Risk Reduction

- Embedded controls
- Run pre-defined processes with complete audit trail
- User permissions allow segregation of duties



System integration

- RPA can integrate most applications in use
- Links existing IT assets with no change required to underlying architecture



Quick results

- Fast implementation ~ 2-3 weeks per robot
- Processing costs reduced by up to 80%
- Ability to experiment and innovate quickly



Improved decisions

- Improved data quality and reporting
- Enables enhanced decision making for management



Employee satisfaction

- Eliminate performance of high volume repetitive tasks
- Enables focus on value-add activities

Project Lifecycle: Four distinct phases

Step by step approach



Is this right for my organization?

Pilot with 3 to 5 processes

How can we scale this to make a difference?

What functions should be involved

Large scale implementation to drive direct business benefits

Develop ecosystem – internal and external – to govern and manage the human-robot environment

AMELIA



Meet Amelia, our new Digital Employee

Introduction

Amelia can be used to deliver best-in-class service fully automating human-to-human interactions and process execution

Peak into Amelia's Brain



Episodic Memory to understand context of the conversation, and provide immediate relevant answers after understanding the intent of the user



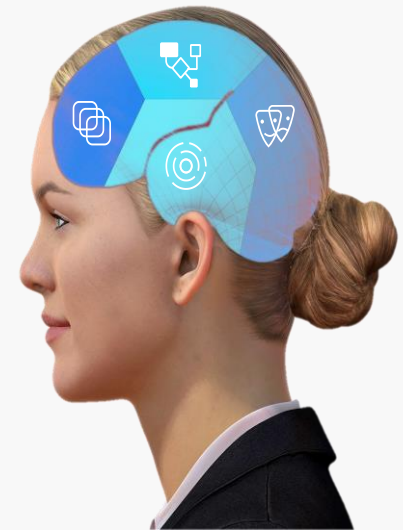
Neural Ontology to allow a very natural conversation with end users using natural language



Process Ontology to execute a process in order to address the user's needs. Amelia is also capable of integrating with the background IT systems & applications



EQ Ontology to enable Amelia to adapt her responses to conversation's sentiment and the user's emotional state



Amelia's Core Capabilities

Services your customers in **natural language**, answers their questions or executes a service or sales process

Knows how to **operate** all your **IT systems**

Monitors your client's **sentiment** and adapt accordingly

Learns best practices directly from your top employees

Provides you instant **scalability**

Amelia Demo



Amelia is an artificial intelligence platform that can understand, learn and interact as a human would to solve problems. She makes it possible to automate knowledge work across a broad range of functions. With Amelia able to shoulder the burden of tedious, often laborious tasks, she partners with human co-workers to achieve new level of productivity and service quality.

Typical Amelia Use Cases

Some typical use cases for Amelia

	Function	Core Use Case	Industry Examples
External	Sales & Marketing	Create an omni-channel experience using cognitive agent as interface, and assist with sell/upsell/cross-sell goods and services	<ul style="list-style-type: none"> Insurance or Mortgage agent able to provide quotes Travel / Hospitality agent able to book / change travel and services Retail sales rep able to make sales and advise on purchases
	Account Servicing	<p>Facilitate Know-Your-Customer activities and gather information relevant to lifecycle support/servicing; facilitate feedback cycles</p> <p>Facilitate B2B interactions (e.g., billing, account management/services)</p>	<ul style="list-style-type: none"> Banking Account Service Agent (credit card fraud, money transfer) Healthcare Provider advisor to connect patients to providers Cross-industry account service support
	Customer Support	Execute transactional services and provide technical guidance/support for products	<ul style="list-style-type: none"> Technical support (FAQ, troubleshooting, scheduling service appt.) Banking, Insurance, Retail Off-hours customer support Healthcare office assistant for scheduling treatments
Internal	Human Resources	Recruitment, employee onboarding, learning & development, transfers, internal policies, position management	<ul style="list-style-type: none"> HR Help desk agent, able to answer FAQ, advise, file paperwork. Support key HR processes including direct deposit, expense reporting, position management, payslip breakdown Facilitate recruitment process as candidates' primary POC
	Business Ops & Finance	Support for internal policies and standard procedures & Facilitate finance processes, procurement	<ul style="list-style-type: none"> Travel & Expense support agent, able to answer policy questions and help with reports Supplier Service agent, able to assist with invoice or payment status
	IT & Helpdesk	Technology support for internal tools and technologies	<ul style="list-style-type: none"> IT help desk agent, trained to support L0-L3 requests (password reset, Wi-Fi access, printer access, VPN provisioning, USB access) Production support agent, able to advise on company policy, provide guidelines on operating procedures

Typical Benefits reported by clients

Testimony by recent client showed 24/7 reachability, 40 to 60% cost reduction through automated processes, reduction in MMTR and waiting time by ~300%, 64% of related queries being handled successfully by Amelia in 3 mons training

Increased User Satisfaction

- Easy **interaction through natural language** (no more complex web flows)
- **24 x 7 reachability** (no more closing times for customer service)
- **Instant access**, scales with demand (no more waiting queues)
- **Execution** is done at **machine speed** (no need to wait for operators)

Better Financial Performance

- **Reduced cost to serve** (40 to 60% reduction through automated processes)
- **Lower development and maintenance cost** for online platforms (as Amelia allows to remove part of web flows and reduce site footprint)
- **Increased 'natural' x-sell / up-sell opportunities** (through monitoring human emotions in real life to determine permeability)

Maintain Compliance

- **Same situation** gives **same answer, always** (and is fully logged)
- **Transparency on type of answers by situation**, including clear approval process for new actions and advice by Amelia

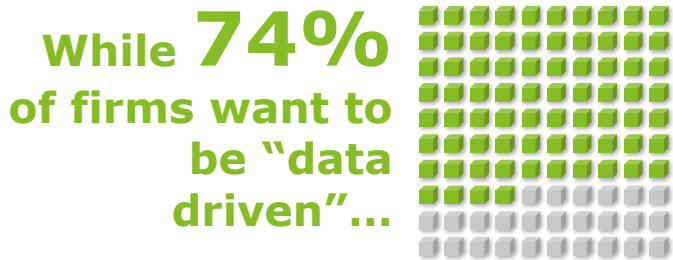
3. Natural Language Generation



Too much data, not enough actionable insight



“We are drowning in information but starved for knowledge” - John Naisbitt¹



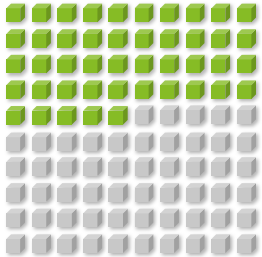
Sources:

¹ www.forbes.com

² www.forrester.com

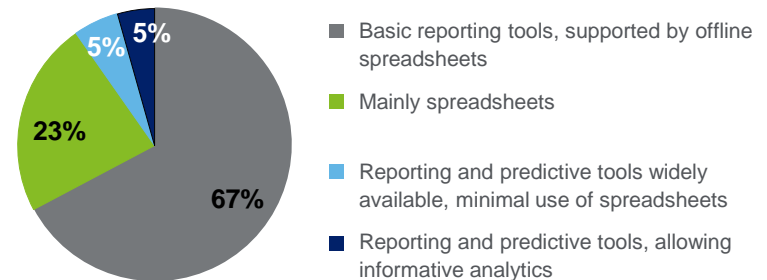
Finance organizations struggle to be effective Business Partners, primarily due to more time doing manipulations than analysis

Most Finance organizations spend excessive time on processing data rather than performing analysis



“45% of finance functions lack efficiency within their finance processes, reducing their capacity to focus on Business Partnering”

...as reflected by limited technology supporting analytics



“Only 10% of surveyed companies use technology enablers to drive analytics and insights”

...resulting in reduced capacity for Finance organizations to partner with the business

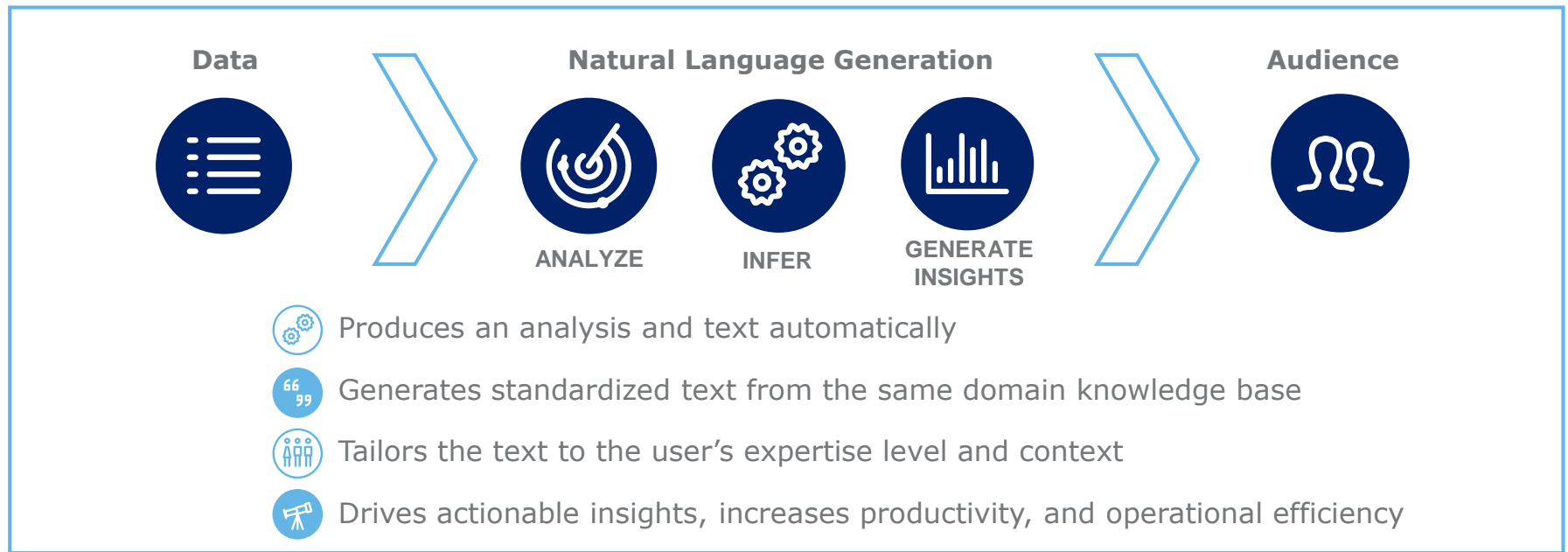


“2 in 3 Finance organizations spending less than 30% of their time partnering with the business”

Source:

¹ Deloitte Business Partnering Survey

NLG is the automation of narratives and derivation of insights from structured data



Government: Allows agencies to more quickly understand large volumes of data, resulting in being able to respond more quickly to alerts or suspicious activities



Marketing Agencies: Generates campaign summaries, media buyer reports, ratings overviews, and brand management reports to win new business



Financial Services: Delivers personalized portfolio summaries, reports, and asset allocation reviews to clients, while reducing cost of production



E-Commerce: Automates product descriptions in driving efficiency and productivity of employees

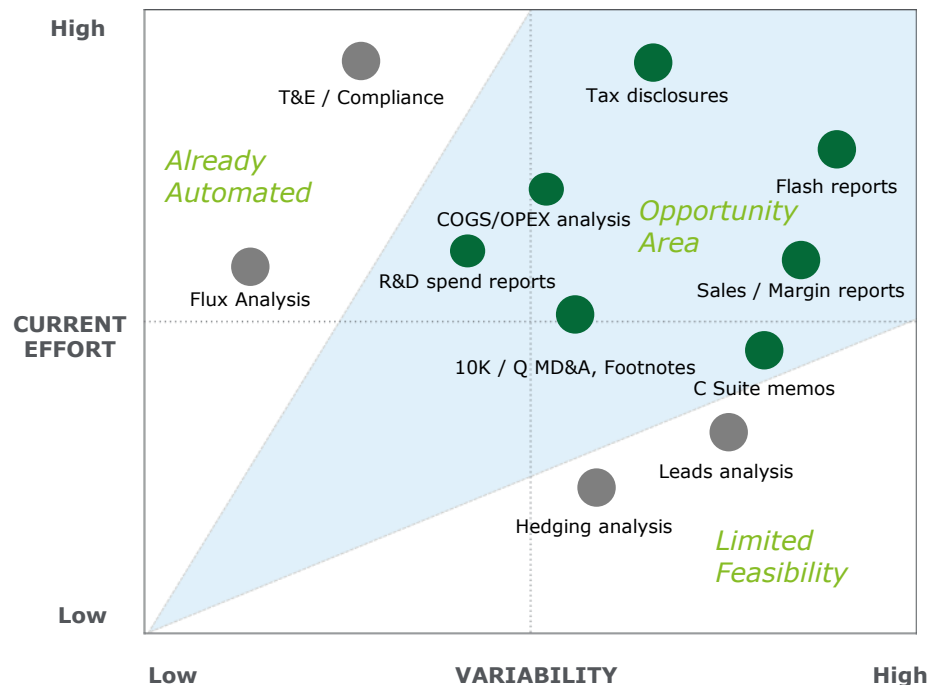


Real Estate: Creates compelling property descriptions, making listings more appealing to buyers and sellers



Media: Enables coverage across more sports, politics, business, finance, and crime stories thereby increasing reader base

Although a new concept within Finance, NLG can be used to generate efficiencies on tasks with medium effort/variability



Natural Language Generation has potential to:

- Reduce manual effort in time consuming, cyclical reports
- Perform data analyses including trends, changes, patterns, and outcomes
- Extract and incorporate insights from structured data

Note: Activities shown are meant to be indicative and are not exhaustive

HIGH EFFORT, LOW VARIABILITY

- Activities that require significant manual effort and are repeatable have already been automated
- Examples include T&E / compliance processes or basic variance analyses

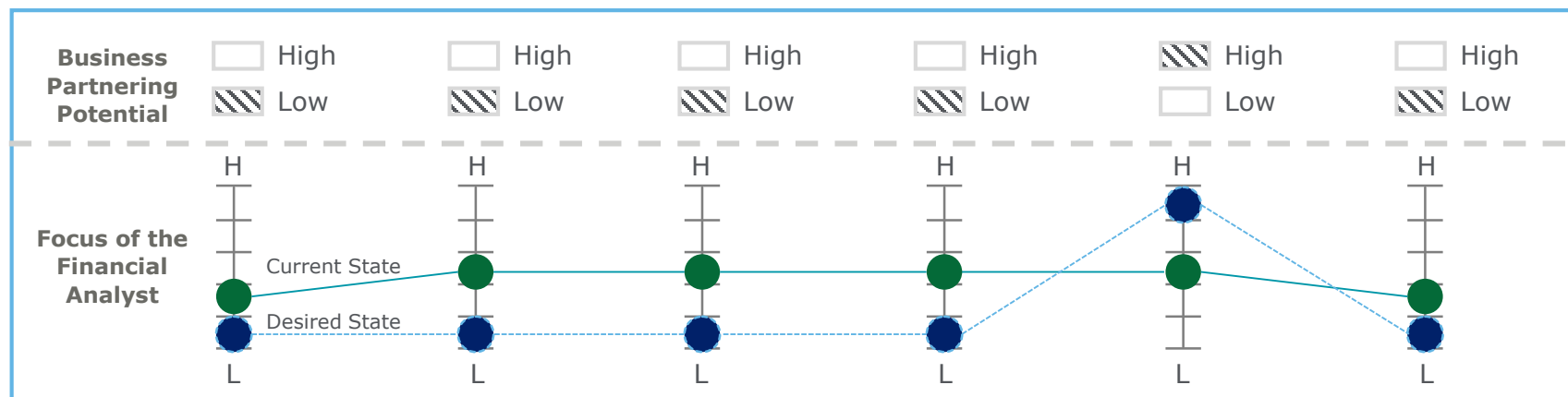
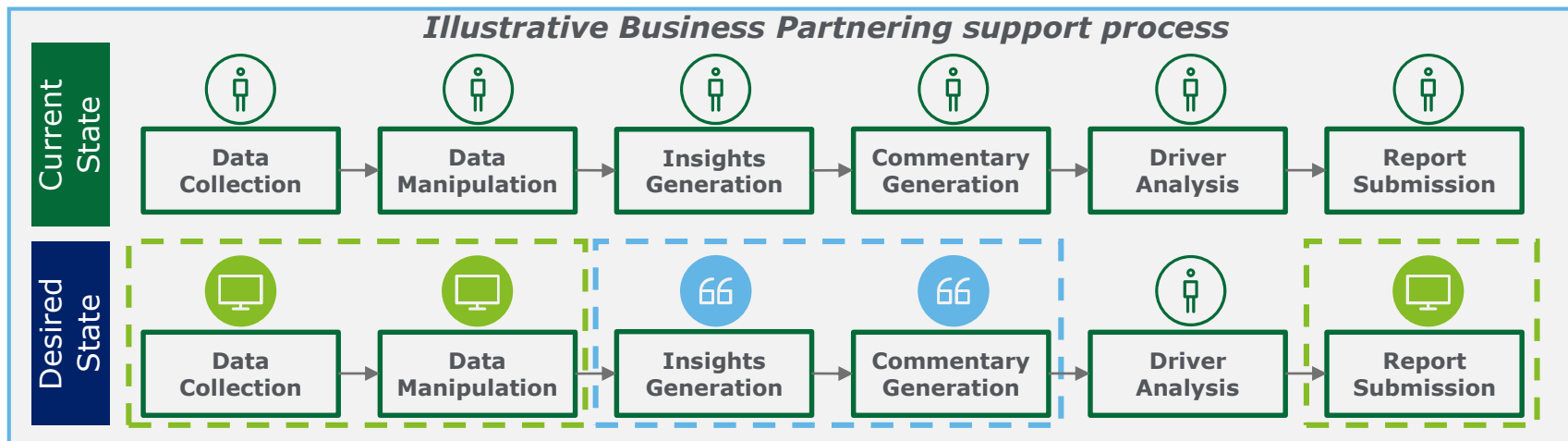
MED/HIGH EFFORT, MED/HIGH VARIABILITY

- Activities that require significant manual effort and have medium to high degree of variability present the most opportunity for NLG automation
- Examples of such activities includes Flash reports, Sales / margin reports, 10K / 10 Q MD&A, C suite memos, R&D spend reports, tax disclosures, etc.

LOW EFFORT, HIGH VARIABILITY

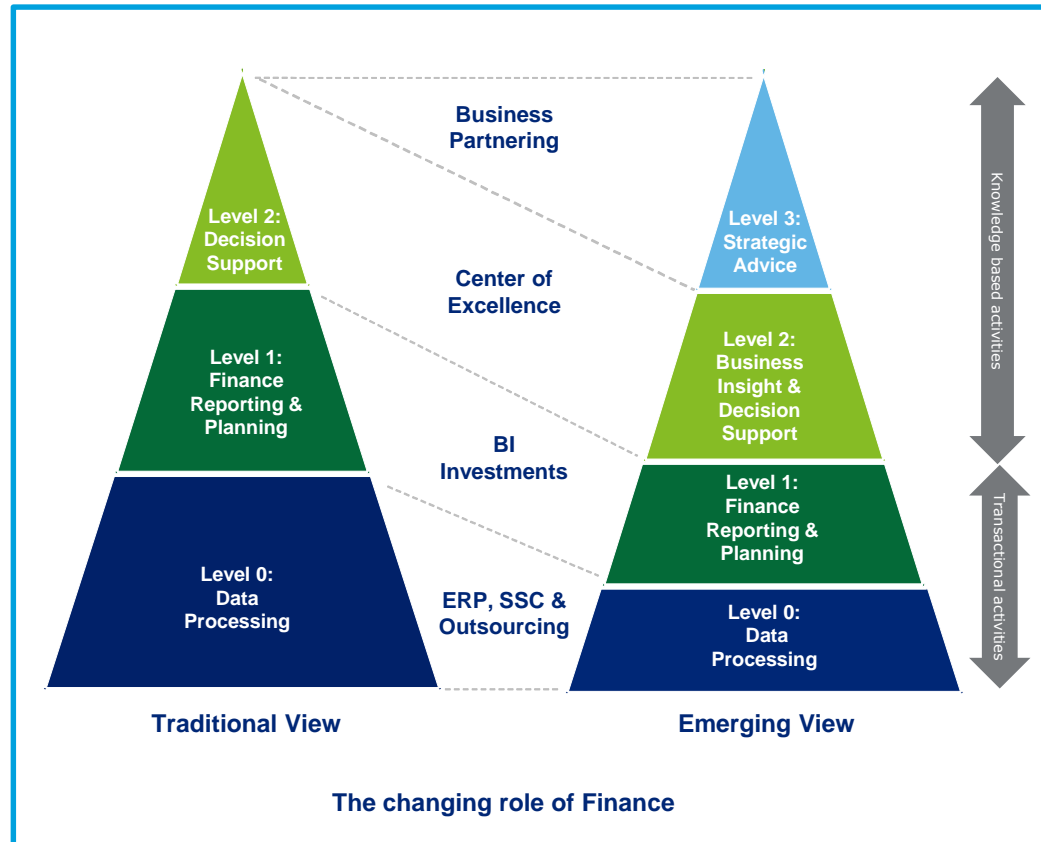
- Activities that require low effort and have high degree of variability provide limited feasibility and ROI for automation
- Examples include hedging analysis

Integrating NLG with Robotics can significantly automate Decision Support activities, enabling a greater focus on analysis



NLG and Robotics can help shift the focus of Finance organizations from the “what” to the “why” – resulting in greater strategic advice

To be effective Business Partners, Finance organizations need to shift their focus to more analysis and value-add activities



Natural Language Generation can enable this shift by automating the generation of commentary and reports, allowing for more time on analysis and insights


In Conclusion..

There's no single prescription for how a CFO should respond to changes being caused by all things digital, but that doesn't mean there's no agreement about the opportunities ahead.

1. CFOs should be deepening their understanding of digital technology and its potential applications
2. Take a close look at process automation as a way to serve the business more efficiently. Also, get your data act together. That's a prerequisite for being able to analyze and interpret information more quickly and accurately.
3. Reexamine your finance talent model to make sure you're prepared to meet growing expectations for business partnering.
4. Walk the walk. Show the rest of the company you're doing your part to reduce costs while freeing up time for more valuable work.

In Conclusion..

In the end, companies will need to chart their own courses. But no matter which future you envision, the leaders will likely be those who figure out how to make digital work for finance – and for the whole business too.



We look at digital transformation as an end-to-end process that affects all parts of the company, including finance.

Speaker



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Timothy is a Partner from Deloitte Consulting, leading the Finance Transformation practice in SEA. He has led in various finance transformation programs and initiatives for consumer business, life sciences and manufacturing clients, including finance strategy, organization review, business process and operating model improvements, M&As and end-to-end shared services implementation across the Asia Pacific region. Timothy also has had prior experience in financial systems implementation. Timothy is a Chartered Accountant (CA)



Nishant Gautam

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Nishant has close to 16 years of extensive experience in IT strategy and large scale IT / business transformation projects. He is aligned to **IT Strategy and Autonomics** capability.

Nishant has led advisory work for clients' transformation initiatives focusing on Autonomics, technology transformation, digital transformation, application portfolio rationalization, IT cost reduction, IT M&A DD, SDLC coaching, PPM, and IT operating model. He is also SME in lean SDLC, Agile and DevOps.



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