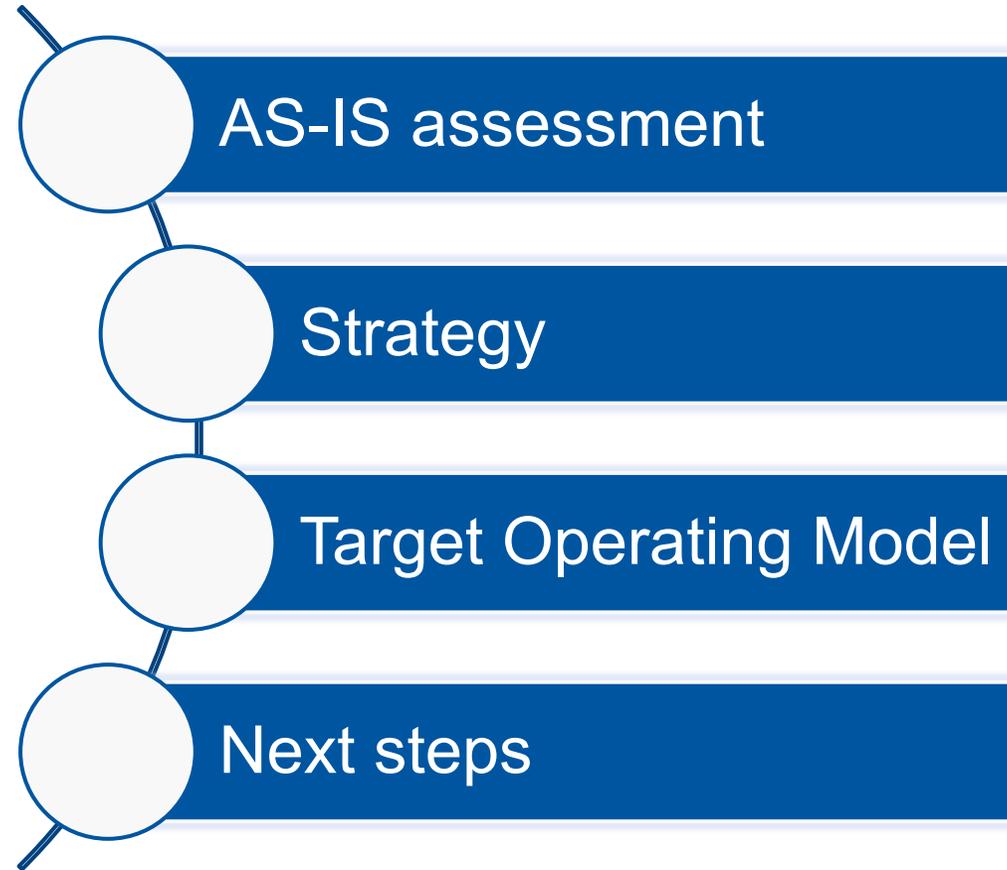


CERN IT Department All-Staff Meeting
IT Target Operating Model

21 March 2022



Successes within existing IT Operating Model

SUCCESSSES WITHIN THE EXISTING IT OPERATING MODEL

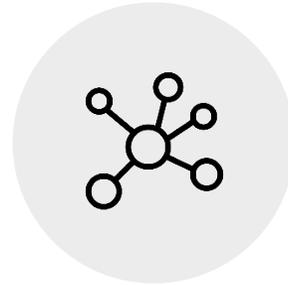
Effective and reliable operations



On the whole, IT runs a **robust infrastructure** with services that support the Organisation. There have **been no significant data losses or outages** and the **technology** used is widely adopted and **respected**

'Standard services IT provide are really excellent. There are no complaints at all'

Delivery of a comprehensive WLCG infrastructure



Whilst there are opportunities for improvement, CERN and IT have **established a strong relationship** with partners through the **provision of an effective WLCG infrastructure**

'Things have been quite stable for the past 10 years and WLCG operations run smoothly'

Pockets of examples of great collaboration



Where **effective collaboration has taken place** between the business and IT, there have been **success stories** of great collaboration. An example of this is the database services for ATS which were designed with end users and leverages existing IT platforms

'The Liaison Representative is really effective at understanding the needs of experiment'

Drive and commitment to contribute to CERN's success



A common theme throughout interviews was the **pride individuals had in working for CERN**, with a genuine **drive and commitment to support** the institution to achieve its mission

'IT at CERN has some of the best people, so it is one of the best existing IT departments'

Business stakeholder interview findings



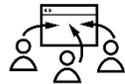
Ensure greater business collaboration

Today: There is limited coordination and collaboration between IT and end users, and the business does not consistently feel that IT understand and recognise their priorities



Improve communication

Today: There is a lack of clarity between IT and the business on who to engage, and a perception that communication is one-way and often not timely. Official communication channels are also perceived as inefficient and circumvented



Structure services to user needs

Today: The approach to developing new services does not consistently recognise the needs of users, with services not effectively monitored and evaluated, leading to a proliferation and duplication of services and solutions across CERN



Align R&D to innovation continuum

Today: R&D is fragmented, and it is unclear what role IT plays when it comes to innovation in computing. This results in a duplication of solutions / effort and a lack of alignment between the business and IT



Establish holistic solution design approach

Today: IT needs to be able to build services when the business has unique requirements, however, off-the-shelf solutions and total cost of ownership are not consistently considered when making build vs. buy decisions



Recognise operational risks

Today: IT disaster recovery and business continuity procedures are not adequate. Although failures are limited, the risk is significant to ongoing operations

INTERVIEW QUOTES FROM AS-IS ASSESSMENT

'It's clear for everyone that we need to work better across the institution'

'I don't really know what IT are meant to provide'

'We don't have a proper disaster recovery and business continuity plan'

IT group stakeholder interview findings (1/2)



Align to business needs

Today: There are pockets of examples of successful collaboration across IT and the business, however service managers are often distant from users' needs



Align innovation to overall business objectives

Today: There is great enthusiasm for innovation across IT, however this is conducted with minimal governance, sponsorship or alignment to the CERN strategy and objectives



Improve communication

Today: There is frustration over the alignment between the business and IT over how communication channels are structured, with limited business engagement with IT tools



Improve change and release management approach

Today: Although change management exists, it is not sufficient for the organisation's needs as timelines are often short, with late identification of down-stream impacts



Establish security protocols

Today: There is a security risk as, although security policies are in place, the implementation and enforcement of these are delegated to Service Managers, posing a risk for the business

INTERVIEW QUOTES
FROM AS-IS
ASSESSMENT

'Some teams are too disconnected from users to know what they want'

'Our change management board is very short term, it doesn't manage change properly'

'Security don't work with us to implement the right security measures for our services'

IT group stakeholder interview findings (2/2)



Direct resources effectively

Today: Teams are enthusiastic about progressing CERN's mission and are skilled at developing new services but there is a proliferation of solutions and a lack of alignment to CERN's overall mission and objectives as there are no clearly defined structures for monitoring where effort is focused to optimise resources



Define governance structures

Today: There are limited governance structures, resulting in difficulty making decisions on priorities and focusing effort, with a lack of governance KPIs



Address ways of working

Today: A large proportion of the department are used to established ways of working, resulting in a reluctance to implement new approaches that may be seen as stifling innovation



Establish a clear architecture

Today: There is no clearly defined architecture, with additional solutions and services built without considering the wider architecture and ongoing support requirements



Streamline solution development

Today: There is a proliferation of services developed to meet competing business needs, as well as a build-first culture, resulting in duplication and a lack of standardisation of the services developed



Increase diversity and attract top talent

Today: There is limited diversity in the workforce, with a focus on recruiting from selected universities. There is also a risk of not attracting top talent, due to the appeal of competitors and ineffective performance and management training

INTERVIEW QUOTES FROM AS-IS ASSESSMENT

'We're an over agile organisation, we just build when we want to'

'We have nearly 10 applications that do the same thing'

'We don't know what is going on within other groups in the department'

IT satisfaction reference group priority actions

RECOMMENDATIONS

Review the brainstorming, decision-making and communication forums



Propose a framework/structure, with different highly interconnected bodies focussed on specific audiences and goals: from a suggested idea to a full-blown production service, and including all the steps in-between

Strengthen the cross-group communication



Enhance a culture based on data and evidence, sense of belonging, empowering and common purpose, where discretionary power is an exception

Introduce a project catalogue / marketplace / incubator



Establish a process for ideas to become projects. Maintain a curated list of running projects

Break the silos



Encourage and support cross-group activities, nurture the diverse inclusive collaborative spirit, at all levels

Increase opportunities to hold department key roles



More transparency and openness to selection for such roles, equitable chances to contribute and develop careers

QUOTE FROM IT
REFERENCE GROUP

'We strongly believe that such an activity (exploring solutions to improve our department) should become a recurrent, if not continuous, process, based on previous iterations and surveys, feedback and results'

Strategic directions



PEOPLE FIRST



ENHANCING STRATEGIC
ENGAGEMENT
AND ALIGNMENT WITH
USERS



HOLISTIC SOLUTION
DESIGN APPROACH



DEFINING IT'S ROLE
IN INNOVATION



FOCUSSING
RESOURCES
EFFECTIVELY



PROVIDING A
SECURE
FRAMEWORK

Logical organisational model

ENGAGEMENT:

User groups will have a dedicated Business Manager responsible for understanding user needs and establishing two-way communication channels

SECURITY:

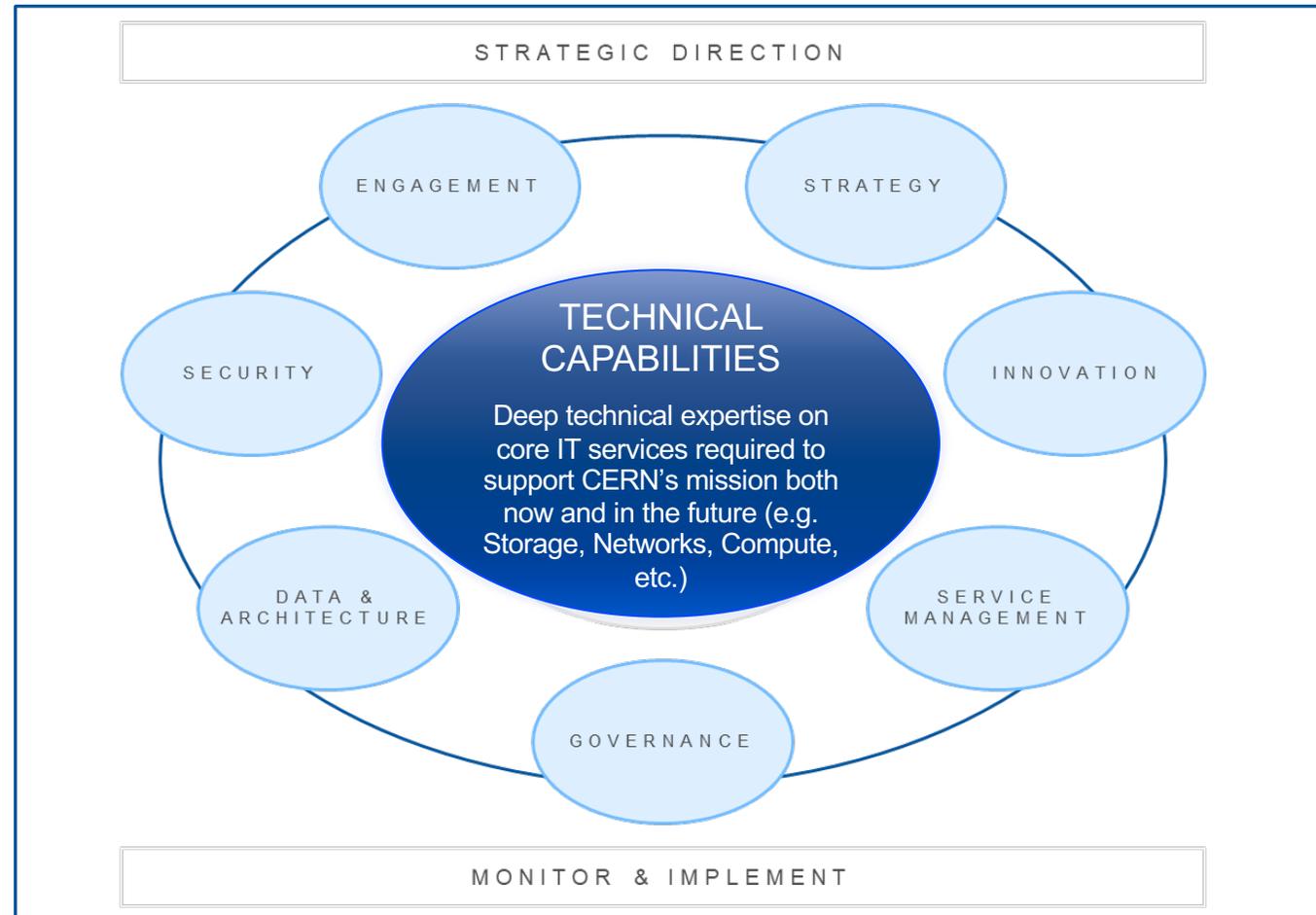
The Security team will be reviewed to ensure a more mature security capability, to better safeguard the environment and reduce operational risks

DATA & ARCHITECTURE:

A Data & Architecture team will be formed to establish a clear framework for CERN and reduce operational risks

GOVERNANCE:

Governance will be put in place for oversight over service delivery and new initiatives, to increase efficiency and strategic alignment



STRATEGY:

The IT strategy will be used to promote inter-departmental collaboration and alignment, delivering the right experience for internal and external stakeholders

INNOVATION:

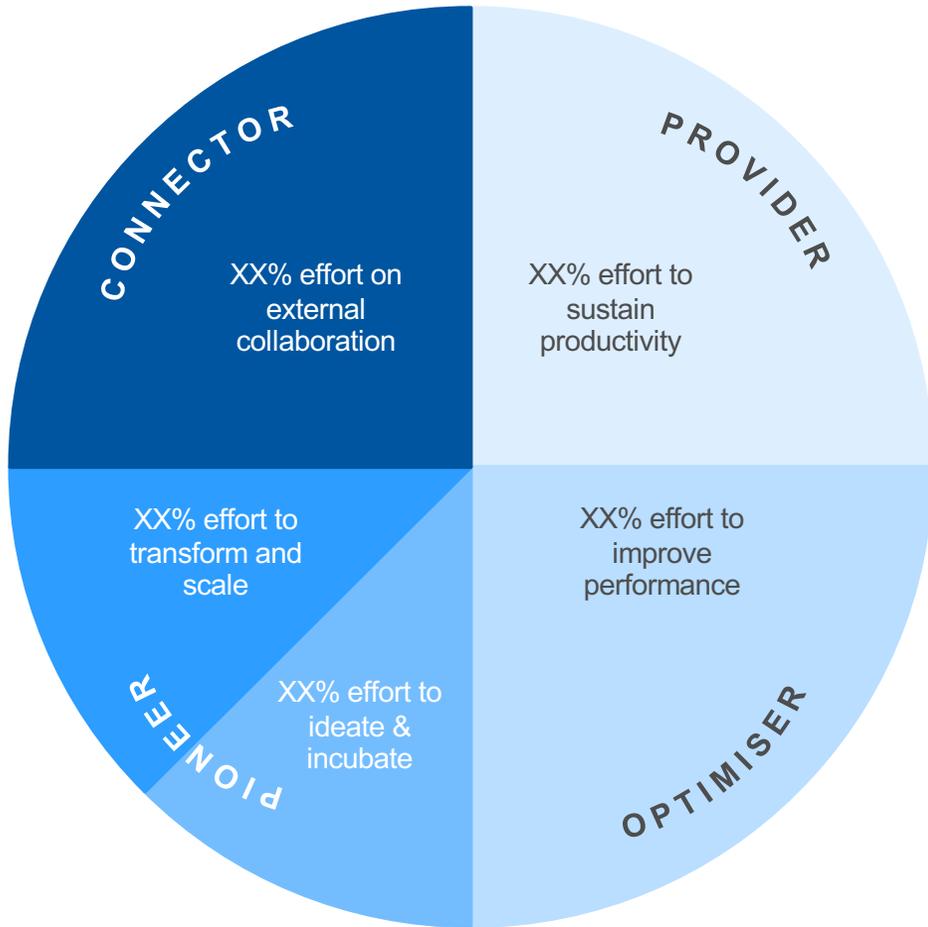
IT's role within innovation and new initiatives will be clearly defined and understood, to deliver the greatest value to users through increased engagement and TCO consideration

SERVICE MANAGEMENT:

Services will continue to be delivered to a high standard, through maintenance of a robust service stack that is measured against alignment with user needs and adherence to SLAs

Focus Area Key: ■ Transformation ■ Evolution

IT roles framework



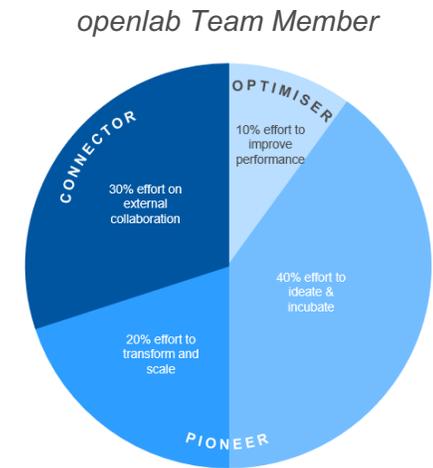
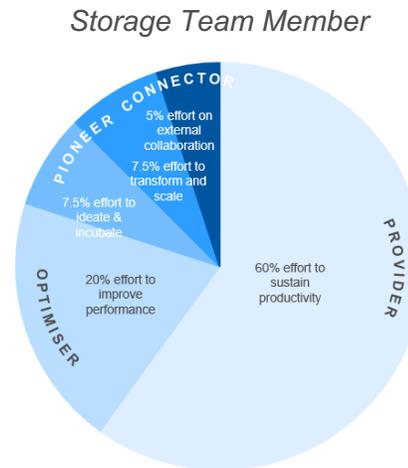
WHAT IS IT?

- The framework shows the roles that are **involved in delivering IT services**
- It highlights the role that IT plays as an honest broker by **connecting all areas of focus with internal and external stakeholders**
- It is designed to be **flexible**, depending on individual's **roles, skills** and **current business objectives**

OBJECTIVE OF THE FRAMEWORK

- To enable individuals and teams to **focus their time / effort for maximum impact**
- To solve the problem of **other departments not being clear on the roles** that IT play
- Roles are **assessed separately** as part of the **MERIT process**

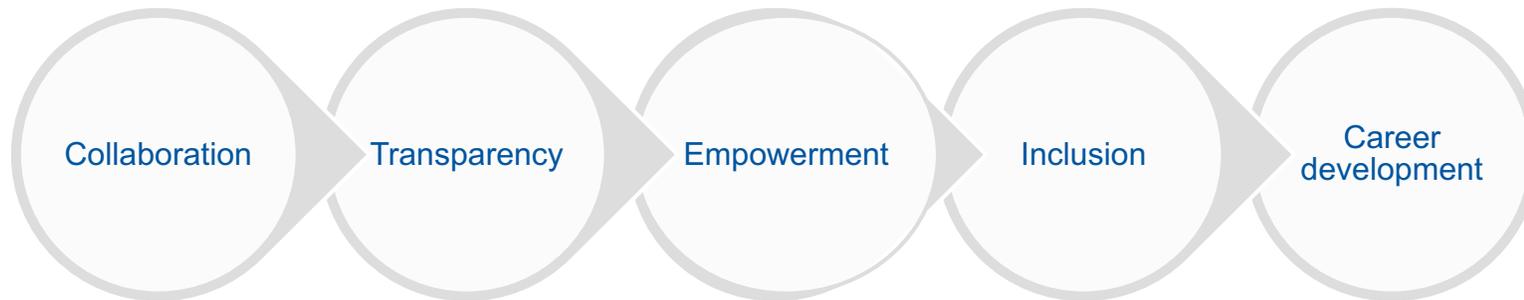
EXAMPLES



How does IT role framework answer our pain points?

- Matrix structure enhances **collaboration** – understand what others do. HOW: part-time roles made publicly available for expressions of interest
- A role should be **temporary** by definition. HOW: a **mandate of limited duration**.
- Sustained training and access to more opportunities to support the **career development** of personnel and allow longer term career goals.

Establishing a talent management team to focus on this objective



How do we address transparency and accountability?

Strengthened governance forums in IT

PORTFOLIO LEVEL GOVERNANCE

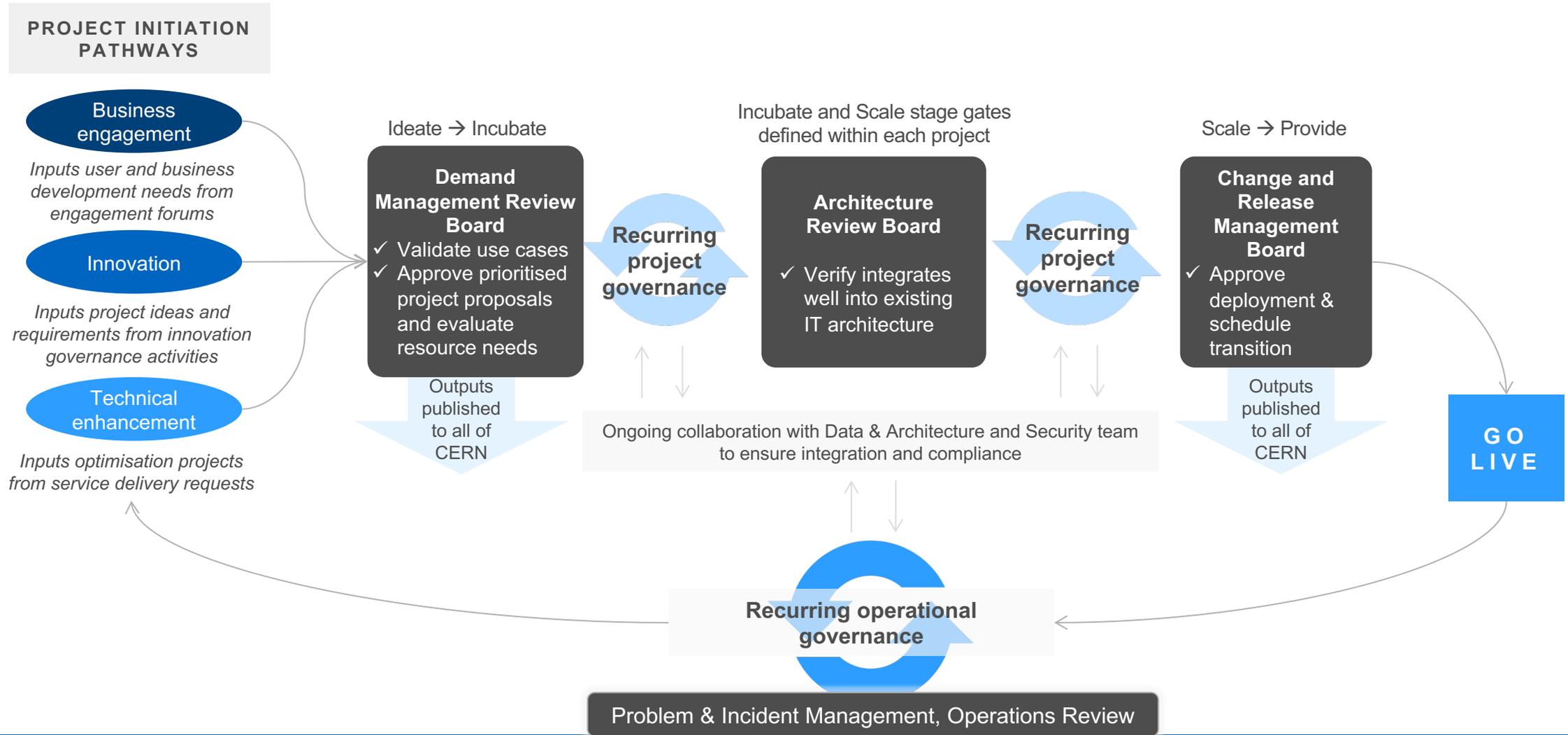
DEPARTMENT LEVEL	BUSINESS ENGAGEMENT	INNOVATION	TECHNICAL DELIVERY	PROJECT PORTFOLIO
Ensures IT's macro-level alignment with strategic objectives of the wider organisation and oversight of the performance of the department as a whole against the IT strategy	Ensures collaboration with other sectors and departments to align IT services to the wider needs of CERN, proposing new service opportunities that would benefit the CERN community	Governance of IT's innovation portfolio focuses the innovation pipeline towards partnerships and projects that provide the most value to CERN	Service and operations management ensures services are well maintained and align to user needs , as well as identifies any improvement opportunities that can be pursued as service development projects	Manages the resourcing, budgeting, and progress of all projects in IT in line with their project plans. Projects are input from three pipelines : business engagement, innovation and technical delivery

PROJECT LEVEL GOVERNANCE

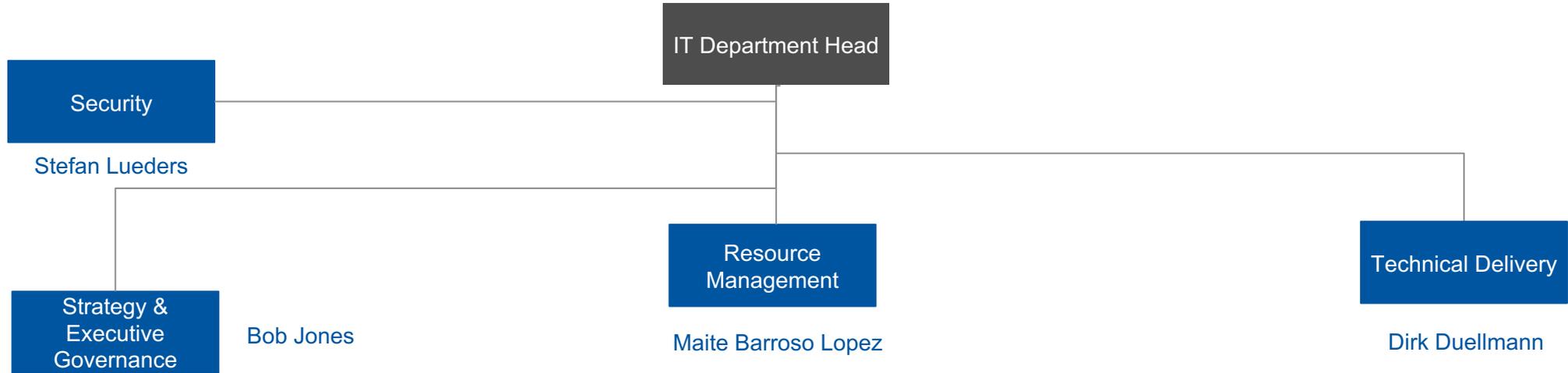
PROJECT GOVERNANCE

Governance for individual projects monitors **progress against project plans** and ability to **integrate with existing IT architecture**. It also manages the **deployment of new services** and associated change management activities

How do we address transparency and accountability? New project governance



What does the new organisational structure look like?

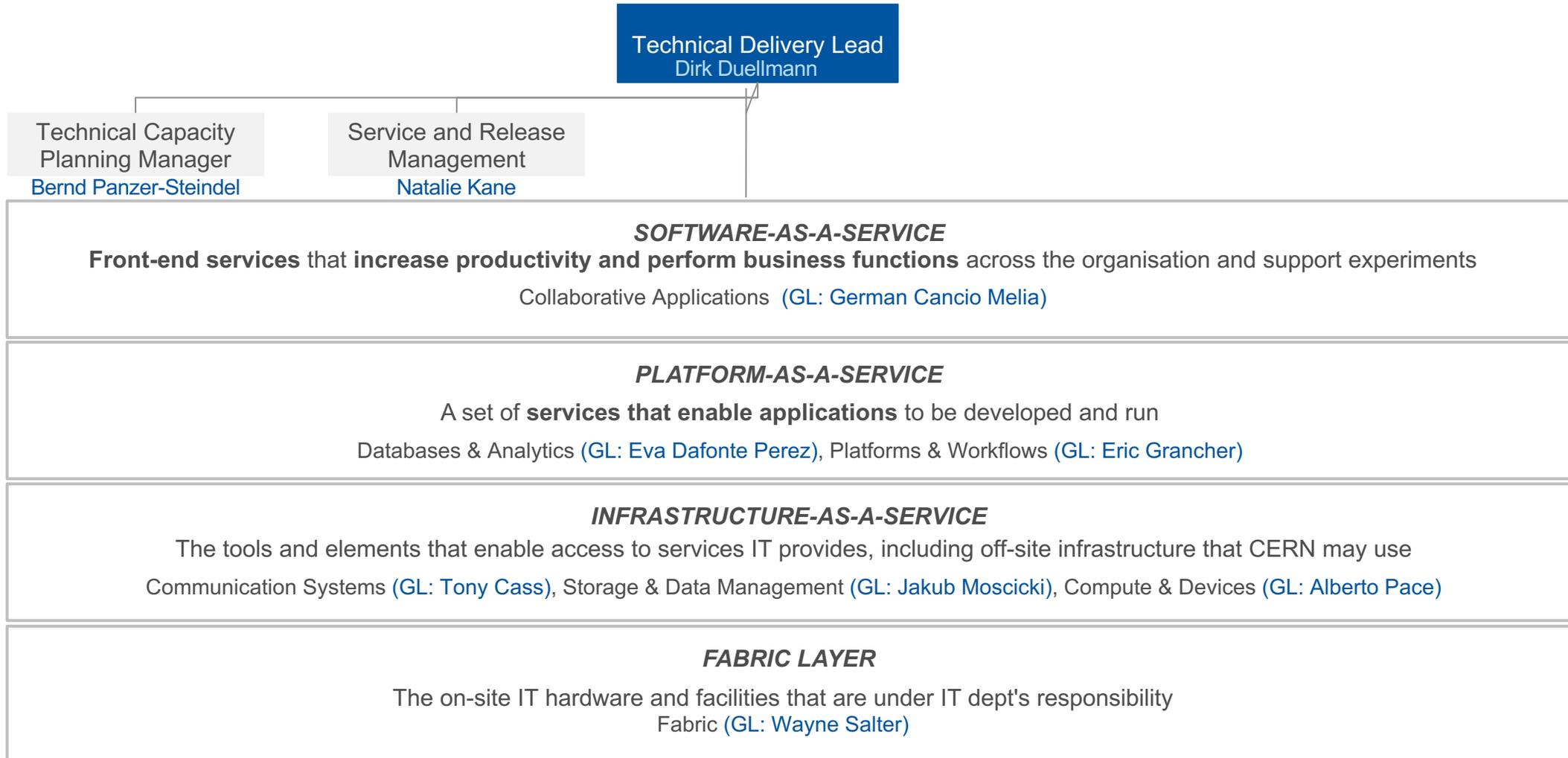


- Data & Architecture = Dan Van Der Ster
- Business Engagement = Simone Campana
- Innovation = Alberto Di Meglio
- Education & Outreach = Tim Smith
- Communications = Melissa Gaillard
- Risk Management = Tim Bell
- Disaster Recovery & Business Continuity = Tim Bell

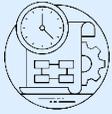
- Programme Management = TBI
- Supplier & Contract Management = TBI
- Talent Management = Nathalie Del Vicario
- Finance & Accounting = Gianni Deroma
- Vendor Management = TBI
- Facilities Management = TBI

- Technical Capability Delivery & Development
- Technical Capacity Planning & Management
- Service Management
- Release and Change Management

Technical Delivery: Organisation structure



Next steps



A step-wise approach – Rome was not built in a day and we need to ensure our operations continue!

 TOM announced to Department	21st March
 TOM announced to Departments and Experiments	31st March
 New structure operational	1st May
 Progressive announcement of vacant department-wide roles	From 1st May