



# INTELLIGENCE- POWERED HUMAN SERVICES

**RAINER BINDER | PAOLO PELLEGRINI | GAURAV GUJRAL**

We live in times of unprecedented change. Digital technologies are transforming the way we interact, work, live, and consume services—both private and public. Some technologies also offer compelling solutions to some of the oldest, most intractable problems facing human services agencies.

This opportunity is now widely recognised, putting agencies under pressure to innovate and transform as quickly as possible. However, doing this involves rising to meet several challenges:



### **HIGH EXPECTATIONS**

Citizens expect the same level of digital services from government that they get from commercial businesses.

**More than three-quarters of public service executives see artificial intelligence (AI) emerging as the new user interface (UI)<sup>1</sup>.**



### **INFLEXIBLE SERVICE MODELS**

Current service models limit the opportunity to view customers holistically and improve personalisation.

**Eight in 10 public service executives say it's important to offer services through centralised platforms, assistants or messaging bots<sup>2</sup>.**



### **COMPLEX ECOSYSTEMS**

Complex ecosystems make it difficult for partners to source data and specialist services needed for effective citizen services.

**More than 9 in 10 public service executives say it is critical to adopt a platform-based business model to engage in ecosystems with digital partners<sup>3</sup>.**



### **BUDGETARY PRESSURES**

New service delivery models need to be lean and efficient enough to ensure adequate citizen support within tight funding allocations.

**For example between 2010 and 2017, local authority spending on social care per-adult in the UK fell by 13.5%.<sup>4</sup>.**



### **TECHNOLOGY ADAPTATION**

Harnessing emerging technologies requires new skills, training and organisational adaptation at speed and scale.

**More than three-quarters of public service leaders have piloted or deployed advanced analytics, and a third have piloted or deployed natural language processing<sup>5</sup>.**

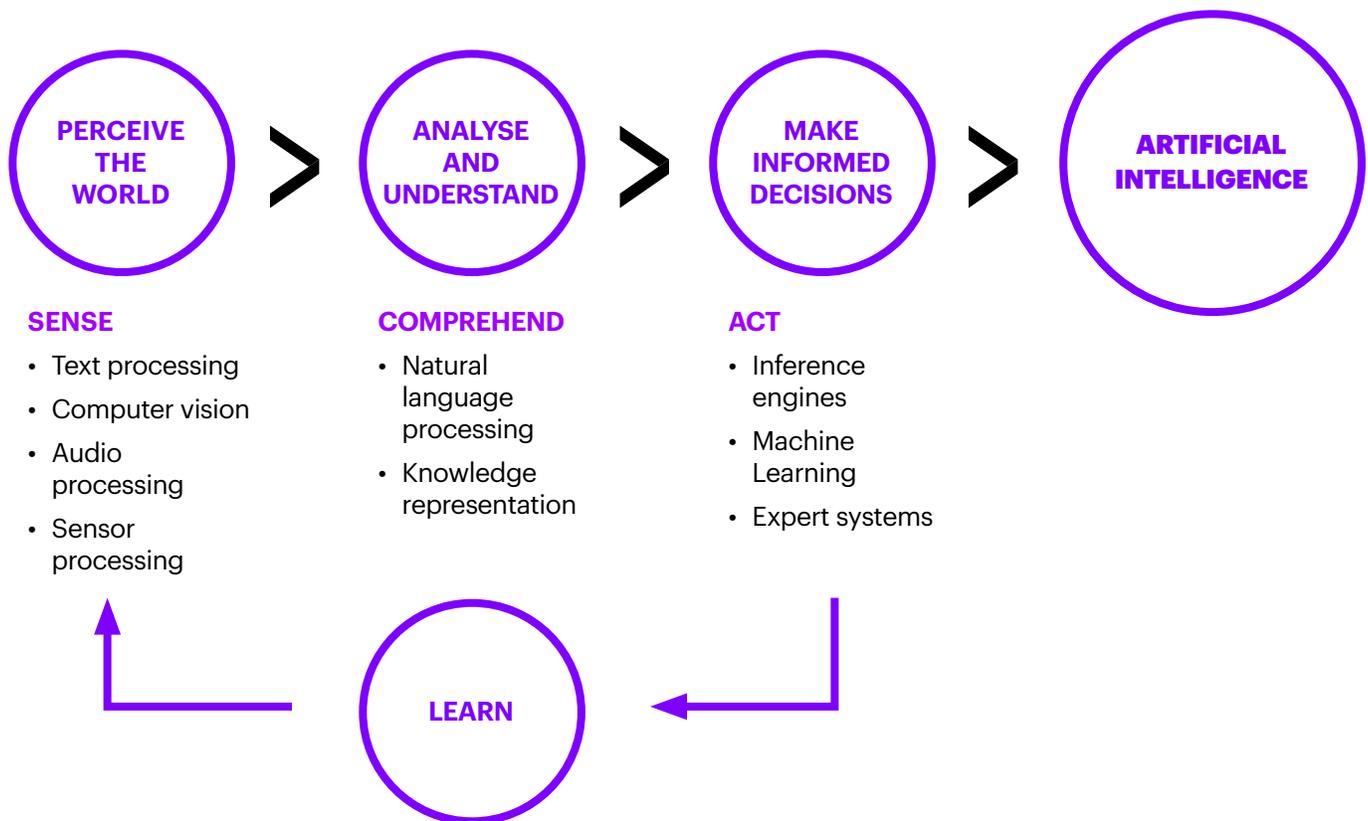
## To build for the future, agencies need to overcome these challenges and strive to:

**Enable** intelligent processes that will improve service delivery speed

**Provide** insight-driven services that optimise decision-making and accountability

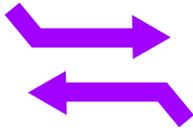
**Offer** proactive and personalised support at key moments in the lives of citizens

Emerging technologies, particularly Artificial Intelligence (AI), can help with each of these priorities. AI allows agencies to not only “do things differently” but also “do different things” and deliver new and improved services for citizens.



# ENABLING HUMAN-CENTRIC HUMAN SERVICES

AI can help human services agencies personalise service delivery and adopt a more human-centric approach to service delivery.



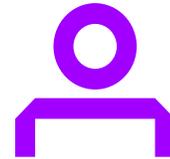
## AI CROSSES CHANNELS

A single view of the citizen across siloes to create a seamless customer experience on any device



## AI MAKES THINGS EASIER

Automation and self-service enablement help to empower citizens, simplifying decision-making across the customer lifecycle



## AI ENABLES A PERSONAL TOUCH

The combination of creative, emotionally intelligent humans and logically intelligent machines increases the scope for human touch to be provided where most needed

## WHAT IS THE VALUE OF AI FOR HUMAN SERVICES?

### CITIZEN EXPERIENCE BEYOND EXPECTATIONS

#### INTERACTION MODEL

Always-available virtual advisers will engage and support citizens, delivering an inspiring and personalised experience.

Receive career advice and benefits recommendation even before any change in circumstance has occurred.

Authenticate and enroll in benefits using voice or face biometrics without the need to provide any ID.

### BENEFITS FOR HUMAN SERVICES IN THE AI POWERED ECOSYSTEM

#### WORKFORCE

Case workers work alongside virtual advisers to automate standard case management and direct efforts on discovering and addressing high-risk cases.

AI will provide the opportunity to reskill the workforce, moving workers away from routine tasks to focus on higher-value, more rewarding activities.

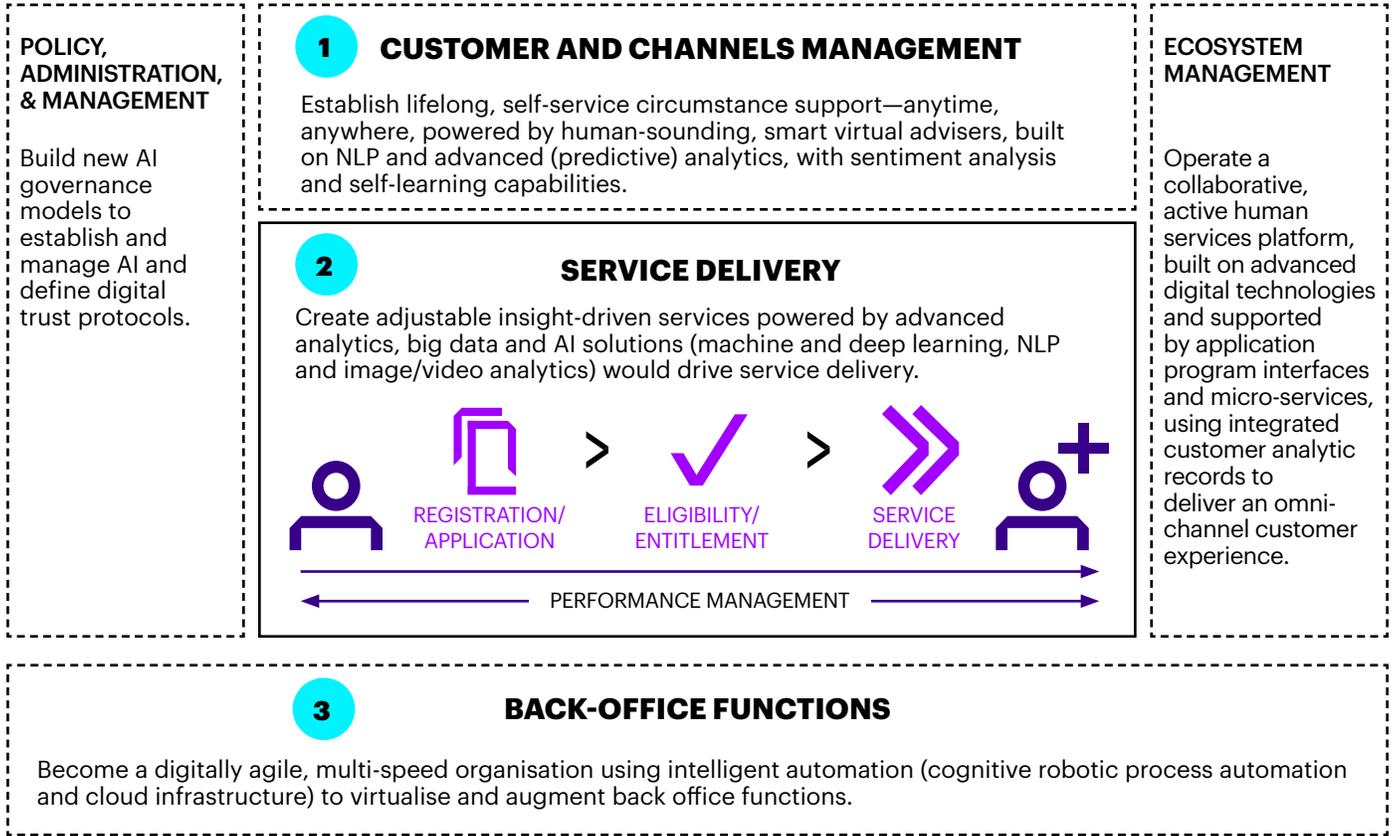
#### ECOSYSTEM

Agile and reactive policy definition powered by machine learning to identify the right benefit, measuring policy impact and learning from environmental and social media data.

Advanced natural language processing (NLP) will translate individual needs into a wider understanding of citizens' issues and the opportunities for personalisation.

# HOW CAN HUMAN SERVICES START MAKING THE MOST OF AI?

By becoming more data and insight-driven human services agencies can make the shift to a person-centric approach and design proactive and more effective interventions, that will lead to better outcomes. AI provides the ability to augment human capabilities, allowing organisations to better allocate resources to provide deeper levels of service that are more personalised.



# 1 CUSTOMER AND CHANNELS MANAGEMENT

Customer expectations are fluid and evolving fast, and agencies need to offer **proactive, automated, lifelong circumstance support that is personalised, transparent, comprehensive and engaging—anytime, anywhere.** Smart virtual advisers powered by **natural language processing, sentiment analysis and automation** (of the routine, back-end customer-service processes) will help to achieve this. Virtual advisers are also trainable—meaning agencies can further personalise and refine customer content and service delivery.

**Example: Digital assistants helping people navigate on line applications for eligibility.**

# 2

## SERVICE DELIVERY

Agencies can extend their insight-driven services by using internal and external data assets and additional decision-support capabilities to improve core processes. **Using the power of machine and deep learning, agencies can add significantly to the judgment-based problem-solving capabilities of their workers.** As AI artifacts gain more experience, they get better and smarter over time, thanks to their self-learning and prediction capabilities. Agencies can then apply these trained-up systems to any set of structured and unstructured data.

**Example: A predictive service-delivery model that leverages machine learning to estimate fraud risk**

# 3

## BACK-OFFICE FUNCTIONS

The need for intelligent information-processing has led agencies to look at employing **automation technologies such as Robotic Process Automation (RPA) to automate some back-office functions and deliver insight-driven services.** This supports fewer errors and better rule-based decisions than manual work. This is a significant departure from the current state of affairs and means there would be more possibilities to optimise resources and work flows, to meet increasing demands, and improve service delivery.

**Example: RPA solution automating key elements of back-office process related to customer claims processing**

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## WHERE DO HUMAN SERVICES AGENCIES START WITH AI?

Despite the case for change, many agencies remain daunted by the transformational complexities of fully embracing AI. However, with the right foundation in place, many AI applications can be implemented incrementally and there are ideal opportunities to start small and scale-up over time. The following areas are important to build up as AI is progressively scaled and spread across the enterprise:



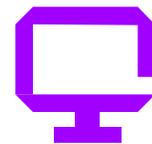
### HAVE THE RIGHT DATA

- Design a big data strategy and supporting architecture
- Engineer a flexible data model and virtualise content
- Integrate with the larger citizen data ecosystem



### INVEST IN CAPABILITIES

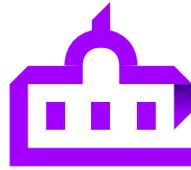
- Map the service delivery value chain with relevant AI usage scenarios
- Build AI capabilities as a platform
- Train and improve the AI platform's self-learning abilities



### SKILLS AND CULTURE

- Define an AI governance model
- Build a multidisciplinary workforce with skills in business, analytics and AI
- Aim for fine-tuned AI capabilities within an agile, insight-driven digital organisation

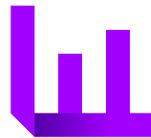
## AGENCIES AROUND THE WORLD ARE ALREADY REALISING THE BENEFITS



### **A LARGE GOVERNMENT AGENCY IN EUROPE**

Digital assistant in citizen interactions

Improved service speed by 30%, enhanced search capabilities on the website, and enabled automated handling of suitable email, webchat and over-the-phone customer interactions.



### **A LARGE PENSIONS AGENCY IN EUROPE**

Intelligent processing

Reduced user set-up times in CRM by 100%, and changes to user set-up by 200%, by introducing a robotics solution to automate user profile management and related work allocation.



### **A HUMAN SERVICES AGENCY IN NORTH AMERICA**

Machine learning and natural language processing

Poised for annual savings of >300,000 employee hours in the processing of public comments on regulations.



### **A LAND REGISTRY AGENCY IN EUROPE**

Deep learning and computer vision, powered by the cloud

Automatically compared property records and aerial images to detect discrepancies and non-compliance, with ~80% accuracy, thereby optimising the management of updates to cadastral maps and improving quality.

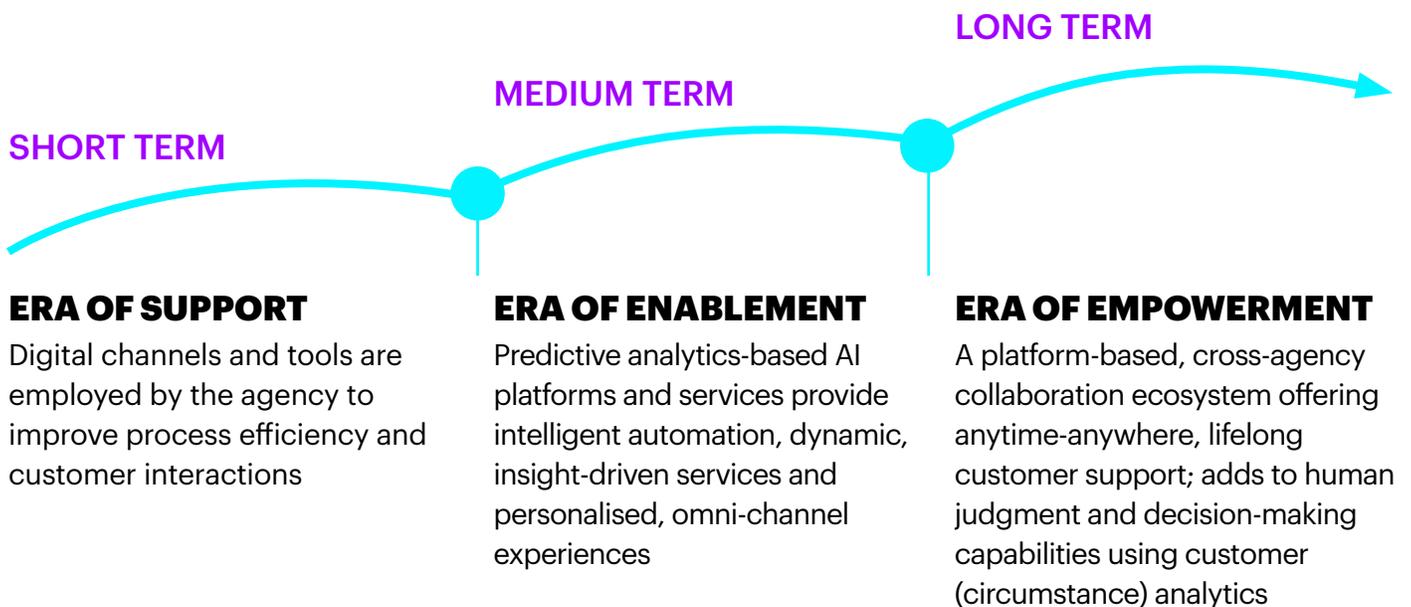
## WHERE IS THE FUTURE TAKING US?

Government agencies in most countries are straining under continuing financial pressures, changes in the workforce and the reliance on many analog systems and processes. Many have already embraced transformation and understand the central role of AI in creating effective, empowering, human-centered services. The way forward is an **evolution through three eras** as AI and other emerging technologies become fully established:

**1. ERA OF SUPPORT** Services are mostly reactive to citizen needs, with segmented services and targeted interventions that use basic analytics

**2. ERA OF ENABLEMENT** Services are mostly proactive, enabling citizens to manage their services and offering the best advice on how citizens can be more financially secure

**3. ERA OF EMPOWERMENT** Services empower citizens to identify their life goals and unleash the power of “government as a platform,” with agencies acting as orchestrator, capturing and addressing opportunity gaps in services



The journey through these eras is heralding a new brand of citizen/government relationship, with agencies as **transformational pioneers**.

AI opens a whole new set of possibilities and opportunities for the delivery of human services. With AI, agencies can co-create with ecosystem partners to explore larger and more valuable applications, draw on wider data-sets and increase inter-agency collaboration and uncover new insights. With increased collaboration and deeper insight service delivery can be improved and greater outcomes for people realised.

The evolution towards the era of empowerment will take longer for some agencies than others, but the trajectory is clear. AI will become stronger and more ubiquitous each year over the next few decades, and as it does, human services agencies will become more efficient, more innovative and more effective in shaping a better society for all.

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## NOTES

<sup>1</sup> Accenture Citizen Pulse Survey

<sup>2</sup> Accenture Citizen Pulse Survey

<sup>3</sup> Accenture Citizen Pulse Survey

<sup>4</sup> Institute for Fiscal Studies, Public spending on adult social care in England, 2017

<sup>5</sup> Accenture Citizen Pulse Survey