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Effective Electronic Patient Record Implementations

Sustainability and Optimisation

July 2021

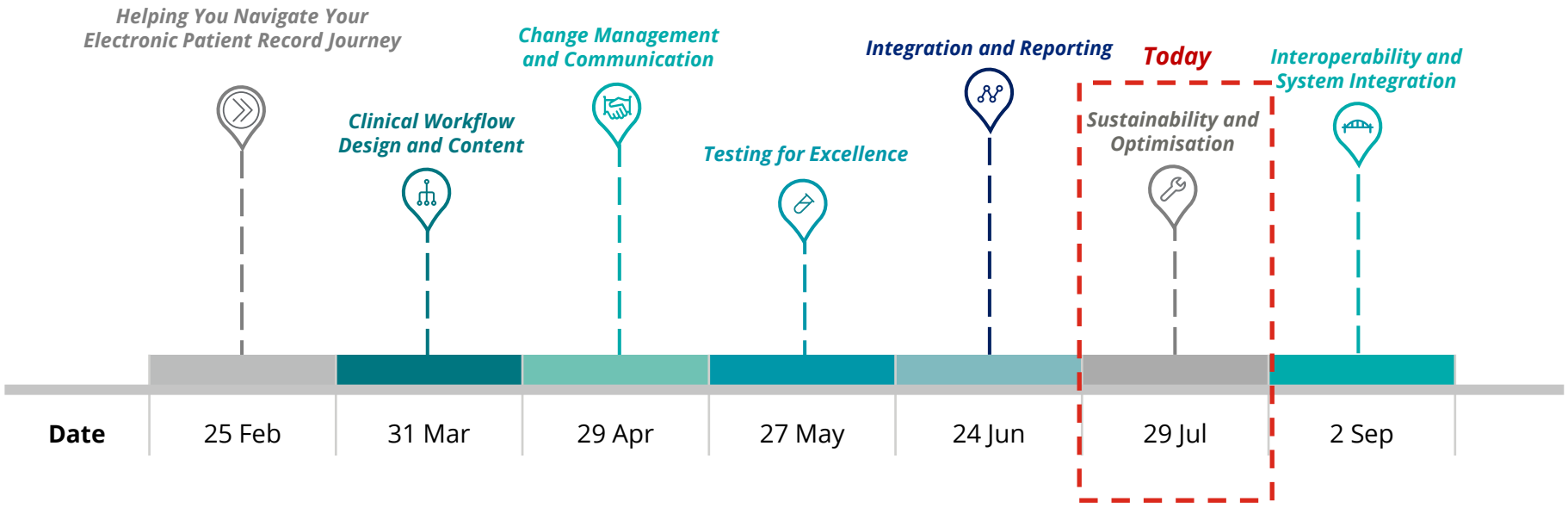
Effective EPR Implementations: Overview of the Series, Purpose, and Schedule

The Effective EPR Implementations webinar series is a set of seven one-hour virtual sessions with Healthcare providers. This series is focused on EPR implementations and driving your success through a holistic implementation approach

Purpose

- ✓ Focus on effective partnerships necessary to succeed in EPR implementations
- ✓ Highlight common pitfalls faced by clients and areas needing support
- ✓ Share key strategies necessary for healthcare practice transformation through EPR implementations

Schedule



Speaking With You Today

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Managing Director, US

Dona Zeller

Specialist Executive, US

Frank Roche

Specialist Leader, US

Jerry Stacy Tucker

Specialist Leader, US

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Setting the Foundation: Governance, Guiding Principles, and Effective Decision Making

Setting a strong foundation from the beginning enhances overall outcomes and Programme success.

Governance

A well-structured governance model helps ensure decisions are made at the right level, by the right stakeholders, at the right time

Guiding Principles

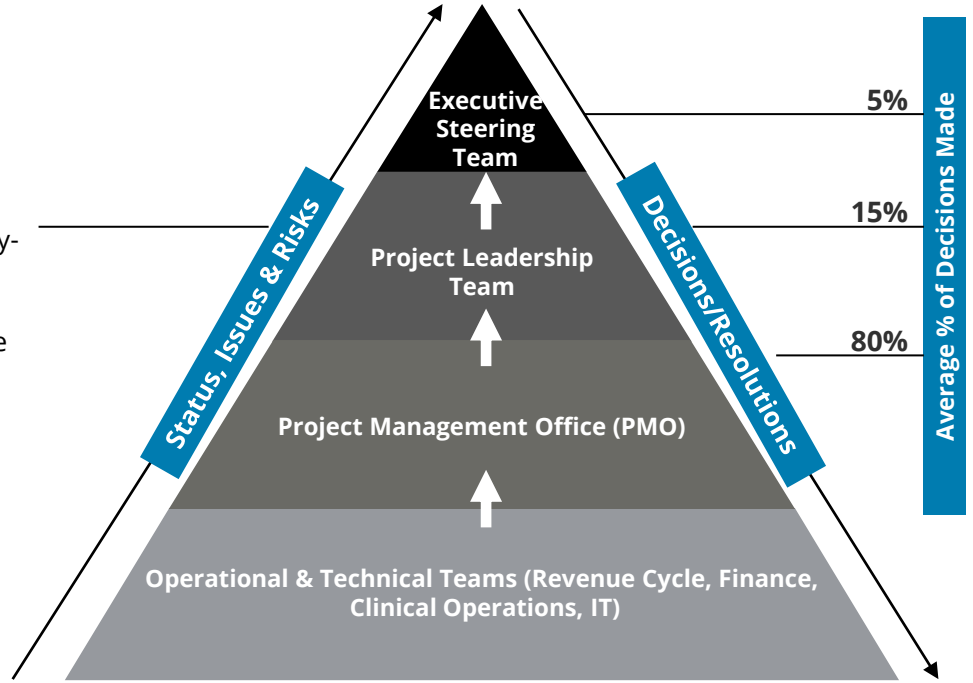
Establishing appropriate Guiding Principles sets the ground rules for system design and implementation, guides decisions, and keeps teams focused on overall goals, objectives, and the desired end state

Effective Decision Making

Decisions that could potentially impact the programme timeline, cost, quality, safety and/or future-state operating model should be escalated to programme and clinical governance

Establish Leadership Support

Leadership support and buy-in is cultivated from the very beginning of the Programme



Key Success Factors

- Clear prioritisation process and criteria '
- Strong project and capacity management capabilities
- Maintain components of the implementation governance structure (Steering, Advisory and Workgroups)

Guiding Principles

- Operationally driven
- Priorities are aligned with organisational goals
- Achieve balance between ongoing support and optimisation

Importance of Governance, Guiding Principles and Effective Decision Making

1. **Commitment from key stakeholders**
2. **Align direction**
3. **Better decisions**

Optimisation Overview

Evolution of EPR maturity

Organisations follow a similar path in their EPR maturity with the initial implementation focused on high priority operational issues and a rush to “get live”.

Descriptors	Implementation & Remediation	Stabilisation	Optimisation	Strategic
Timeframe	Starts at go-live and continues for two to four weeks post-live.	Follows remediation and can last up to 6 months post-live.	Starts once the system is considered “stable” and metrics are at or above baseline	Begins approximately 18 months to 2 years post-live.
Criteria to move to next phase	• No critical defects • End users adopting and using the system • System response times are acceptable • No unplanned downtime	• All major defects (critical and high) are resolved • End users complete their workflows as designed • KPI’s return to baseline or enhanced performance	• Vendor upgrades taken on schedule • Clinical programs are enabled by EPR tools • User efficiency enhanced • Patient experience enhanced	Not applicable
Focus areas	▪ Address performance improvement priorities ▪ Meet the timeline ▪ Establish enterprise standards ▪ Meet external reporting requirements ▪ Improve information flow across care settings	▪ Resolve defects ▪ Address build gaps ▪ Fix priority areas as defined by clinical and business leadership ▪ Improve post go-live key performance indicators (KPI)	▪ Improve programme sustainment capabilities ▪ Implement new capabilities ▪ Improve patient and user experience ▪ Utilise metrics & reports to manage performance ▪ Enhance clinical program capabilities ▪ Increase integration	▪ Implement advanced capabilities within or on top of the EPR to meet organisational goals ▪ Utilise BI and analytics to improve population health and outcomes ▪ Optimise patient and user experience

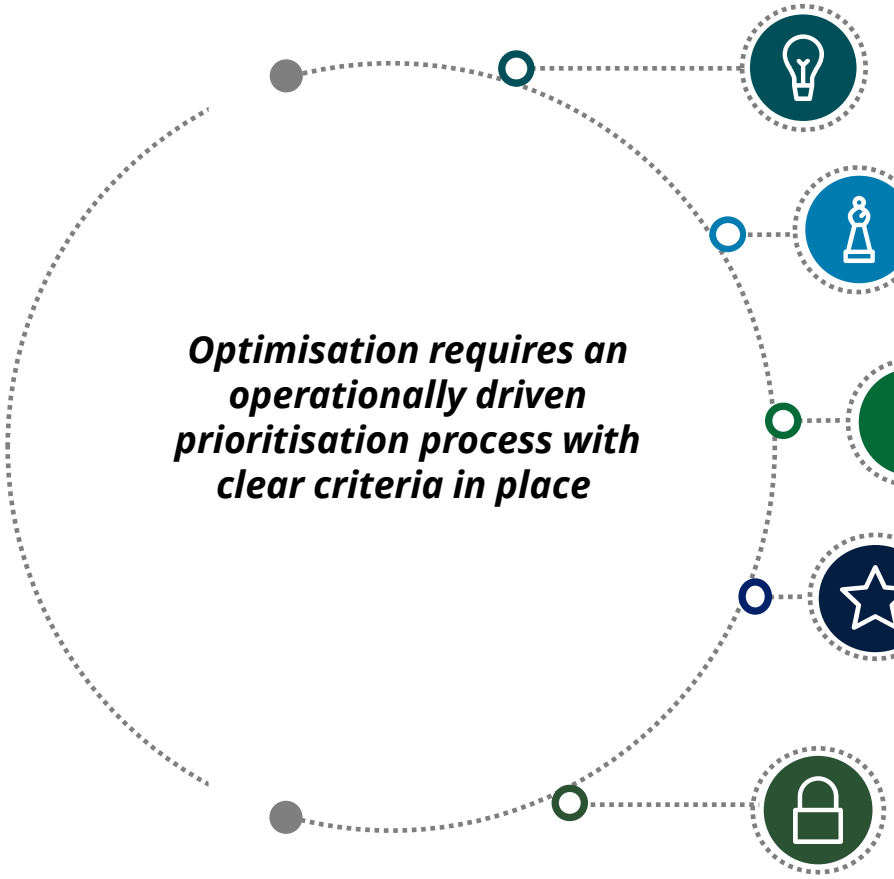
Challenges to Optimise

Although the benefits from implementing an EPR are clear, there are many challenges that impede an organisation's ability to realise the value from their EPR investment.

1. **Resource and capacity constraints**
2. **Continuous implementation cycles as hospitals come together to create integrated care systems**
3. **Limited reporting and analytic capabilities**
4. **Lack interoperability resulting in fragmented or inefficient care coordination**
5. **Inability to decipher root cause of people, process or technology issues**

Optimisation Planning

Optimisation planning begins with EPR planning and is modified throughout the implementation. Based on lessons learned the following principles are used to guide optimisation planning.



Find the Balance

Achieve a balance between ongoing maintenance and optimising the system or the end users will become frustrated

Leverage the Help Desk

Educate the help desk staff to increase their EPR understanding and take on a larger role in addressing simple issues or direct them to the appropriate resource

Keep the Super Users

Maintain the super user network who play a key role in supporting upgrades and reinforcing workflow changes within their departments

Consolidate the Governance Structure

Keep specific groups to support operationally led decision making

- Executive Steering and select Advisory Groups remain in place (Clinical, Business)
- Department focused workgroups (A & E, Pharmacy, Radiology) and select integrated workgroups (Clinical Decision Support) remain in

Right Size the Implementation Team

- Analysts that remain for ongoing support are cross trained in other applications
- Training and Communication capabilities are reduced but remain in place
- Testing team remains in place to support fixes, upgrades and optimisation

Managing Intake for Various Requests

Establishing a clear and well understood process that correctly categorises requests, directs them to the appropriate resources and establishes priorities where needed is an essential component of optimisation.

Request Types

Type	Definition	Method
Incident	Something that was once working is now broken	Incidents are prioritised based on criticality and fixing critical/high issues remains a top priority for analysts.
Request	A request for something new to existing technologies, generally requiring less than 40 hours of work to complete	**Access Requests:** Requests for additional access to a system or removal of access from a system are filled by IT within a predetermined SLA. **Service Requests:** Requests for assistance, such as installing software or relocating a PC are fulfilled by IT within a predetermined SLA.
		Enhancement Requests: Requests for something new that goes through the prioritisation process and the business owners determine the order.
Project	A request for something that does not exist today, generally requiring more than 40 hours of work to complete	Projects can be large enhancement requests or new technology implementations. Projects are also prioritised by the Business

Goes through prioritisation

Prioritising Enhancements & New Projects

The prioritisation process takes place within the governance structure by bringing the enhancement requests and projects forward to the appropriate Advisory group based on established criteria. The top priority items for each area are brought forward to IT Executive Steering for review and finalisation.

Guiding Principles for Successful Prioritisation

- Align with **organisational goals** e.g. benefits realisation, DEI
- Prioritise based on **value and effort to implement** the future state and be transparent about the prioritisation process
- Provide necessary operational training, change management, and communication for **successful end-user adoption**
- Measure and monitor for **sustainable improvement**

Value (Scale of 1-5)

- Patient Safety
- End User Experience
- Patient Experience
- Clinical Quality
- Standardisation

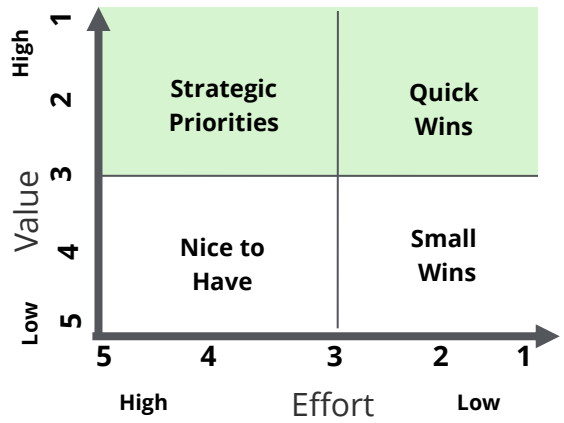
X

Level of Effort (Scale of 1-5)

- *Low* = impacts single team or functional area; <40 hours
- *Medium* = integrated and impacts >1 team or functional area; <120 hours
- *High* = May require additional investment in resources, third-party or integration; >120 hours

=

Priority Ranking



Keeping the Lights On

Depending on the size of the post-live team, a vast majority of the resources can be consumed by application support, routine maintenance and taking regular software updates, leaving little capacity for optimisation.

IT Governance/PMO

Issue & Risk | Communications | Capacity Management | Compliance Service Management | SLA Tracking & Service Quality

Level 0

- IT Operations, Informatics, Clinical Help Desk

Level 1

- Service Desk

Level 2+

- Application Support
- Application Maintenance
- Application Updates
- IT Infrastructure

Application Support

- Receive prioritised incidents from ticketing system
- Triage and assign incidents
- Update incident status and progress
- Communicate incident status
- Perform root cause analysis
- Manage configuration changes
- Validate resolution and production readiness

Application Maintenance

- Implement standard changes and maintenance
- Configure updates for third party data such as IMO/SNOMED, SureScripts, First Data Bank, DRG and medication cost
- Create and manage operational reports
- Update internal content for clinical and business users

Application Updates

- Develop and manage application upgrade plans
- Execute applications patches, updates and upgrades
- Review and validate upgrade scope
- Conduct testing for updates and upgrades (regression test, user testing)
- Communicate changes and provide training where needed

Incorporating Capacity Management into Prioritisation

Identifying the recurring requirements, projecting the intermittent requirements and determining the optimisation capacity paints a realistic view of what the IT department and organisation can accomplish within a specified timeframe.

Total FTE Resources

Recurring Requirements

X FTEs – Quarterly/ Version Upgrades, Fixes, Content Maintenance

+

Intermittent Requirements

X FTEs – Merger with New Hospital, Regulatory Changes

+

Optimisation Priorities

X FTEs- Prioritised Optimisation Requests

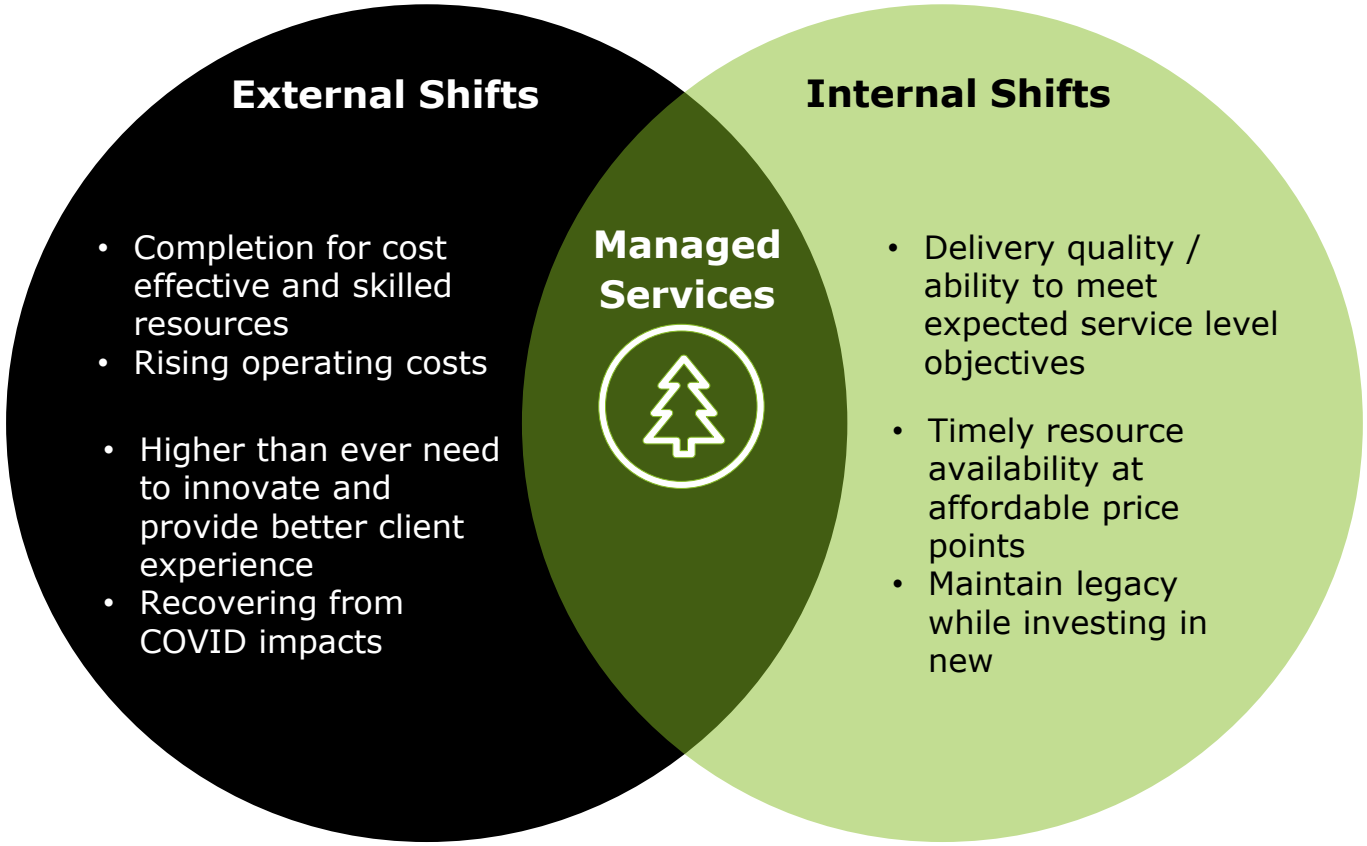
Key Decisions:

- What volume of optimisation requests is the organisation able and willing to commit to?
- Is there a need for temporary resources to complete all the top priority requests?

Managed Services

Why Managed Services Make Sense For Production Support

Managed services help provider organisations transform their operations to develop and provide cutting-edge, value-added services



Benefits

Efficiency

- Automation of recurring and predictable tasks to reduce cost and turnaround time

Insights

- Data driven reports help executives determine root cause of issues and address them
- Analytics that help improve revenue cycle insights

Flexibility

- Ability to quickly ramp up/down experienced staff to align with their business needs without reliance on high-cost contract resources

Quality and Risk Management

- Highly qualified and experienced staff to serve their needs across clinical, revenue cycle, and technical disciplines

Transparency and Predictability

- Service Level Agreements and measurable KPI metrics, with near real-time reporting ability

Managed Services Offerings

Seek partners who drive the evolution of the IT operating model across EHR's and the IT service portfolio to best support your strategic business imperatives

Healthcare Managed Services
Ongoing responsibility of maintaining and generating outcomes for a range of applications, processes, and / or IT functions in order to drive efficiencies, reduce operational expenses, and enable innovation

Integration Foundry

Industrialised Interface and integration services supporting build, testing and ongoing maintenance

- Development
- Support
- Platform Realisation
- Application Upgrades/ Platform Migration
- Automation

Technical Managed Services

Support for on-premise, cloud, and hybrid application infrastructure and related systems

- EHR and Healthcare Applications
- Technical Operations
- Core Infrastructure Management
- Business Continuity (HA/DR)

Application Managed Services

Ongoing incident management, application maintenance, monitoring and optimisation for IT applications in a predictable manner

- Support
- Maintenance
- Updates
- Optimisation
- Consolidation

Testing Center of Excellence

Flexible global testing solutions scaled to support demand while leveraging analytics, robotics, and automation

- Flexible Testing
- Co-sourcing Services
- Full Managed Services

Reporting as a Service

Reporting and analytics as an extension of the IT team, leveraging existing processes and environments

- Transactional Reporting
- Self-Service Reporting
- Dashboards / Analytical Reporting

Multiple Engagement Models

Offering scale and excelling in Managed Services using a global delivery model and shared service capabilities

	Staff Augmentation	Foundry	Co-Sourced	Managed Services
How it Works	• Staff specific roles • Client managed delivery • Client processes and governance	• Flexible and fluid capacity model • Ability to scale project talent resources up and down with demand • Purchase resources/hours on a recurring basis	• Deloitte/Client shared responsibility • Common governance model • Service level objectives	• Deloitte end-to-end responsibility • Manage to services levels • Fixed Fee with incentive/penalties and performance improvements
When to Consider	• Demand spikes for projects, reporting, testing or backfill • Replace higher cost contractors	• Small projects and enhancements • Desire a reduced time to market	• Re-purpose client IT staff to high impact initiatives • Starting point for longer term managed services	• Client wishes to retain only “core” functions i.e., management, governance, architecture and security • Aggressive cost reduction/management goals

Improve Resourcing

- Shift resources to high priority projects
- Supplement in-house talent with high-quality, certified global resources

Enhance Business and Operations

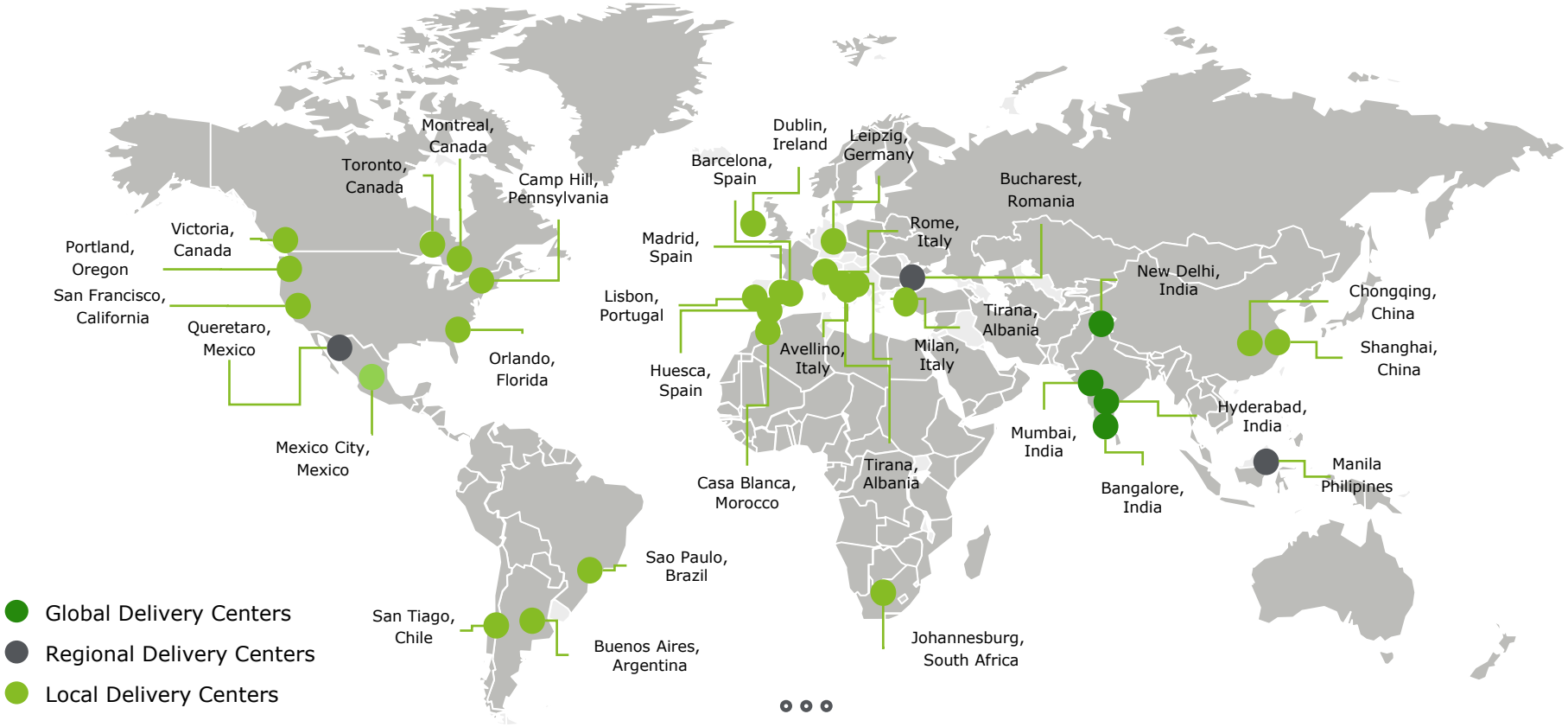
- Improve core support operations
- Lower upfront capital costs
- Increase agility and flexibility

Increase Innovation and Disrupt

- Accelerate speed to market
- Introduce and exploit disruptive technology
- Access industry leading methods and accelerators

Deloitte's Global Operate Delivery

Delivering Operate services seamlessly through our global network



One of two firms certified by Epic for delivery from India

"Clean rooms" with highest security controls to protect PHI/PII

Largest pool of EHR talent in India

Innovation labs for automation, analytics etc.

Only firm certified by Epic to deliver from (ARDC) in Queretaro Mexico

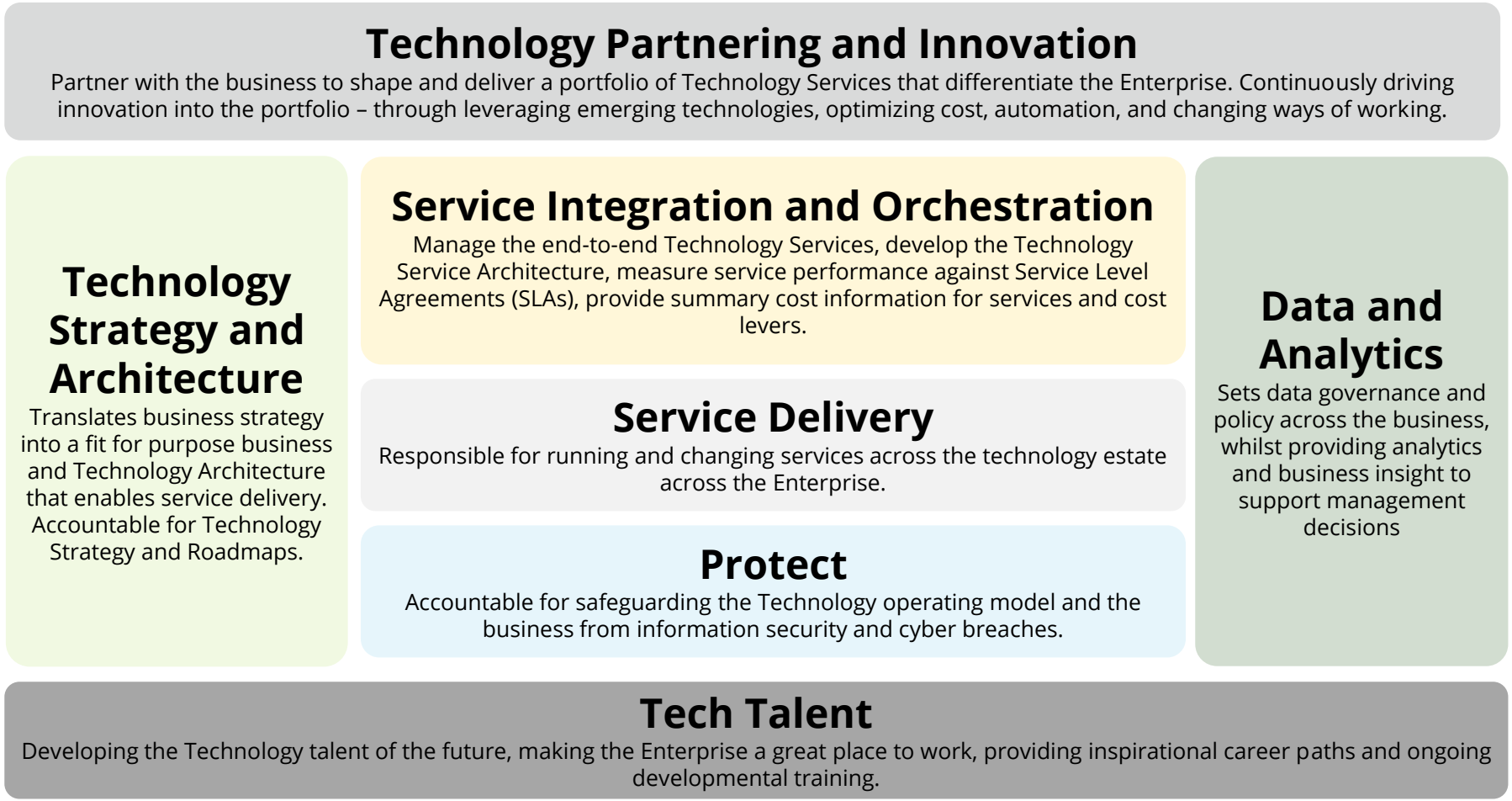
Access to client systems through secure high-speed connectivity

Staggered shifts to achieve 24x7 coverage

Technology Considerations

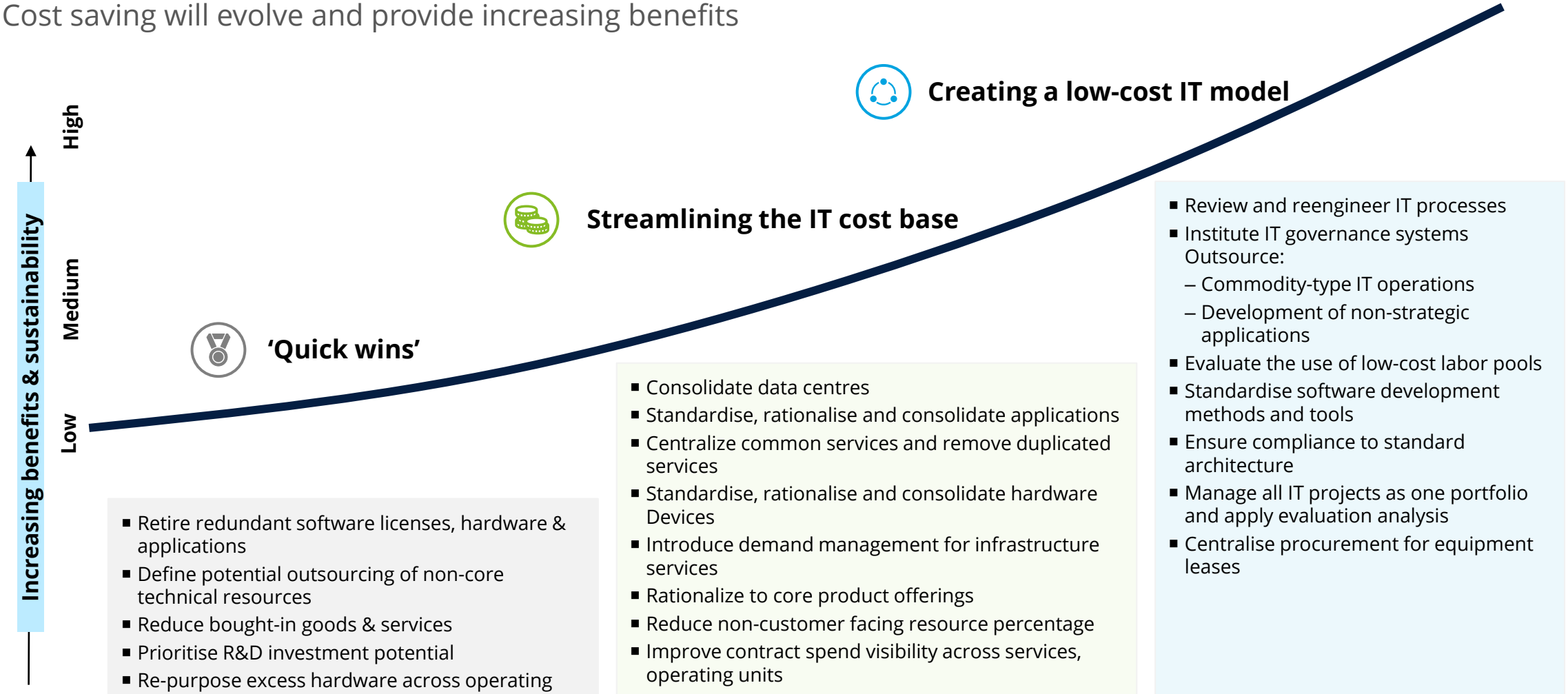
Technology Operating Model

The Technology Operating Model covers technology capabilities and is designed in line with industry standards. It is comprised of seven capability domains, broken down into specific capabilities that are necessary to deliver best in class technology services to the wider organisation.



Application and Infrastructure Portfolio Rationalisation

Cost saving will evolve and provide increasing benefits



Application and Infrastructure Rationalisation

Application rationalization can be defined as the process to catalogue and eliminate duplicate software applications and associated infrastructure used across the organisation to improve efficiency, simplify application portfolios and reduce total cost of ownership (TCO)

1 Need

- **Shadow IT and Siloed Purchasing** habits lead to rogue and redundant applications that exist outside the scrutiny and control of the IT organization
- **M&A** activity introduces a set of applications and services of the newly acquired business, many of which may overlap or parallel those already in use
- **Complexity** across the vast portfolio can make it difficult to understand where the duplication is happening
- **Complicated TCO Calculations** can potentially make it difficult to get a buy-in and lead to uncertainty about cost implications of decommissioning
- **Zombie Applications** – Applications running possibly because the retirement plans were not fully executed

2 Challenges

- **Lack of Collaboration/ Engagement –** Difficulty to build consensus around the total cost of ownership (TCO) of the applications among business partners. Striking the right balance of estimation assumptions is key to drive collaboration
- **Mismanaged Application Portfolio –** Large application portfolios hide application redundancy and lock innovation spend to legacy apps.
- **Under-utilized Applications** – Adding new applications to the portfolio without maximizing business value from an existing application
- **Redundant Platform Changes -** Moving all apps from one platform to another, without evaluating business value increases technical workload

Application and Infrastructure Rationalisation – An Iterative Approach

Rationalisation is a timely and complex exercise. Our approach breaks the problem down into 4 phases

*If an organisation has finished implementing then they should go into **phase 4** of the cycle*

Step 1: Understand Environment; Secure Support	**1. Understand what success is** • Understand business objectives, capabilities, and expectation • Secure executive sponsorship and Business Unit participation
Step 2: Define Plan and Approach	**2. Mobilise for the future** ▪ Determine scope, approach and plan ▪ Define evaluation model for agreeing target architecture
Step 3: Compile Application Information	**3. Gather information** ▪ Collect application information using a standardized template ▪ Map each app to business processes, lines of business, regions etc.
Step 4: Develop Future State Application Architecture	**4. Determine what the future should look like** ▪ Assess the value, costs, risks, & strategic alignment for each application based on evaluation model ▪ Identify redundant and obsolete applications ▪ Develop future state application architecture
Step 5: Identify, Define, & Prioritize Projects	**5. Determine what we need to do to achieve target state** ▪ Identity gaps between current & future state app architecture ▪ Define projects to get to future state ▪ Analyze & prioritize projects ▪ Ensure program is within budget
Step 6: Develop and Communicate Sequenced Roadmap	**6. Determine when and how the target state will be achieved** ▪ Develop a sequenced roadmap for achieving the future state application architecture ▪ Communicate the roadmap
Step 7: Monitor Application Architecture	**8. Check and approve on-going changes** Guide decisions regarding changes to the application architecture
Step 8: Govern the Application Architecture	**7. Keep on top of change** Review and highlight changes in versions, support and business need
Step 9: Execute Application Roadmap	**9. Execute** ▪ Deliver projects

Case Studies in Application Rationalisation

As an organisation begins decommissioning its application portfolio, you should pursue several potential gains while preparing for common pitfalls

Prepare

Potential Gains

- A comprehensive strategy for application selection and rationalization, delivered to support decision-making, can streamline operations
- Detailed decommissioning plans which balance risk, time and cost, and rapid development of program architecture support effective governance

Lessons from the Field

- Discovery of “orphan” servers, unknown owners or unknown applications, pose the greatest risk to project timelines
- Incomplete data regarding application connections and dependencies can inadvertently cause downtime

Decommission

Potential Gains

- A well executed and communicated decommissioning which meaningfully reduces application support costs can shift perception of IT from a cost center to a business partner committed to cost optimization
- Decommissioning legacy systems reduces operational risk and dependence on vendors

Lessons from the Field

- Lack of business engagement or under communication may lead to last minute “wave-offs” i.e., withdrawing from planned cutover
- Over reliance on single resources or third-party support creates risk
- Testing strategies must be thorough enough to capture critical dependencies but simple enough to avoid elongating downtimes

Wrap-Up

Potential Gains

- Decommissioning processes developed during the larger effort can be operationalized to efficiently sunset applications in the future
- Application data discovered during the decommissioning provide a rich configuration management dataset
- Tighter controls and accountability, including leadership-level reporting to ensure program success

Lessons from the Field

- Handing issues over to operations without complete resolution creates negative publicity and elongates resolution times
- Unrelated issues are frequently blamed on decommissioning

Q&A

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