A Utilities' identity Management Journey to the Cloud and Digital Transformation
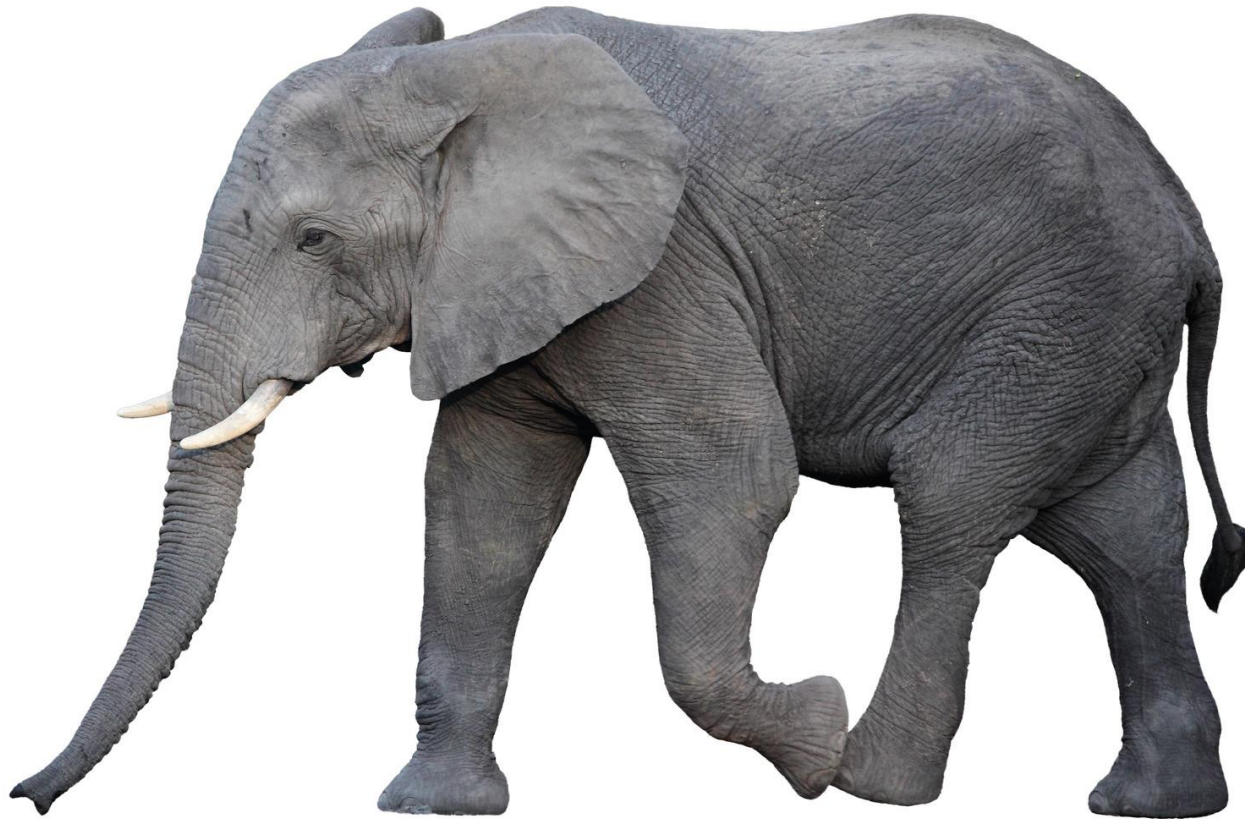
# This one is about an elephant!

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How do you eat an elephant?

One bite at a time!

Background – Southern Water

- Supplies water and wastewater treatment services across a 10,530 sq. Km area of the UK.

- 6+ thousand employees and contractors

- 4.5+ million household customers and also has a large base of commercial customers

- Part of UK's critical 'National Infrastructure', hence regulated

- Investing £3 billion pounds in infrastructure and service improvement between 2015 and 2020
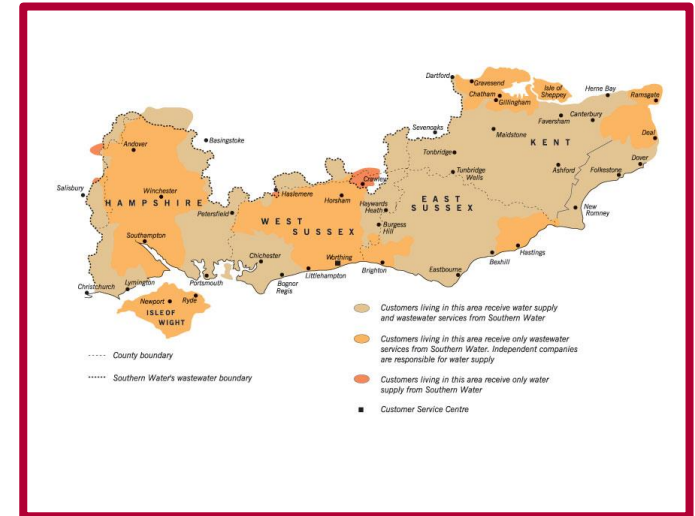
What the business wants to do?

Transform IT to use new technology innovation like cloud and mobility

Provide field employees with easy access to operational systems and data

Improve customer experience by providing simple e-Services

Support government's new open water initiative to increase competition in retail business

Improvement visibility and security

What capabilities do they need for that?

Single Identity Store

Single sign on

Employee service

Customer self service

Federation

Audit and Analytics

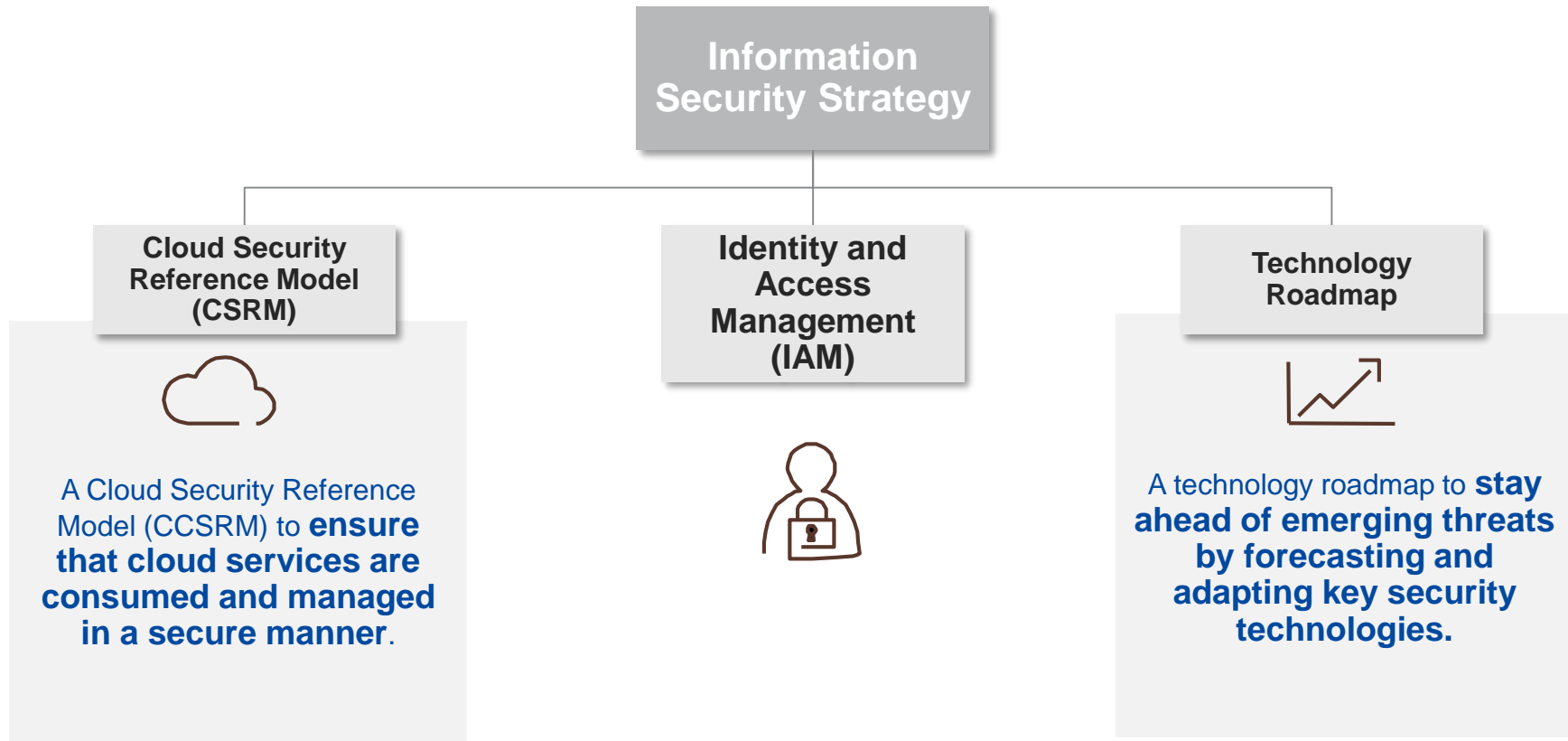### What constraints them from executing?

Fragmented requirements

Fragmented funding of IT change programmes

No centralisation of Identity Governance and Architecture
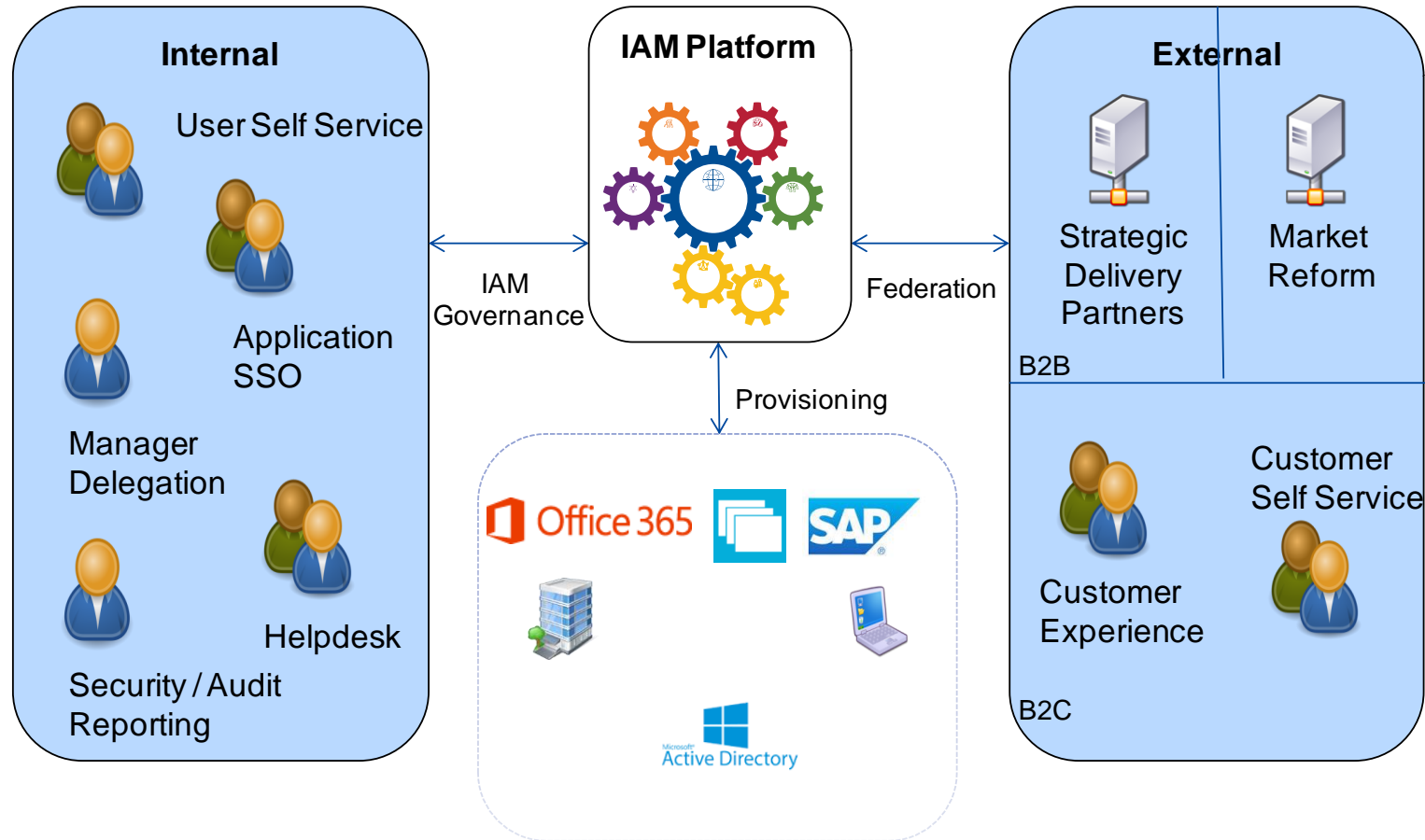
Business engagement and understanding of benefits

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What did we do?

Used the IT strategy refresh as a catalyst for change

Information Security Strategy

Cloud Security Reference Model (CSRM)

A Cloud Security Reference Model (CCSRM) to **ensure that cloud services are consumed and managed in a secure manner**.

Identity and Access Management (IAM)

Technology Roadmap

A technology roadmap to **stay ahead of emerging threats by forecasting and adapting key security technologies.**
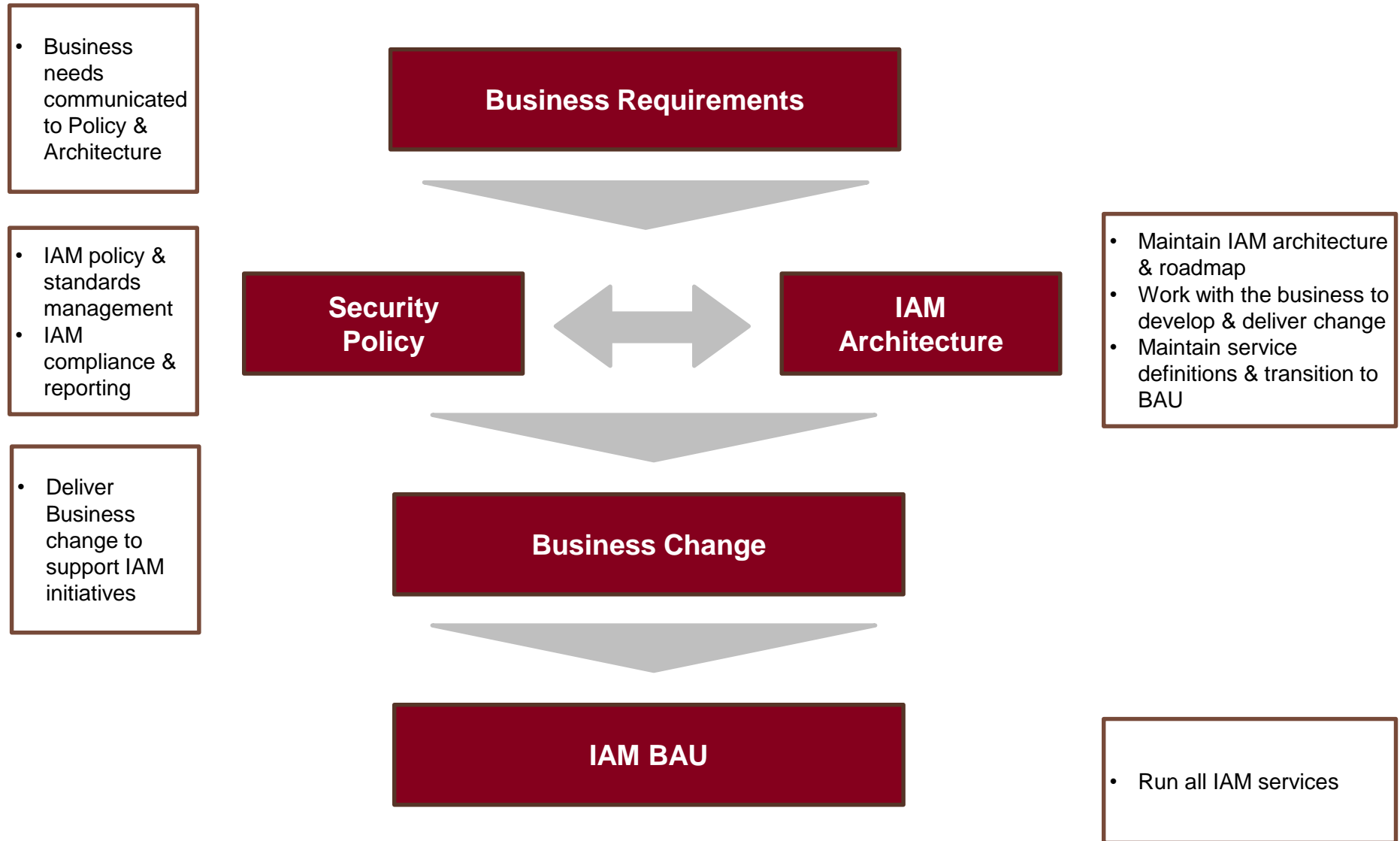
The **Identity Hub project** will deliver an Identity and Access Management (IAM) platform **to consolidate identities, simplify logins and increase security**.

IAM Future State Vision

Internal
- User Self Service
- Application SSO
- Manager Delegation
- Helpdesk
- Security / Audit Reporting

IAM Platform

IAM Governance

Federation

Provisioning

Office 365 | SAP | Microsoft Active Directory

External

Strategic Delivery Partners

Market Reform

B2B

Customer Experience

Customer Self Service

B2C

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Designed an Identity Governance Operating Model

- Business needs communicated to Policy & Architecture

Business Requirements

- IAM policy & standards management
- IAM compliance & reporting

Security Policy ⟷ **IAM Architecture**

- Maintain IAM architecture & roadmap
- Work with the business to develop & deliver change
- Maintain service definitions & transition to BAU

- Deliver Business change to support IAM initiatives

Business Change

IAM BAU

- Run all IAM services

We backed the vision with a clear roadmap for delivering prioritised business benefit

	2015/16	2016/17	2017/18	2018/19

Customer & Partner Experience

Simplified login & self service

Seamless & secure access for business partners

Customer login using social media

Access anywhere from any device

Improved security awareness

Secure & reliable connectivity

Personalised Services

Crisis ready

Assurance on OT assets

Monitored Security through selected security metrics

Unified Security Governance across directorates

Business User Experience

Simplified login & self service

Access anywhere from any device

Quick turnaround on user requests (i.e. new access request)

Informed stakeholders through a cyber dashboard

Improved user compliance

Engaged senior stakeholders through board level security briefing

Demonstrable security compliance (e.g. IAM compliance)

Cloud ready policy framework (CSRM)

**Security silos
Poor experience
Cloud complexity**

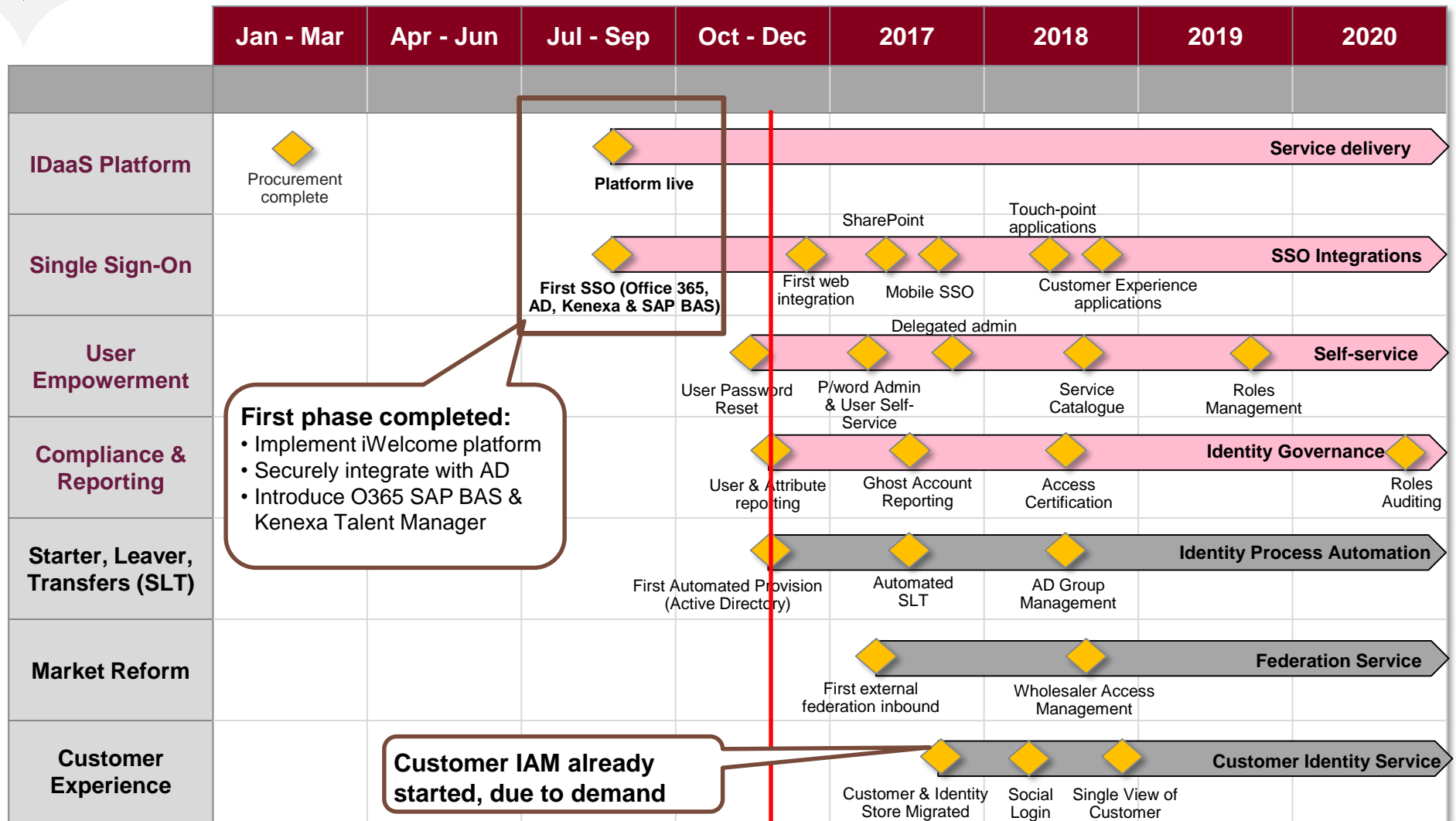| Business User Experience	Management Information & Insight	Compliance & Control

Legend: = Security Capability

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Chose an IDaaS platform that can deliver the full vision and business can pay for over time

Created a near term programme plan to kick off the journey starting with SSO

	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec	2017	2018	2019	2020

IDaaS Platform
- Procurement complete
- Platform live
- Service delivery

Single Sign-On
- First SSO (Office 365, AD, Kenexa & SAP BAS)
- First web integration
- SharePoint
- Mobile SSO
- Touch-point applications
- Customer Experience applications
- SSO Integrations

User Empowerment
- User Password Reset
- P/word Admin & User Self-Service
- Delegated admin
- Service Catalogue
- Roles Management
- Self-service

Compliance & Reporting
- User & Attribute reporting
- Ghost Account Reporting
- Access Certification
- Roles Auditing
- Identity Governance

Starter, Leaver, Transfers (SLT)
- First Automated Provision (Active Directory)
- Automated SLT
- AD Group Management
- Identity Process Automation

Market Reform
- First external federation inbound
- Wholesaler Access Management
- Federation Service

Customer Experience
- Customer & Identity Store Migrated
- Social Login
- Single View of Customer
- Customer Identity Service

First phase completed:
- Implement iWelcome platform
- Securely integrate with AD
- Introduce O365 SAP BAS & Kenexa Talent Manager

Customer IAM already started, due to demand

Where we are | Milestone | BAU activity | Project activity

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At the heart of the IAM vision is a "good looking" platform with strong appeal to the end user

Transition to CIAM

Southern Water

Water and wastewater services for Kent, Sussex, Hampshire and the Isle of Wight

🏠 | **At home** | **For business** | **Property & developers** | Search site... 🔍 | ?

Your bill & account | **Your water** | **Your wastewater** | **Your area**

At home

Water-saving home visit ❯

We are offering water-saving home visits in selected areas. Find out if you qualify

Wrap your home up this winter

It's easy to set up a Direct Debit

📍 Your area

Find out if Southern Water supplies your home, check your water quality or explore what's happening in your area.

Enter postcode here... 🔍

What would you like to do?

Pay your bill

Understand your bill

Tell us you're moving

❓ Need help?

Type your question here... 🔍

Customers often ask...

I have a water meter but my bill is

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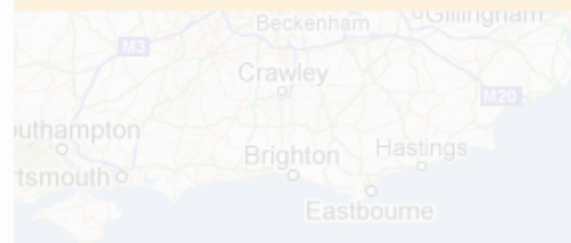
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📍 Your area

Find out if Southern Water supplies your
home, check your water quality or explore
what's happening in your area.

Enter postcode here... 🔍

Beckenham · Gillingham
Crawley
outhampton · Brighton · Hastings
tsmouth · Eastbourne

What would you like to do?

📇 Pay your bill | ⓘ Understand your bill | ✏️ Tell us you're moving

## ❓ Need help?

Type your question here... 🔍

Customers often ask...

I have a water meter but my bill is

Digital transformation – "Sell less water, more efficiently"

- Implemented new CRM system

- Moving from voice to online services

- Goal: Reduce service calls & increase satisfaction
  - Today 600.000 calls per year
  - Reduce 200.000 calls (30%) in 18 months
  - Increase Customer satisfaction from 3.x to 4.8

- Implementing smart meters

- More advanced services via apps in 2017-2018

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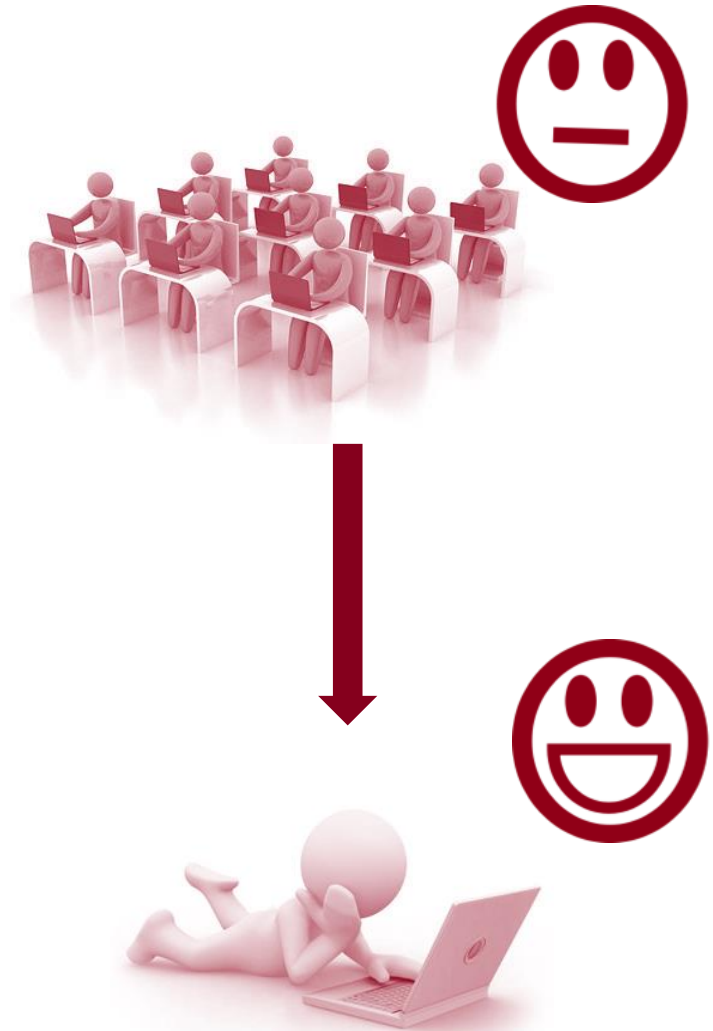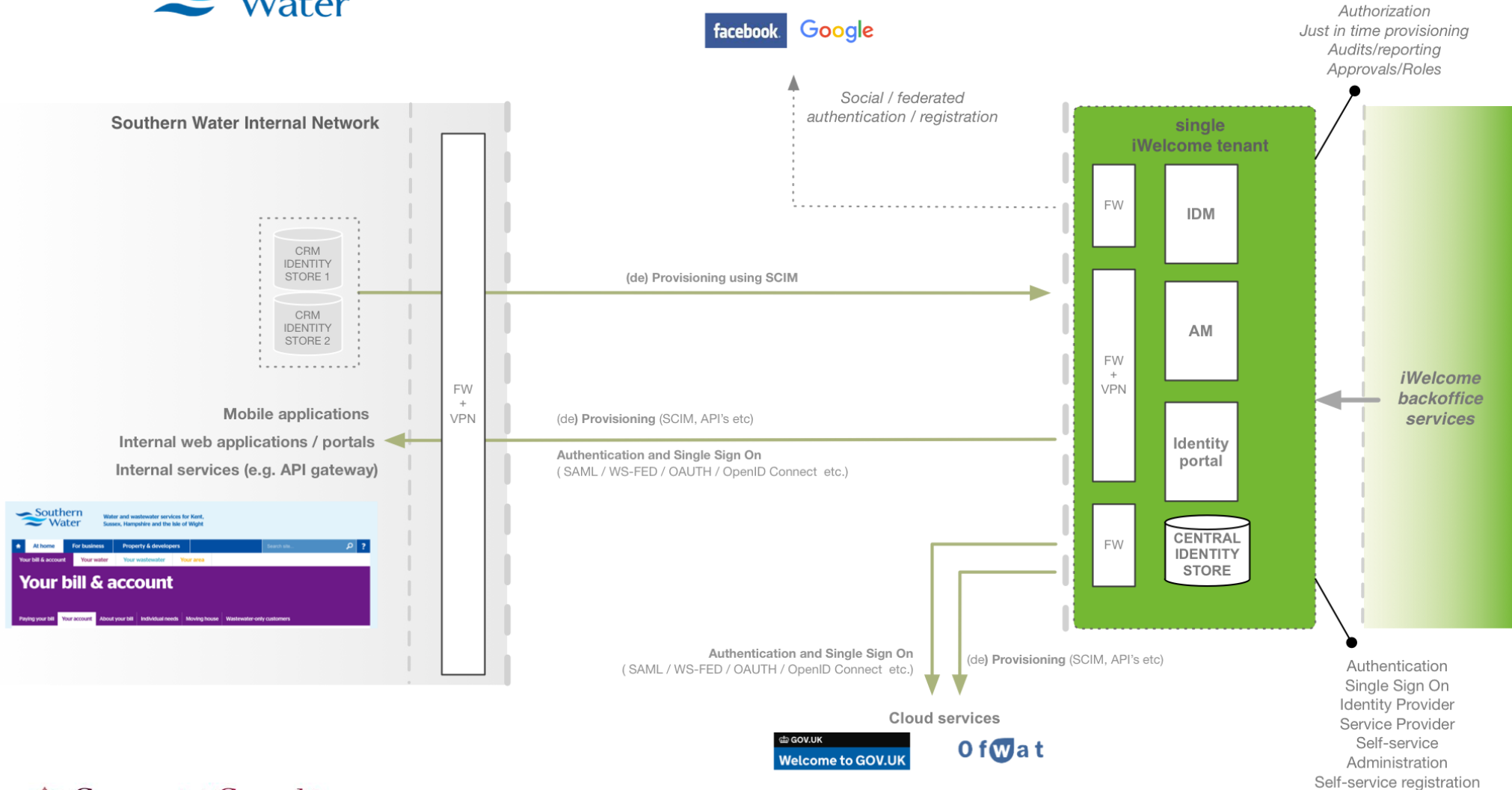
Lessons learned so far

- Consumer IAM starts in the business and is focused on digitally enabling customer services e.g. "Your water", "Your bill", "moving"

- Usually run teams outside for "traditional IT" such as marketing or eCommerce, mainly focused at Portals and CRM

- Hence less aware and focussed on security and privacy requirements for e.g. GDPR

- Limited contact between department delivering consumer IT and enterprise IT and likely to start with own 'temporary' solutions' meeting tactical needs for a user directory

- Overall common IAM architecture & roadmap between Enterprise and Consumer needs are crucial to avoid a new island;

- Digital transformation department are yet to fully grasp the value and impact of investment in IAM for consumers

  - Access via apps and portals
  - Integration standards and API's
  - User self service
  - Consent management

  - Social registration and logon
  - Risk based and Step-up authentication
  - Service desk support
  - Profiling

  - 99,9+ % availability
  - 24x7 monitoring
  - Security standards
  - HA, DR and DDoS

- Only once they grasp the value their Consumer IAM will truly begin BUT they already have the platform in place

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CIAM centralises privacy management - compliance with the GDPR is required

GDPR Implications

Implementation Directions

GDPR Implications		Implementation Directions
GDPR requires state-of-the-art implements of appropriate technical & organizational measures, to ensure a high level of protection of the individual's personal data.	**Data security**	Integration of ISO 27018 - *Code of practice for protection of personally identifiable information (PII) in public clouds - in ISO27001*, as well as database field encryption for all privacy related attributes.
GDPR increases the requirements on individual consent giving, in particular for minors conditions on consent giving are strengthened.	**Choice/ Permissions**	Extensive consent flows during attribute aggregation and 'follow me', connected with age restriction. Family management to address consent for GDPR consent age restriction.
GDPR pays particular attention to data analytics, profiling, free services, and digital offerings to minors.	**Options/ Preferences**	Preference management API/UI to register (including consent) specific data driven actions like profiling, news letters, content pref., follow me.
GDPR requires accuracy of personal data processed and users to have control over their data, incl. the ability to change, transfer their data.	**Data Quality**	Full transparency of data collected and processed via MyPage and configurable r/w/rw on all attributes. Data export option available on MyPage for user as well as "right to be forgotten".
GDPR requires to maintain records of processing activities under your responsibility, in order to demonstrate compliance with the regulation.	**Privacy Registry**	Complete logging of all changes, centrally. Export (archiving) and streaming options available of these logs (secure syslog). Data-retention is configurable to also comply to other regulations.
GDPR increases the requirements for transparency about the processing activities, in particular at the point of data collection.	**Transparency & Openness**	MyPage of a user offers a detailed graphical *time-line*, that can be configured to show all processing, consent, change events etc.
Privacy goes beyond the GDPR requirements, it's must be considered as corporate responsibility. Companies must be aware of the public sentiment.	**Stakeholder Dialogue**	Constant dialogue with your customer & stakeholders about their expectations towards collecting, processing and use of personal data. Regular Data Protection Officer peer meetings.

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