SITA
State Information Technology Agency SOC Ltd

Application Modernisation Programme

May 2017

Presentation Points

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- ✓ Business Outcomes
- ✓ Applications Transformation
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- ✓ Applications Modernisation Streams
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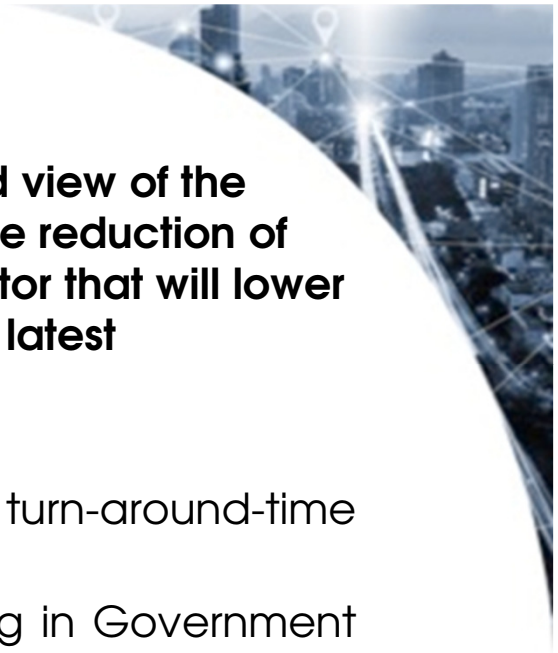
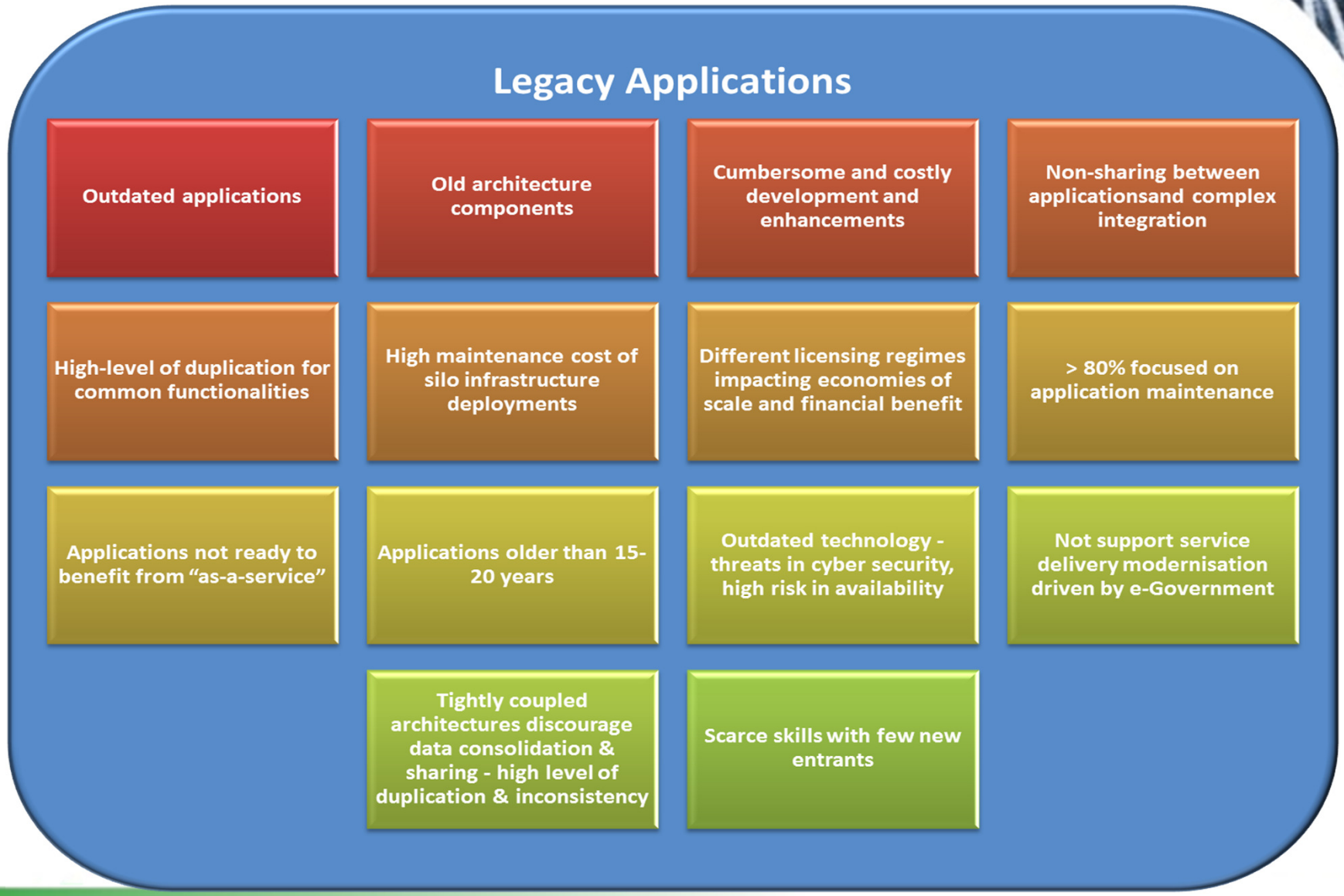
Background



The Application Modernisation Programme drives a consolidated view of the application portfolio of all Government Departments to ensure the reduction of unnecessary duplication of information systems in the Public Sector that will lower cost and improve productivity in the Public Sector aligned to the latest international technology trends

- **Problems:**
  - The applications within Government are outdated and turn-around-time of application development takes too long.
  - There is not a clear indication of all applications residing in Government and this lead to duplicate and disparate solutions.
  - The turn-around time in the application environment is too long and thought leadership needs to drive clear guidelines to modernise Government applications.
- **Principles:**
  a) Consolidated view of all applications within Government;
  b) Common applications are shared across government;
  c) Applications are independent of technology infrastructure;
  d) Common applications are easy to use;
  e) Processes and guidelines are driving quick application delivery; and
  f) The transition of end-of-life and outdated applications is addressed.

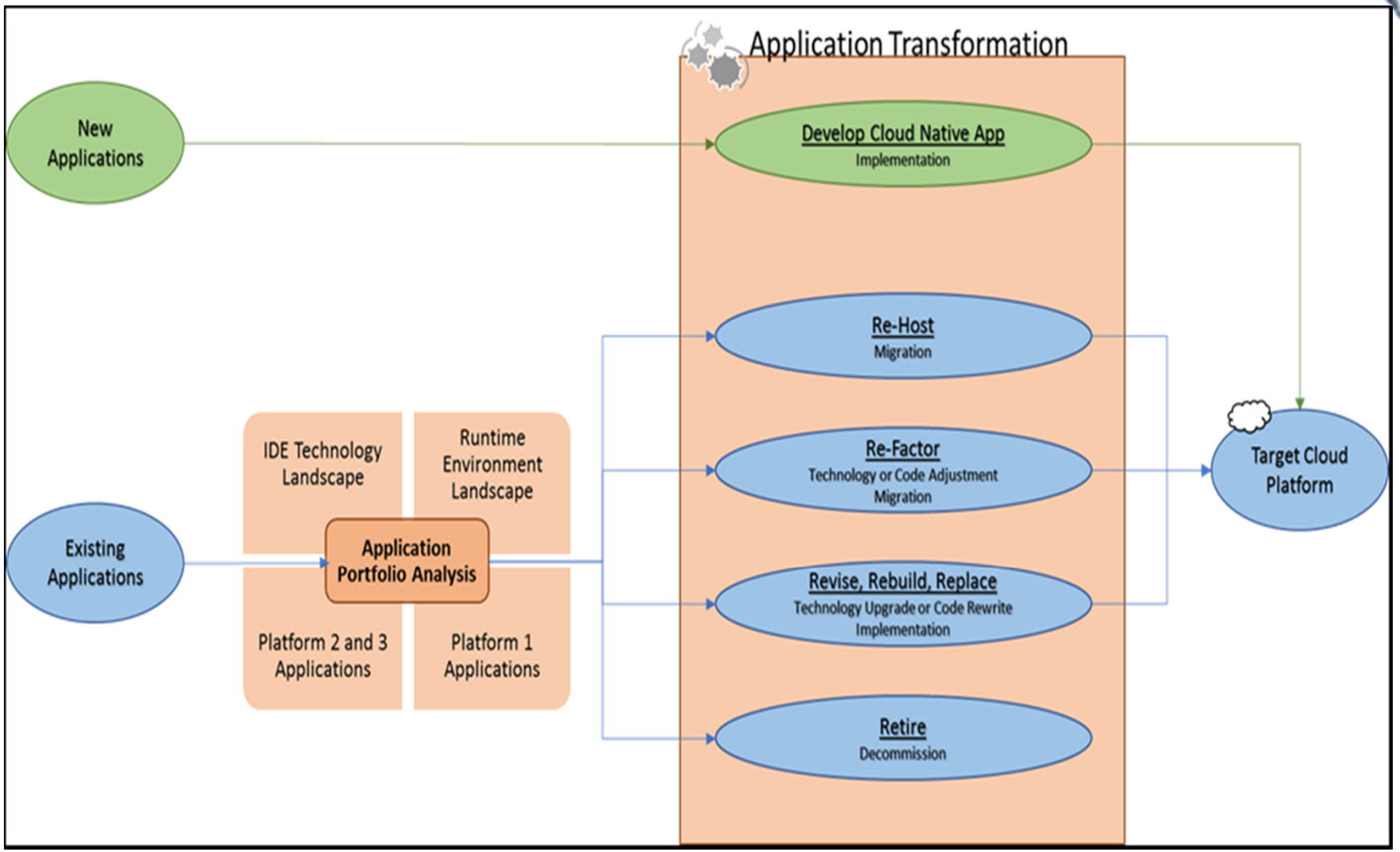
Legacy Application Constraints



Business Outcomes

Outcomes	Benefits
Reduced duplication	Information systems with same functionality and data sources with similar data will increase sharing and re-use across functionaries and reduce wasteful investments.
Reduced operating cost (economies of scale)	The increase in sharing of a larger converged system as opposed to multiple different systems will improve economies of scale and financial sustainability.
Improved productivity	Converged systems that integrate and standardise business processes and data exchange across departments will improve efficiency, integrity and consistency across departments.
Citizen Convenience	Converged data sources (i.e. the integration of data sources and processes across government) will reduce re-entry and duplication of citizen data across public sector; and improve citizen access to data and transaction with government.
Technology alignment	Aligning to international best practises to ensure modernised applications.
Modernised service delivery	Incremental integrated value at different levels of the business and technology stacks, towards a completely new paradigm in public service delivery through ICT.

Applications Transformation



Application Migration Options and Phases

There are **5 migration or modernisation options**, which can be applied in migrating applications to a cloud environment (defined by Gartner):

a) **Re-host** on infrastructure as a service (IaaS)
b) **Refactor** for platform as a service (PaaS)
c) **Revise** for IaaS or PaaS
d) **Rebuild** on PaaS
e) **Replace** with software as a service (SaaS)

The following major phases are recommended:

Phase 1: Re-Hosting

Applications taken on via a lift-and-shift model with little to no reconfiguration because the same O/S, up to the level of version number, is included in the GPC Cloud Foundation Infrastructure (CFI) Technology Reference Model (TRM) and the required support structures are in place as part of the CFI organisation

- Websites currently hosted in a production environment;
- Platform2 applications that are standalone with no integration to other applications on any layer of the application architecture;
- Platform2 applications that can be re-hosted in the GPC with minimal re-testing; and
- Platform1 applications on legacy technologies that can either be upgraded or reconfigured to run in the cloud.

Application Migration Options and Phases

…Continued

Phase 2: Re-Factoring
Applications taken on via a lift-and-shift model with some level of reconfiguration utilising a development environment in the GPC to ensure optimal use of the GPC features.

Phase 3: Revise, Rebuild, Replace
Modernisation of legacy applications that cannot be adapted for cloud via reconfiguration utilising a development environment but require extensive redesign and re-architecting.

- Platform1 applications on obsolete technologies that cannot run in the cloud.

Status of the Applications Modernisation Programme

Implementation Plan and Roadmap: Application Portfolio Modernisation

Government applications developed and maintained by SITA

As-Is Government applications hosted and housed by SITA (Data Centre inventories and assessments)

Application Inventory Framework and Template	GPC Reference Architecture *	Strategic Framework - Migrating Applications to the GPC	M14 Storage and Compute Transition Plan *	Application Inventories •Government applications developed and maintained by SITA •As-Is Government applications hosted and housed by SITA (Data Centre inventories and assessments) •Technical assessment DoL •Technical assessment GPG	Inventory Assessment - Migrating Applications to the GPC	Guiding principles: Retirement, rejuvenation or convergence of Govt Apps	Implementation Plan and Roadmap: Platform 1 Applications Rejuvenate or Renewal for the GPC

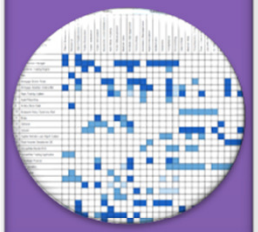
Will be reviewed once all inventories has been included and benchmarking exercise has been done

Need to extend the inventories to include all applications within national and provincial Government Departments

* Deliverables contains both cloud and application inputs

Applications Modernisation Streams

Streams 4-8 - Implementation



Stream 2

Development and continuous update of an inventory of all information systems in Government

Stream 3

Application Modernisation Centre of Excellence

Rationalise, standardise and monitor the SITA development environment with regards to technologies, processes and skills

Stream 4

Convergence and Rationalisation of IDE Technologies

Stream 5

Convergence and Rationalisation of Runtime Environment Technologies

Stream 6

Re-Hosting (Porting to Cloud Technology)

Stream 7

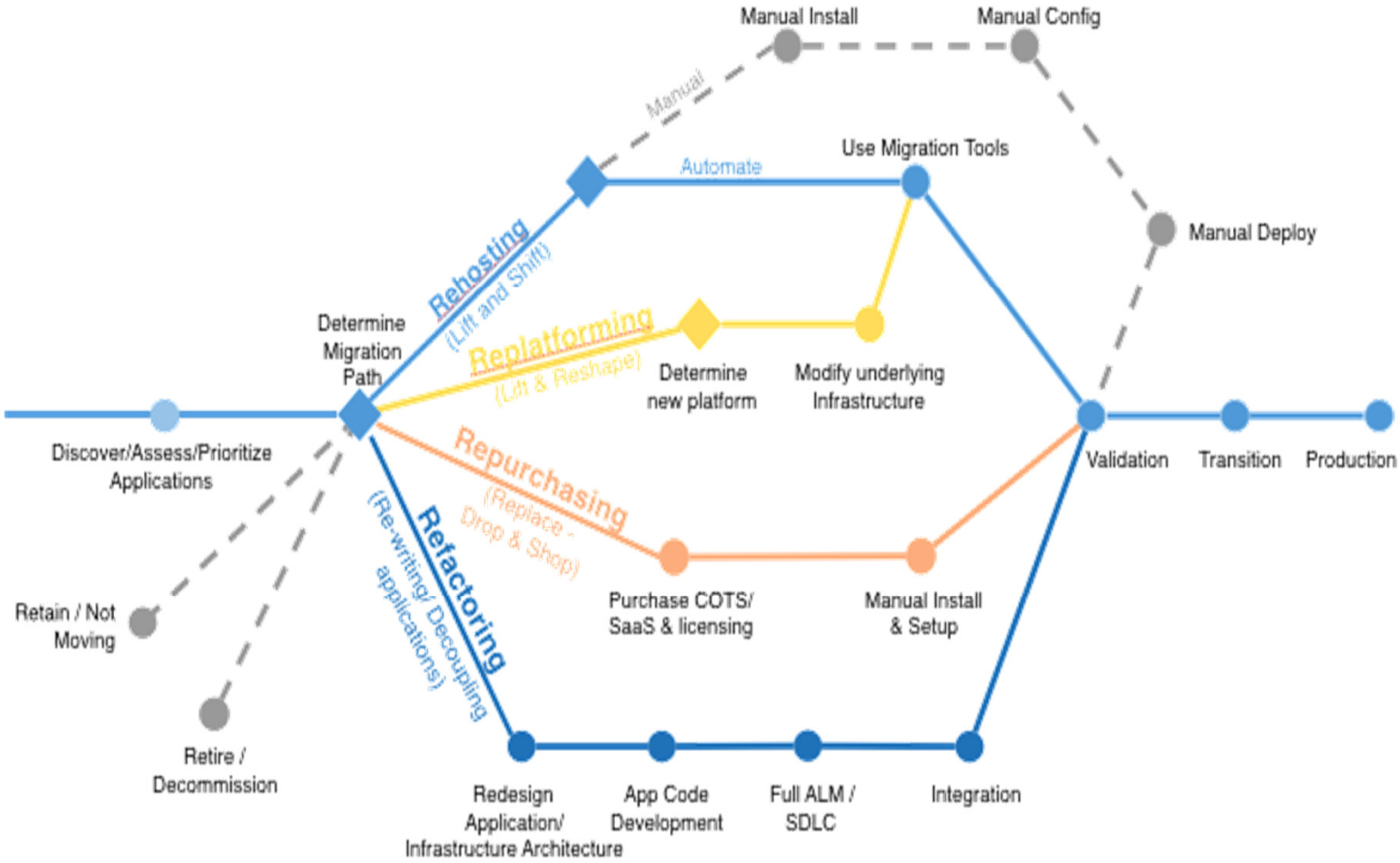
Legacy Rejuvenation to Cloud Technologies

Stream 8

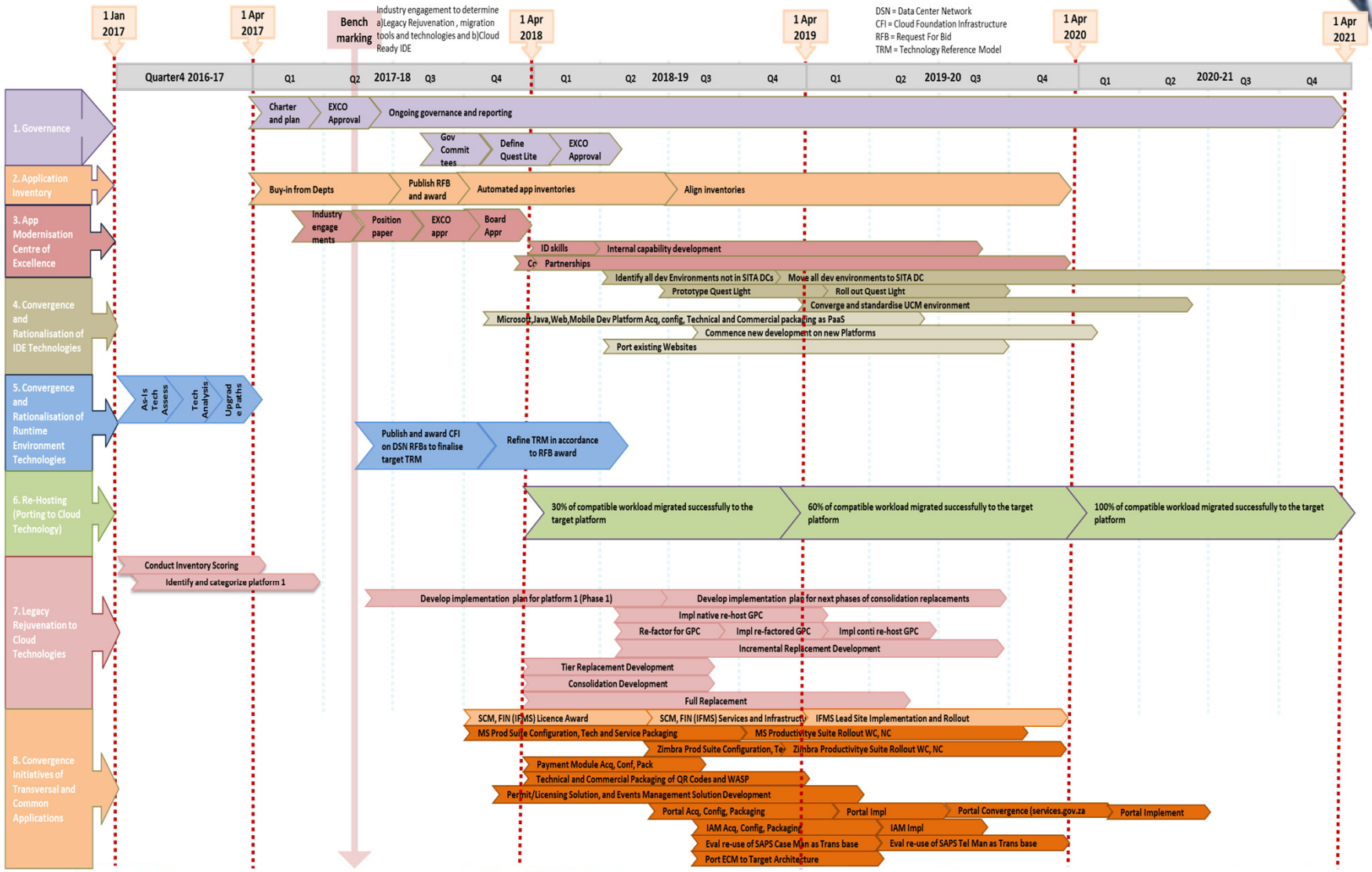
Convergence Initiatives of Transversal and Common Applications

Stream 1 - Programme Governance

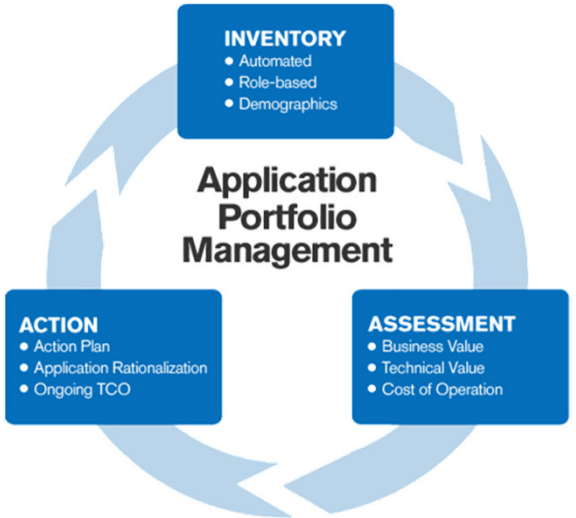
Application Modernisation or Renewal Options



Draft Application Modernisation Programme Plan (2017/18+)



Thank You


INVENTORY
• Automated
• Role-based
• Demographics
Application Portfolio Management
ACTION
• Action Plan
• Application Rationalization
• Ongoing TCO
ASSESSMENT
• Business Value
• Technical Value
• Cost of Operation