Technology & Data Strategies progress update: overview

Technology & Data Group 24 Feb 17

Technology & Data Strategies

● Confirmed Leads
● Interim Leads

Business Strategies

People Strategy
Head of T&D Strategy

Communications & Engagement
Head of T&D Strategy

Project Governance
Head of Technology Programmes

Cyber Security *Chief Information Security Officer*

Knowledge Management
Head of T&D Strategy

Embedding the new T&D
Head of T&D Strategy

Customer Personalisation
Head of T&D Digital

Transformation Strategies

Licence Management
Head of Technology Service Operations

Service model
Head of Technology Service Operations

Joiners, Movers & Leavers
Head of T&D Strategy

Commercial Management
Head of Commercial T&D

Infrastructure Strategies

Networks and Telecoms
Head of Transformation Portfolio – Networks

Hosting
Head of Transformation Portfolio – Hosting (Interim Head of T&D Strategy)

Data and information
Chief Data Officer

EUC, AV, Print and Telephones
Head of T&D Professional Services (Interim Head of T&D London Underground)

Vehicle/Bus architecture
Head of T&D Surface

iBus2 *Head of T&D Surface*

Surface applications *Head of T&D Surface*

Surface Voice Radio
Head of T&D Surface

CCTV *Head of T&D Surface*

Products Strategies

ERP *Head of Transformation Portfolio – ERP (Interim Head of T&D Strategy)*

Asset Management (incl. Facilities and BIM) *Head of T&D Surface and Head of T&D London Underground*

CAD *Head of T&D London Underground*

GIS & TIS *Head of T&D Strategy*

Fares & Payments (Future Ticketing Phase 5) *Head of T&D Payments*

Platform for London *Head of T&D Strategy*

LU monitoring & operational reporting *Head of T&D London Underground*

Engineering & LU operational technology support *Head of T&D London Underground*

Intranet *Head of T&D Strategy*

Customer Notification and Contact *Head of T&D Digital*

Customer Digital Information and Channels *Head of T&D Digital*

Business Strategies

People Strategy

- Owner: Matthew Hudson, Head of T&D Strategy

- Sponsor identified in new org structure. First version in year 1 of T&D.

- Next step: liaise with HR to ensure we align with pan-TfL approach

Communications & Engagement

- Owner: Matthew Hudson, Head of T&D Strategy

- Status: lead identified in new organisational structure for both producing the strategy and ensuring delivery

- Current focus: delivering transformation communications. First draft to be produced by Head of Strategy by 31 March to help with launch of new T&D

EVERY JOURNEY MATTERS

Project Governance

- Owner: Andy Barrie, Head of Technology Programmes

- Effective project controls and governance
    - Rigorous start up of projects
    - More engagement and support from senior management.
    - Better working relationship with Commercial
    - Clearer business engagement and responsibilities
    - Smart questions instead of compliance checks
    - Projects controls team embedded with the programme team
    - Consistent approach to financial controls

- Work underway to unify key project controls in readiness for new T&D organisation "go-live"

Cyber Security

- Owner: Michele Hanson, Chief Information Security Officer

- Execution of the ExCo approved milestones with defined goals

- Programme 1 - Critical OT areas under review, for cyber maturity. Progress to be up dated bi-monthly.

- Programme 2 – Managing user privileges specifically addressing one process across TfL for managing user access.

- Programme 3 - Technical Roadmap against risks.

EVERY JOURNEY MATTERS

Knowledge Management

- Owner: Matthew Hudson, Head of T&D Strategy

- Lead Identified in new organisation structure for both producing the strategy and then to ensure delivery. First version in year 1 of T&D.

Embedding the New T&D

- Owner: Matthew Hudson, Head of T&D Strategy

- First draft to be produced by Head of Strategy by 31 March to help with launch of new T&D

- Strategy will fall under Business Change Implementation team

Customer Personalisation

- Owner: Head of T&D Digital (vacant role)

Transformation Strategies

Licence Management

- Owner: Djamila Guernou, Head of Technology Service Operations

- Status: in progress

- SAP licensing strategy workshop held to clarify the high level process. Next steps are to hold follow up interviews with users across the organisation to define the next level of detail in the sub-processes

Service Model

- Owner: Djamila Guernou, Head of Technology Service Operations

- Status: in progress

Joiners, Movers & Leavers

- Owner: Matthew Hudson, Head of T&D Strategy

- Status:
  - A Gate 0 paper has been approved which sets out the scope of work for the Discovery phase and capture the needs of security, operations and administration.
  - An internal product has already been developed for controlling access to certain Oyster applications which is a prime candidate for development.

- Options will be identified and a recommendation in Q1 17-18.

EVERY JOURNEY MATTERS

Commercial Management

- Owner: Philip Hewson, Head of Commercial, Technology and Data

- Commercial ICT manages a portfolio of ~550 contracts with an annual value of £300m. Of these 275, worth £150m were owned or managed by IM. Commercial T&D will manage ~ 750 contracts worth some £650m – the majority owned or managed by the T&D directorate.

- The new Commercial T&D department will have six fewer Senior Commercial Managers than the predecessor teams.

- The supply chain for T&D is too large and too flat. There are insufficient Commercial and Operational resources to provide best-practice contract management for all material contracts. Re-procurement of low-value contracts is time consuming and expensive.

- There is a great deal of duplication and overlap of services and applications.

- There is an urgent need to consolidate and rationalise the supply chain in order to:

  o   Reduce the cost of bought goods and services

  o   Focus commercial and operational management on key providers/services

  o   Remove "noise" of low value transactional activities

- In the medium to longer term, strategic changes in how services are delivered will radically change the procurement and contract management demands on T&D and Commercial.

EVERY JOURNEY MATTERS

Infrastructure Strategies

Network and Telecoms

- Owner: Mark Bulle, Head of Transformation Portfolio – Networks

- Execution of the Executive Committee approved strategy continues, with the stated objectives (including cost reduction, improved agility, increased security) remaining unchanged

- Programme 1- WAN Re-Let: Sourcing of new pan-TfL commodity network service contract progressing to plan. Contract award due Dec 2017

- Programme 2 - Connect PFI exit. Governance established, programme team assembled, options evaluation underway. Approach / strategy paper for LU board approval May 2017

- Programme 3 - Technical Roadmap. Activity in mobilisation stage

Hosting

- Owner: Head of Transformation Portfolio – Hosting (Interim Head of T&D Strategy)

- Challenges:
    - Leases costs and underutilised space
    - Inconsistent approach across the business
    - Hosting is a late consideration to many projects despite criticality

- Future objectives:
    - Reduce application hosting costs
    - Develop a flexible and agile hosting model
    - Implement a pan-TfL hosting strategy

Data and information

- Owner: Lauren Sager Weinstein, Chief Data Officer

- Endorsed by T&D group in September 2016

- Today presenting a recommended guidance pattern
  - Operational Reporting (e.g., station & asset performance)
  - Business Intelligence Reporting (e.g. marketing campaign effectiveness, mode shift)
  - Data Science Lake (raw data to create new algorithms)
  - Real-time Alerting & Monitoring
  - Supported by a Data Library – a searchable, controlled catalogue of our data.

EVERY JOURNEY MATTERS

EUC, AV, Print and Telephones

- Owner: Rebecca Bissell, T&D Head of London Underground (interim)
- Current landscape
    - o 'As is' discovery almost complete
        - o EUC costs TfL £32m to manage 89,000 devices across TfL;
        - o Most of the cost is through managed services contracts and license costs;
        - o Business needs defined through extensive research
        - o Risks and issues with the current services have been identified.
    - o Market opportunities exist
        - o Desktop – migrating from an expensive on premise thin client model to a cloud desktop service,
        - o Back office telephony – migrating to a software provided phone (Skype for Business);
        - o Productivity & Communication – migrating email and Office to Microsoft's Office365 cloud service;
        - o Mobile – migrating to a modern mobile management to automate existing manual build and management processes. Migrating from Apple products to Android-based products.
    - o Next Steps
        - o Assign a T&D sponsor;
        - o Launch a Gate 0 programme for EUC;
        - o Launch a desktop options analysis process (benefits: capital cost avoidance, operational cost reduction);
        - o Launch an Office 365 migration project (benefits: capital cost avoidance, operational cost reduction; meet business needs for collaboration).
- Future objectives
    - Operational cost reduction, capital cost avoidance
    - Modernisation of services to meet business needs

EVERY JOURNEY MATTERS

Vehicle/Bus Architecture

- Owner: Simon Reed, Head of Tech and Data Surface

- Current on-board bus systems are a mix of Operator owned, TFL and third party systems operating independently contributing to weight, maintenance cost and inefficiency.

- Vision: one on-board architecture with shared services (e.g. location) and a single physical and conceptual architecture. Sensor data standards will utilise existing FMS and the on-board protocol will be EN13149 parts 7/8/9,

- Current landscape – (pre-Gate 0)
  - o   Current TFL on-board equipment costs are Circa £15k/bus – Target to reduce by half.
  - o   Current TFL built bus costs a premium owing to the numbers of specialist installations. Standardise to reduce costs and improve residual value.
  - o   Transfer all build risk to Coach Builders
  - o   Plug-and-play equipment modules

EVERY JOURNEY MATTERS

iBus 2

- Owner: Simon Reed, Head of Tech and Data Surface

- Today:
    o Installed on 9500+ London buses, >6m daily passengers
    o On-board "next stop" visual display and audio
    o Helps to identify and monitor congestion
    o Other?

- Focus on:
    o iBus2: reduce cost and increase functionality
    o 2017-2019: replacing iBus radio
    o Operational risk of O2 m2m service (re-let in 2018)

EVERY JOURNEY MATTERS

Surface Applications

- Owner: Simon Reed, Head of Tech and Data Surface

- Several sets of applications
    - Enforcement and Compliance
    - Mobility Services - Dial a Ride and DRT
    - Transport Services - Applications used by Buses , Trams and other Transport delivery modes in surface
    - GIS/Geospacial
    - Real Time Information
    - Reporting Platforms
    - Roads Services - Applications used by Roads and other teams

- Current landscape (in surface)
    - Several projects in flight.
    - Many different life-cycles and stakeholders

Surface Voice Radio

- Owner: Simon Reed, Head of Tech and Data Surface

- Bus, trams and field staff currently use 3 x different voice radio networks : iBus, Airwave and Trams. iBus is capacity constrained but has coverage pan-network to Essex, Berkshire and Kent. Airwave is current used beyond it's licence and Trams system is life-expired.

- Current landscape – (pre-Gate 3)
    o   Replace iBus radio with a DMR service and perform an in-frequency migration.
    o   Provide a bridge to enable (lo cost) Android devices as hand-helds.
    o   Migrate Airwave to new ESN/LTE service when available.
    o   Offer iBus on-board solution to trams and operational vans

CCTV

- Owner: Simon Reed, Head of Tech and Data Surface

- Surface has a single strategy and business group looking after CCTV. This needs review (relaunch) and discussions with LU. Is there an appetite for one CCTV system, multiple systems, conflicting needs? Surface also use third party CCTv networks, e.g. Westminster (dwindling)

- Current landscape (in surface)
    o Comms networks currently being transferred to Interroute (comms consolidation)
    o Hardware upgrade to be built in in due course.?
    o Meetings arranged with LU colleagues to firm up.

Product Strategies

ERP

- Owner: Head of Transformation Portfolio – ERP (Interim owner: Head of T&D Strategy)

- Head of Transformation Portfolio – ERP will be appointed by mid-March. They will be responsible for producing the ERP Strategy by the summer.

- In the meantime, we are establishing a T&D internal governance group to ensure that information about all projects that fall in the scope of ERP is disseminated appropriately across the directorate.

EVERY JOURNEY MATTERS

Asset Management

- Owner: Rebecca Bissell, Head of T&D London Underground
- Current landscape:
  - 70 AMIS solutions across TfL, from major Commercial Off The Shelf (COTS) products to local databases and spreadsheets
  - of the 70, around 10 are considered major AMIS solutions providing core functionality, such as asset register and work management
  - Feasibility Study to rationalize Facilities management systems (from 6 to 1 underway)
- Costs:
  - Current AMIS: >£14m p.a. plus extra costs for technology upgrades
  - One TfL AMIS: £10-£20m capital investment reduction of Opex to £6m p.a.
- Benefits over the next 10 years:
  - £15-30m savings through rationalized system contracts and streamlined support
  - enabling >£100m savings AND improved services through optimised Target Operating Model
- Dependencies
  - Business Target Operating Model, ERP Integration, Master Data Management, BI & Analytics, GIS / Visualisation, Remote Monitoring, Operations, Mobile Platform, CAD and Document Management, Facilities Management Contract Rationalisation
- Next steps:
  - set up a programme to deliver AMIS strategy, roadmap and business case – detailing priorities, dependencies, options, sequencing of activities and costs for the next 2-3 years

CAD

- Owner: Rebecca Bissell, Head of T&D London Underground

- Status: in progress

GIS and TIS

- Owner: Matthew Hudson, Head of T&D Strategy

- Initial working group has been set up prior to the appointment of Product Owner in the new structure.

- The aim is to identify any early work that can be carried out prior to the organisational change.

Fares & Payment (Future Ticketing Phase 5)

- Owner: Mike Tuckett, Head of T&D Payments

- Objective to simplify the ticketing system prior to the next Revenue Collection Contract (RCC)
    o Will address Oyster top-up proposition, building on FTP4
    o Simplification will make the ticketing system easier to compete in the open market at contract renewal
    o Biggest challenge is maintaining Instant Gratification for Oyster customers

- RCC is due for renewal in 2022/25. Any changes need to be embedded prior to this

EVERY JOURNEY MATTERS

Platform for London (PfL)

- Owner: Matthew Hudson, Head of T&D Strategy

- Vision and strategy for programme endorsed by the Executive Committee in December 2016

- T&D now analysing the feasibility and deliverability of the first phase of the project (all services that TfL is responsible for)

- We are developing a high level business case to: set out what services are in scope, analyse options available, identify and quantify high level benefits/costs and efficiency savings that could be delivered, assess the level of resourcing required to deliver next stage of the programme

- Maintaining alignment with progress on future Road User Charging and Congestion Charge

EVERY JOURNEY MATTERS

LU Monitoring & Operational Reporting

- Owner: Rebecca Bissell, Head of T&D London Underground
- Current landscape: Under development
  - Maintenance Modernisation and Operational modernisation has a significant need for data capture and analysis - this means we need to have a blueprint for data warehousing and reporting
  - T&D and operational teams in the business produce a significant number of data sets and reports utilising vast volumes of processing capability and technology – not always producing decision making information
- Costs & Benefits:
  - This needs to be defined once the Product managers are in place
- Dependencies
  - Business Target Operating Model,
- Next steps:
  - Agree the scope and demarcation with the LU Transformation workstream
  - Carry out due diligence on all the applications and systems in-scope including the associated investment plan and commercials

Engineering & LU Operational Technology Support

- Owner: Rebecca Bissell, Head of T&D London Underground
- Current landscape: Under development
    - There are a number of operational control systems to manage and monitor the rail network in real-time and support the control rooms
    - The definitions of Operational Technology need to be agreed with the Delivery Businesses and the detailed list of applications and services – Engagement with the Engineering workstream ongoing
    - Need to align with the Cyber Security Operational Technology gap analysis and subsequent roadmaps
- Costs & Benefits:
    - This needs to be defined once the Product managers are in place
- Dependencies
    - Business Target Operating Model, Remote Monitoring, Operations, Cyber Security, Networks strategy and Connect PFI Exit, CAD and Document Management and Contract Rationalisation
- Next steps:
    - Agree the scope and demarcation with the Engineering Directorate and LU Transformation workstream
    - Carry out due diligence on all the applications and systems in-scope including the associated investment plan and commercials

Intranet

- Owner: Matthew Hudson, Head of T&D Strategy

- Status: Gate 0 paper prepared for submission

Customer Notification & Contact

- Owner: Head of T&D Digital (role vacant)

EVERY JOURNEY MATTERS

Customer Digital Information & Channels

- Owner: Head of T&D Digital (role vacant)