ActewAGL

for you

ICT Strategy 2015 - 2019

"Enable ActewAGL's transition to our 2022 vision through the effective investment in and utilisation of technology across the business"

Foreword

The purpose of this document is to provide one Information and Communication Technology (ICT) Strategy that covers the ActewAGL Joint Venture (ActewAGL) for the five year period FY2015 - FY2019.

ActewAGL has made a significant investment in the replacement of information technology systems via the Systems Replacement Program (SRP). The current focus of the ICT Strategy for the next five years is centred on improving the alignment of ICT services, capabilities and resources with the emerging needs of the business. It also articulates how ICT will be used to help achieve ActewAGL's business strategies.

The ICT Strategy has been developed using input from ActewAGL's business divisions, and in consultation with the ActewAGL Executive.

This document consists of two components:

Part A - Strategic Directions responds to the external and internal strategic priorities of ActewAGL as a whole.

Part B - ICT Operational Framework outlines how ICT will be governed and managed within the organisation.

Table of Contents

PART A – Strategic Directions

1 Supporting ActewAGL's Strategic Outlook

Over the past five years ActewAGL has devoted considerable effort to re-focussing operations on core business of managing energy assets and customers. The ActewAGL Board endorsed the Strategic Outlook which sets out ActewAGL's strategic objectives for the next 10 years.

| Outlook	Transition
ActewAGL has operated its regulated network businesses and its retail operations very successfully. These existing businesses will continue to be the main focus of ActewAGL over the next ten years. But they will not operate in a "business as usual" manner. The energy business in particular will experience unprecedented change which will inevitably affect the day-to-day operations of ActewAGL's core business and will challenge many of the established work practices. *New opportunities will emerge during this period of uncertainty and volatility, some being opportunities of choice, others being opportunities of necessity driven by the need to defend existing businesses.* *As a result, ActewAGL will be a different organisation in ten years' time.*	*The transition of ActewAGL to 2022 will engage the entire organisation and require:* • *employees with a culture of adaptability, commercial agility and enthusiasm to embrace change and with the skills to succeed and in whom the culture of safety is deeply embedded;* • *existing business activities to be responsive to a new industry landscape and to be undertaken on the basis of continual improvement and improved efficiency;* • *modernisation of the networks;* • *successful implementation of major capital works programs;* • *active exploration of new markets and innovative ways of building customer loyalty;* • *growth through judicious investment in areas related to ActewAGL's core businesses; and* • *an increased focus on community interaction and corporate reputation under the one strong joint venture brand.*

Strategic Objectives for the Growth Phase

- *ActewAGL to continue to perform its core energy supply business in the ACT and capital region to generate acceptable returns to the owners;*
- *To move into new products and services (on a prioritised basis) in the ACT and capital regions that have a synergy with existing operations and capability, to ensure that ActewAGL holds a position in any product or service necessary to defend its core business and retain existing customers;*
- *To be agile to up-scale these products and services if they can evolve into a material new line of business with acceptable returns to the owners;*
- *To further consider what corporate vehicle/structure could be used to generate joint growth opportunities between the respective ActewAGL partnerships;*
- ██
- *ActewAGL's ICT Strategy aligns with the organisations strategic direction as technology plays a major role in supporting the business operations. To meet the emerging challenges and regulatory requirements will require greater adoption and integration of technology into ActewAGL's operations. Accordingly, future ICT investment must be planned, considered and appropriate for the business as a whole.*

> **To achieve the strategic direction whilst meeting challenges from change, competition, regulators and customers; ActewAGL must effectively invest in and utilise technology across the business.**

2 Alignment to ActewAGL's Planning Horizons

To proactively meet these challenges, ActewAGL's Ten Year Strategic Outlook adopts three distinct strategic planning horizons. The roadmap for these horizons are Regenerate (Years 1 - 3), Consolidate (Years 4 – 7) and Grow and Innovate (Year 8 and beyond).
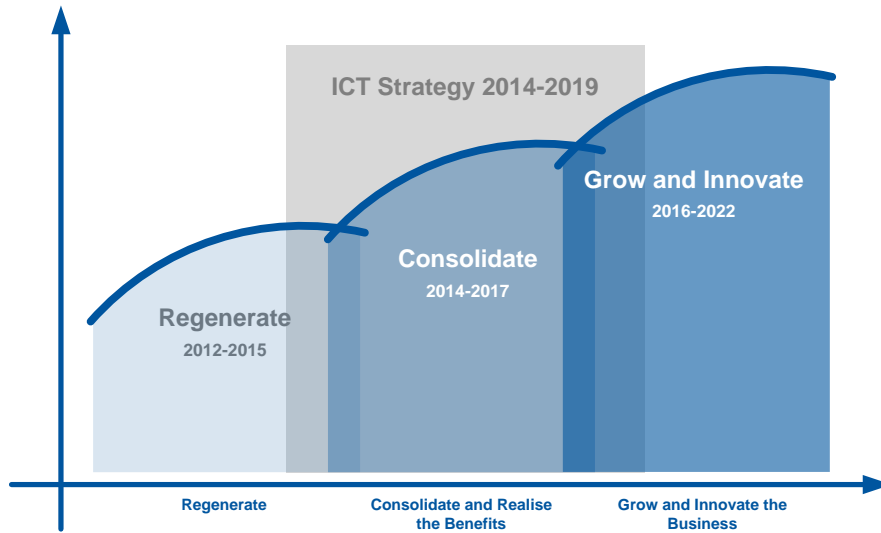
The role of technology and the outcomes sought from these three horizons is summarised below.

	Regenerate	Consolidate	Grow
Business Outcome	Cultural and business transformation to position ActewAGL to meet emerging challenges and prepare for consolidation.	Realise the benefits of organisational transformation and utilise new capabilities to initiate growth.	Pursue targeted growth, innovation and new opportunities.
Technology's Role	Replacement of aged corporate and operational systems to provide a stable technology platform and enable regulatory compliance.	Realise the benefits from investment in technology, build on capability available from improved systems and consolidate remaining systems.	Use technology to support business areas to identify and rapidly respond to change.

As ActewAGL commences the Consolidate horizon, the focus for ICT is primarily to realise the benefits from investment in technology, build on capability available from improved systems and consolidate remaining systems.

3 Key ICT Priorities

ActewAGL has three key priorities that form the primary focus of ICT activities. These priorities enable and support the strategic directions. They represent a significant investment in ICT and are critical in meeting business and regulatory requirements.

1 **Realising Systems Replacement Program (SRP)**

ActewAGL's most significant ICT investment is the SRP. This program is planned to go live on 30 June 2014.

The challenge for ActewAGL is to realise the benefits of the investment in SRP and develop capabilities needed to support, maintain and enhance the solution.

2 **Retail**

Manage and Maintain the ICT Asset Base

ActewAGL Networks is committed to maintaining its ICT asset base in accordance with the applicable regulatory standards. Part of this commitment requires ongoing investment, which further extends the core systems, introduces new business capabilities, and continues the replacement of outdated or obsolete assets.

Networks

3 **Support the Business via Common Solutions**

ActewAGL's Corporate and ICT must support reliable, safe, efficient and cost effective operations. Common solutions and services will be adopted across the entire business to achieve consistency, introduce economies of scale and avoid duplication.

Additionally, ActewAGL must continue to provide ICT shared services to ACTEW Corporation (ACTEW) under the Corporate Services Agreement (CSA) via ActewAGL Distribution and the Customer Services & Community Support Agreement (CSCSA) via ActewAGL Retail.

Corporate

4 Strategic Principles

In order to realise the benefits associated with the SRP and to ensure that ICT remains cost efficient moving forward, all ActewAGL business divisions must have a shared focus to guide ICT investment and decisions.

The aim of this shared focus is to ensure that ICT investment and decisions are in the best interest of the joint venture, avoid duplication, make best use of existing services and are aligned to common standards. The focus reflects that we are building a technology platform to support future growth, but not pursuing expensive 'best of breed' or 'leading edge' solutions.

ActewAGL's business divisions have identified eight common themes that together form a shared ICT focus for ActewAGL.
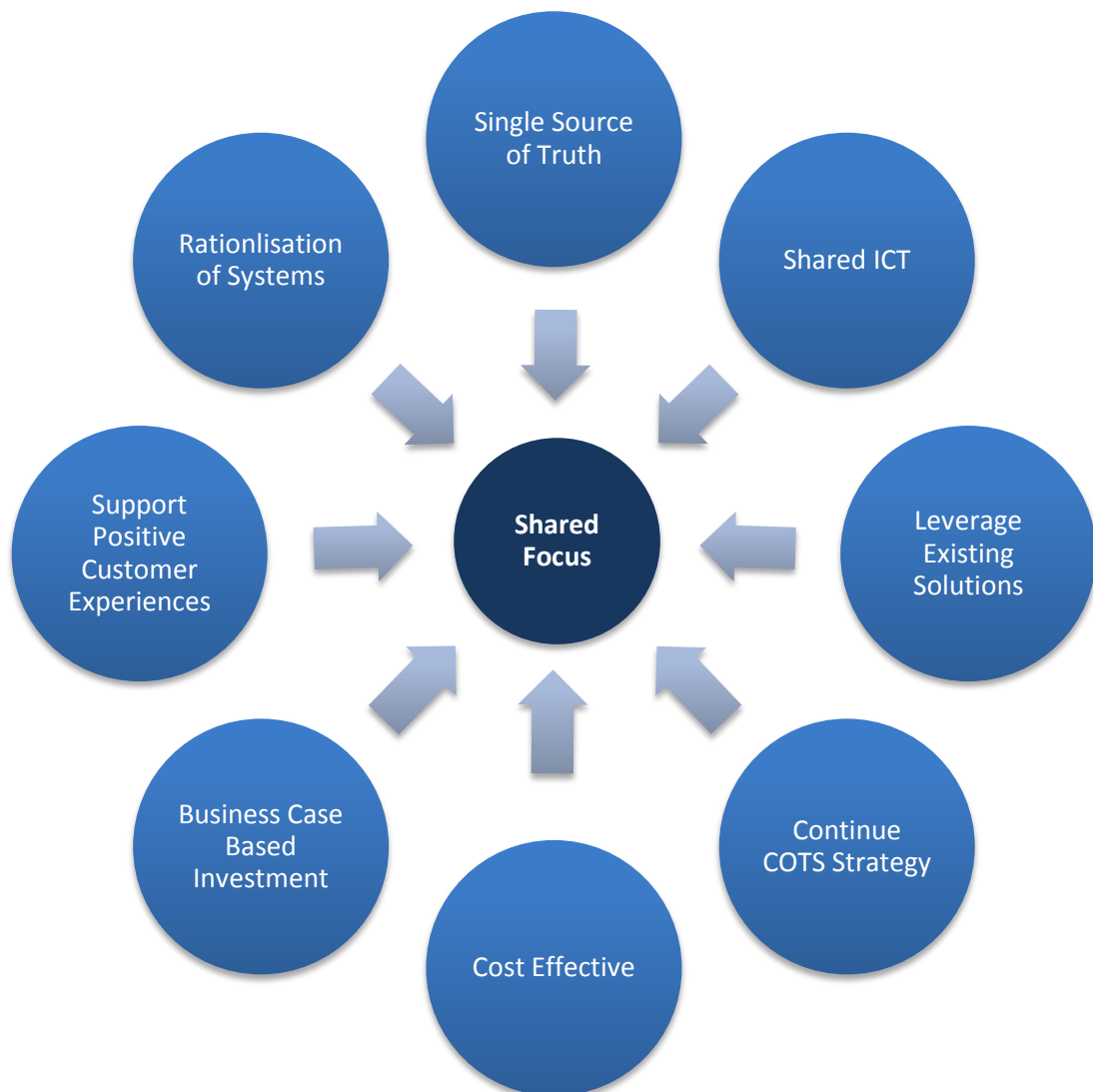
Single Source of Truth
Capture data once and then make it available where needed.

Shared ICT
Shared ICT assets, solutions and services should be managed in accordance with the relevant and applicable standards and other legislative and regulatory requirements so they can be shared across the business. This enables ICT to be adopted across the business to realise benefits at minimal incremental cost.

Rationalisation of Systems
Where possible use single solutions across the entire business rather than duplicating functionality in each area of the business to reduce technology complexity and deliver associated benefits, savings and efficiencies.

Cost Effective
While considering appropriate levels of risk, make cost effective choices for the delivery and support of ICT solutions. Where possible consolidate and centralise ICT service delivery to achieve economies of scale and other synergies.

Support Positive Customer Experiences
ICT solutions and services should be delivered with a customer centric focus to ensure a positive customer experience.

Business Case Based Investment
All ICT investments need to be supported by a business case. Business cases for all ICT investment are to include initial and full-cycle costs including support and maintenance.

Leverage Existing Solutions
Look for ways to leverage and expand the use of existing systems to drive value from ActewAGL's existing ICT investment.

COTS Strategy
Where re-use of existing solutions are not practical, buy Commercial Off-The Shelf (COTS) and only build custom solutions as a last resort. Minimise customisation through the re-engineering of business process to match COTS functionality.

5 Supporting Business Needs

Each ActewAGL business division requires ICT to support their respective business strategies. How they plan to utilise ICT via a series of key initiatives is summarised below:

	Background	Business Strategy	ICT Direction	ICT Initiatives
Networks	Networks operates and manages an electricity distribution and gas distribution network in a regulated environment governed by the National Electricity and Gas Rules, and each mandating a 5 year cyclical revenue determination process. The Electricity Network is operated, managed and maintained internally whilst the Gas Network although managed in-house, all other operations are outsourced including the provision of operational ICT systems. Networks has focused on the Corporate Objective of "Regenerate", that being the first of the 3 objectives: Regenerate, Consolidate, and Grow. In rationalising and implementing new systems: • Geospatial technology was chosen as the basis to strategically position the Network ICT systems to achieve the final 2 Corporate Objectives of Consolidate and Grow; • The PAS55 framework has been adopted "The optimal management of physical assets"; and • Legacy and obsolete systems and data have been rationalised.	From 2014 – 2018 Networks will focus on the Corporate Objective of "Consolidate". Challenges include: • Cyber Security; • Embedded Generation; • Demand Management; • Customer Engagement; and • Business Continuity Expectations. The Division will: • Transition from PAS55 to ISO55000; • Improve utilisation and productivity through mobility solutions; • Enhance the capability and capacity of the new Asset Management System (AMS) and extend it to non-distribution network assets; • Develop workforce knowledge; • Prepare for Smart Network technologies; and • Strengthen the Telecommunications Network.	The Networks ICT environment is working towards achieving a single, completely integrated system providing an end-to-end, geospatially-enabled platform for controlling the network, managing assets, designing and augmenting the network and delivering services to customers. A single platform provides organisation-wide visibility of the electricity distribution network, asset information and customer experiences to support the ActewAGL Strategy. The future ICT environment is comprised of five key functional areas: • Asset Management; • Enterprise Resource Planning; • Works Management; • Demand Management; and • Real-Time Network Operations.	• Azteca Cityworks (in progress). • Riva Modelling (in progress). • ESRI ArcGIS & Schneider-Electric ArcFM/Designer. • ADMS/Oasys SCADA Integrated High Voltage and Low Voltage Network Primary Control System. • ADMS/Oasys SCADA DR Facility. • Mobility Project. • ADMS Enhancements. • Engagement & Information Portal. • ███████████. • Electricity distribution Metering & Billing Stage 2. The telecommunications infrastructure included in Electricity Networks secondary systems strategy: • SCADA Telecommunications Infrastructure. • SCADA Radio IP, Bandwidth & Security.

ActewAGL *for you*

	Background	Business Strategy	ICT Direction	ICT Initiatives
Retail	██████████ ██████████ ██████████ ██████████ ██████████ ██████████ ██████████ ██████████ ██████████ ██████████ ██████████	██████████ ██████████ ██████████ ██████████ ██████████	██████████ ██████████ ██████████ ██████████ ██████████	██████████ ██████████ ██████████ ██████████ ██████████ ██████████ ██████████ ██████████
Corporate	ActewAGL has refocused its business operations to leverage its core competencies. IT investment in corporate systems over the last decade has been minimal. This has resulted in systems which have heavy customisation and inefficient business processes. ActewAGL has initiated the CSRP. This investment included upgrades to the finance, human resource and incident / risk / hazard / injury management systems.	The strategy for corporate services is to provide cost efficient and effective services to the ActewAGL organisation. Ensure compliance with statutory and regulatory obligations; report on the organisation's performance to stakeholders and to assist the executive through the provision timely and accurate corporate information.	The corporate ICT focus is to leverage the CSRP investment and limit future ICT investment in the core platform to support, upgrades and system enhancements. Planned ICT investment for corporate services will be restricted to complementary technologies such as business intelligence and to meet specific business requirements such as support the corporate banking replacement initiative.	• FIMS. • HRMS and FIMS. • Treasury and Banking Systems Upgrade. • Business Intelligence (Corporate component). • Guardian Upgrade. • Document and Records Management.

Background	**Business Strategy**	**ICT Direction**	**ICT Initiatives**
BSD Business Systems Division (BSD) is part of ActewAGL's Corporate business division within ActewAGL Distribution. Whilst it's not a separate business area, it has been included for completeness as it has responsibility for much of the ICT at ActewAGL. Traditionally, BSD has provided support to bespoke and custom built applications, however the change in strategy towards COTS solutions and the significant investment through the SRP initiative places new demands on the support and maintenance capabilities of BSD.	BSD's strategy is to provide cost efficient, service orientated and effective ICT support for ActewAGL. BSD aims to operate and maintain up-to-date COTs based systems and infrastructure. Its focus going forward is on prudent investment and simplification of the ICT environment whilst ensuring it remains secure and compliant.	To realise its strategy, BSD will introduce a service management framework to support the business and maintain the ICT investment. In addition, improve the resilience and reliability of the ICT infrastructure through a program of refresh and upgrade initiatives. Further, BSD seeks to consolidate, rationalise and improve ActewAGL's applications to reduce cost, enhance data integrity and support decisions in the field.	• Disaster Recovery (DR) facility (in progress). • Data Centre Upgrade. • Server Virtualisation. • Infrastructure Refresh and Expansion. • Operating Systems Upgrade. • Software Maintenance and Refresh. • IT Service Management. • Mobility Infrastructure. • Application Rationalisation.

5.1 Networks

ActewAGL Networks is responsible for electricity and gas distribution to customers in the ACT. This includes the provision of gas and electricity supply, connection and metering services to domestic and industrial customers in the ACT.

Networks
Background:
Networks build, operate and maintains an asset intensive environment regulated by the Australian Energy Regulator, specifically the National Electricity Rules (NER) and National Gas Law and Rules. ActewAGL's Electricity Networks has chosen to use an internationally recognised specification for the "Optimisation of Physical Assets" – PAS55, as its framework for holistic improvement to the approach to managing the Regulated Asset Base. This aligns with ActewAGL's Corporate Strategic goals of: Regenerate, Consolidate and Grow & Innovate. The period of 2012-14 was focused on "Regenerate".
Electricity Networks ICT systems (also referred to as Operational Technology or OT) are responsible for the maintenance, operation, reporting, planning, design and augmentation of the electricity distribution network. The ICT environment is a network decision support tool and operational portal for the management of a geographically distributed asset base in a business environment operating 24 hours, 365 days a year.
Given the geographically dispersed nature of electricity distribution, a geospatially-centric operational platform provides the most effective method for tracking distributed assets, customers and service deliverables. The period of 2012-14 focused on implementing geospatial based systems that could be purchased off the shelf i.e. with minimal customisation and review / consolidation of data to work towards a 'single source of truth'.
Strategic Electricity Networks ICT initiatives commenced during 2012-14 include:
Telvent Pilot: Advanced Distribution Management System (ADMS). Geographical Information System (GIS) centric, the ADMS is a consolidated network modelling system that combines network operation functionalities with network analysis and simulation capabilities.
Cityworks / Riva: GIS-centric Works, Asset Management and Strategic Planning System.
GIS ArcFM/Designer: An extension to the existing ESRI ArcGIS system that provides a suite of configurable data models critical to effective asset management.
Networks Strategy:
Electricity Networks operate in an industry facing unprecedented structural and technological change. Resource shortages, rising prices to customers and the normalisation of alternate energy generation sources are adding pressure to not only the work that Electricity Networks do but how quickly it needs to be able to respond to change.
Networks have adopted an asset-centric philosophy, delivering a high standard of

Networks

customer service, improving safety of employees and the community. Becoming more agile, flexible and adaptable will be vital to the continued success of Networks. Employees continue to play a critical role in delivering high quality and reliable services at reasonable prices to the consumer. Technological advancements, compliance requirements and increased partnerships with customers and stakeholders will heavily influence and change the manner in which Electricity Networks functions in future years.

Within the boundaries of the regulated environment, Electricity Networks will drive continuous improvement by transitioning from PAS55 as the governance framework for the "Optimisation of Physical Assets" to ISO55000 "An integrated, effective management system for asset management." Electricity Networks will manage, maintain and operate assets in a reliability-based asset management model, which provides a platform for business capability shift and modernisation of the Network as it seeks to move towards the Corporate Objective of "Grow and Innovate".

ICT Direction:

Electricity Networks have placed an emphasis on delivering on strategic ICT outcomes and a capability shift with an overall philosophy of rationalisation of functions. The future state of the network operational ICT environment is a single, completely integrated system providing an end-to-end, geospatially-enabled platform for controlling the network, managing assets, augmenting the network and delivering services to customers. A single platform will provide organisation-wide visibility of the electricity distribution network, asset information and customer experiences to support the Electricity Networks Strategy.

The future operational ICT environment is comprised of five key functional areas:

Asset Management: Statistical and reliability based modelling will be used to forecast future network requirements and manage the existing asset base.

Works Management: Service delivery will be fully contestable, and service providers, both internal and external, will require a high-security access portal to the operational environment and network information.

Real-Time Network Operations: Operating and tracking the networks real-time state, as well as providing detailed reporting on historical network performance and event analysis.

Demand Management: The electricity distribution network will be analysed and demand side management opportunities assessed, providing a platform to enact new Demand Side Management schemes and projects as well as monitor their effectiveness in real time.

Enterprise Resource Planning (ERP): Supports the sourcing, development and sharing of technology and systems related knowledge.

Initiatives:

- Azteca Cityworks (in progress).
- Riva Modelling (in progress).
- ESRI ArcGIS & Schneider-Electric ArcFM/Designer.
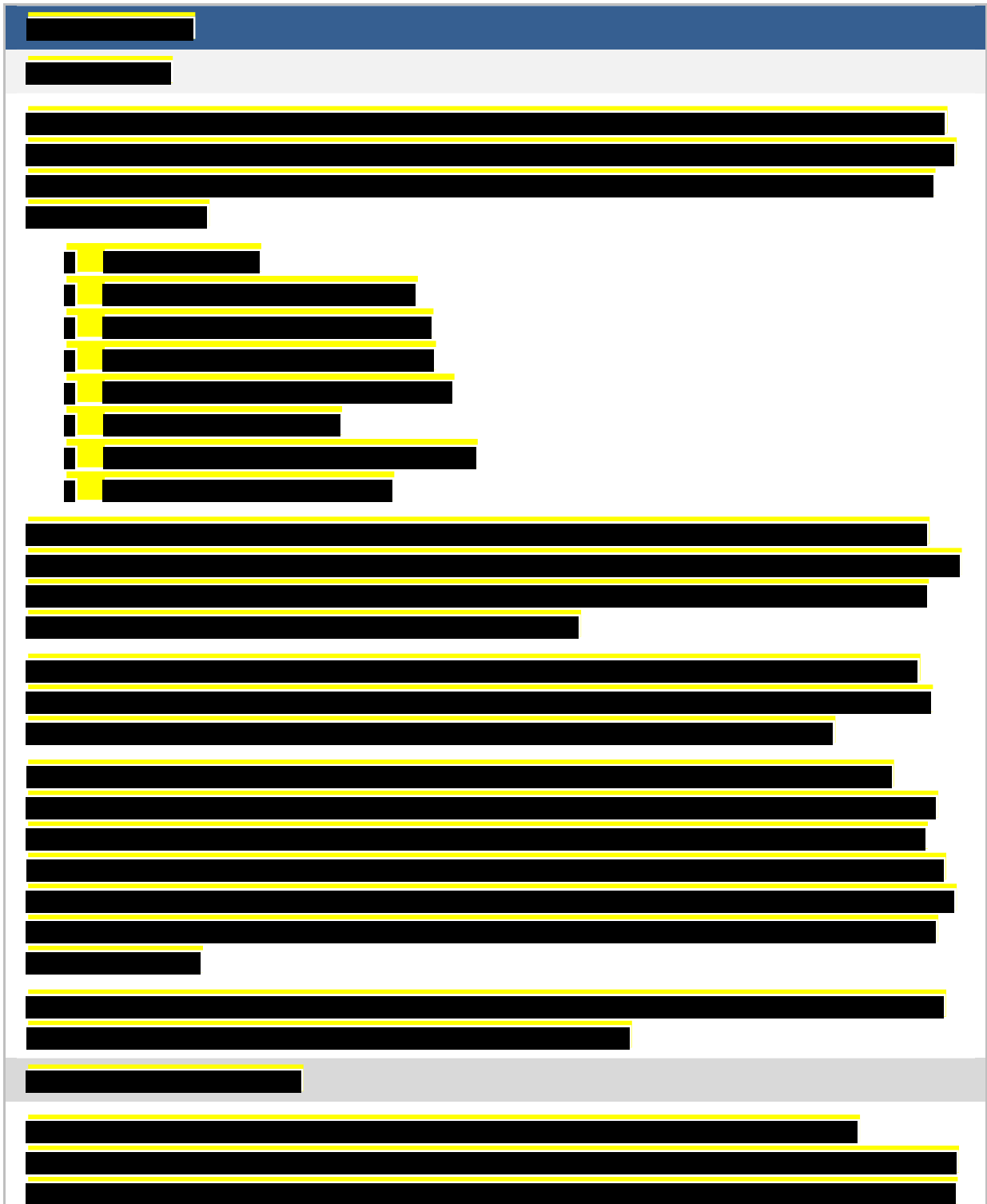
Networks
- ADMS/Oasys SCADA Integrated High Voltage and Low Voltage Network Primary Control System.   - ADMS/Oasys SCADA DR Facility.   - Mobility Project.   - ADMS Enhancements.   - Engagement & Information Portal.   ██████████████████   - Electricity distribution Metering & Billing Stage 2.   The telecommunications infrastructure included in Electricity Networks secondary systems strategy: - SCADA Telecommunications Infrastructure.   - SCADA Radio IP, Bandwidth & Security.

5.2 Retail Services

ActewAGL Retail purchases and retails electricity and gas services in the ACT and throughout the capital region (including Goulburn, Yass, Young, Nowra and Bega). ActewAGL Retail also provides a range of customer services functions to ACTEW under the CSCSA.

<table>
<tr><td>██████████████</td></tr>
<tr><td>████████</td></tr>
</table>

██
██
██
██
██
██
██
██
█████████████████████

██████████████████

██
█████████████████████████████

███
███
███
██
██
██████████████████████████████████

██████████

- ██
  ████████████
- ██
- ██
- ██
- ██
- ████████████████████████

5.3 Corporate Services

ActewAGL Corporate Services is responsible for the corporate affairs and support services of the ActewAGL Joint Venture; this includes finance, health and safety, legal, regulatory, and people services.

Corporate Services
Background:
ActewAGL has refocused its business operations to leverage its core competencies, promote greater business efficiencies and maximise shareholder value. This resulted in the divestment of non-core services, operations and assets. ActewAGL's IT investment in corporate systems over the last decade has been minimal. Systems have been "optimised" within budgetary constraints, leading to an overly complex patchwork of disparate, internally built, heavily customised, out of support and ageing systems. ActewAGL also faces increasing operational and reputational risk as heavy customisation and inefficient processes, coupled with limited vendor support, continues to impede the ability to modify systems to meet new and emerging business requirements and drive future efficiencies. To address these issues ActewAGL's response was to initiate a program of core systems replacement. The Core System Replacement Program (CSRP) is a transformational initiative to implement new systems for corporate business functions. This includes upgrades to the Financial Information Management System (FIMS), Human Resources Management Systems (HRMS) and the Guardian- incident/risk/hazard/injury management systems. This significant corporate ICT investment is a key enabler to meet future business, customer and regulatory challenges and requirements, maintain high performance and to pursue future growth and commercial agility.
Corporate Services Strategy:
The strategy for corporate services is to provide cost efficient and effective services to the ActewAGL organisation and ACTEW via the CSA and CSCSA. This includes: • The automation and streamlining of corporate business processes and improving the exchange of information to meet both internal and external stakeholders; • Ensuring compliance with statutory and regulatory obligations to meet the increased regulatory and other stakeholder scrutiny; • Effective and accurate management reporting on the organisations performance, resulting in enhanced investment and business choices; • Stronger information analytical capability to analyse and interpret data to improve strategic business decisions; and • Ensuring business risks are effectively managed and mitigated for the organisation and its customers.

Corporate Services

ICT Direction:

The corporate ICT focus is to leverage and maintain the CSRP investment via ongoing investment in support, upgrades and system enhancements to remain contemporary. This focus aims to realise the CSRP benefits of greater information integration, more efficient business processes, and improved information sharing across the business. Implement strong ICT governance and controls to better meet and comply with obligations and regulatory requirements and ensure that corporate systems are robust secure and supported.

Future investment in corporate ICT will be limited to complementary technologies and to meet specific business requirements.

Complementary technologies such as business intelligence and analytics will be introduced to leverage the data stored in core systems. The objective of this is to improve analysis and decision making capabilities.

Additional ICT investments will be made to address specific business needs as they arise such as the need to support the transactional banking replacement initiative and upgrades and system enhancements, to include audit, contractor management and mobility within the Guardian solution.

Initiatives:

- FIMS.
- HRMS and FIMS.
- Treasury and Banking Systems Upgrade.
- Business Intelligence (Corporate component).
- Guardian Upgrade.
- Document and Records Management.

5.4 Business Systems Division

ActewAGL's Business Systems division is responsible for IT corporate governance, service delivery and operations, applications, infrastructure, telecommunications, system processes and IT project management.

Business Systems Division
Background:
BSD has responsibility for much of the ICT at ActewAGL, these responsibilities include: • Working with business to build an understanding of their specific ICT needs; • Delivering and supporting ICT projects; • Managing, supporting and enhancing applications; • Operating ActewAGL data centre and physical ICT infrastructure; • Operating a business ICT helpdesk; • Managing the procurement of ICT assets and services from vendors; • Setting the strategic direction and leading ICT innovation at ActewAGL; and • Providing ICT shared services to ACTEW under the CSA and CSCSA via ActewAGL Retail. Traditionally BSD has provided support to bespoke and custom built applications, however the change in strategy towards COTS solutions and the significant investment through the SRP initiative places new demands on the support and maintenance capabilities of BSD.
Business Systems Strategy:
BSD's strategy is to provide cost efficient, service orientated and effective ICT support for ActewAGL. BSD aims to operate and maintain up-to-date COTS based systems and infrastructure. Its focus going forward is on prudent investment and simplification of the ICT environment whilst ensuring it remains secure and compliant. Consistent with ICT COTS strategy shared focus, BSD's future direction is to support and maintain more comprehensive solutions that are interfaced and require ongoing enhancement. The nature of the SRP systems being deployed is such that BSD now requires: • Better ICT - business alignment; • A more rigorous support and maintenance approach; • Stronger governance; and • Delivery of service in a cost effective manner. As a service provider, BSD must meet the increase in its responsibilities and to deliver on the service expectations of ActewAGL's business divisions.

Business Systems Division

ICT Direction:

To realise its strategy, BSD will introduce a service management framework to support the business and maintain the new ICT investment. This will enable BSD to govern ActewAGL ICT assets in accordance with the applicable quality and safety standards. Service management improvements will ensure that BSD meets the emerging business requirements and at the same time enable portfolio maturity to support COTS solutions.

BSD will continue to make improvements to improve the resilience, reliability and security of the ICT infrastructure through a program of refresh and upgrade initiatives.

In line with the shared ICT focus, BSD will seek to consolidate, rationalise and improve ActewAGL's applications to reduce cost, enhance data integrity and support decisions in the field.

Additionally BSD will look to increase its engagement with business areas to champion the strategic ICT direction and drive innovation with ActewAGL's business through the use of ICT.

Initiatives:

- Disaster Recovery (DR) facility (in progress).
- Data Centre Upgrade.
- Server Virtualisation.
- Infrastructure Refresh and Expansion.
- Operating Systems Upgrade.
- Software Maintenance and Refresh.
- IT Service Management.
- Mobility Infrastructure.
- Application Rationalisation.

6 ActewAGL Roadmap

Based on the ICT direction from each of the business areas, ActewAGL has slated a range of initiatives to contribute to achieving ActewAGL's ICT strategic direction. The size of the investment to deliver the initiatives is smaller when compared with the size of investment under the SRP.

Consistent with ActewAGL's Consolidate horizon, the proposed ICT investment initiatives are aimed at realising the benefits from investment in technology by providing ongoing refinement and complementary extension to the recently introduced ICT capability.

The key initiatives include:

Business Intelligence – a centralised business intelligence and analytics solution to enable business function and cross business function data analysis including retrospective and prospective analysis to improve decision making and crystallise savings across the organisation in areas such as procurement, working capital and resource planning.

Mobility – introduce the ability to deploy works and network information directly to the field for action, removing any avoidable travel between sites and the depot, improving data capture processes and overall productivity of field and office staff.

ADMS Integrated High Voltage (HV) and Low Voltage (LV) Network Implementation – provide the ability to manage the LV distribution network with the same amount of rigour applied to the management of HV network.

In addition to these key initiatives the technology roadmap provides more detail of other ICT initiatives and their timing. The roadmap provides the overview of planned ICT investment over the next 5 years.

A formal governance process will be established to assess each initiative against predefined criteria such as alignment to industry trends, timing of emerging technology adoption and operational readiness considerations to ensure that ActewAGL are implementing an economically sound, industry tested solution.

Further details are set out in the Technology Roadmap Implementation document.

6.1 Investment Summary

ActewAGL
for you

	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

Networks

- Telvent (OSRP) — Mobility Project
- AAD Billing (CSRP) — ADMS – Enhancements — Engagement and Information Portal
- Azteca City Works (OSRP) — Cityworks Stage 2 — Advanced Metering Infrastructure
- Riva Modelling (OSRP) — ESRI ArcGIS & Schneider-Electric ArcFM/Designer — Distribution Metering and Billing Stage 2
- ADMS Integrated HV and LV Network Primary Control System
- Minor IT Projects
- Riva Capital Planning Module
- SCADA Telecommunications Infrastructure
- SCADA Radio IP, Bandwidth & Security

Corporate

- FIMS – Oracle (CSRP)
- HRIMS – Aurion (CSRP)
- Document and Records Management — Document and Records Management — Business Intelligence
- Guardian Upgrade
- Treasury Solution
- Reporting Dashboard — FIMS — Contracts
- Leases — Accounts Payable
- Payroll Journal
- HRMS/FIMS
- Minor IT Projects

BSD

- DR Facility
- Data Centre Upgrade — Application Rationalisation
- Server Virtualisation — Server Virtualisation
- Data Storage
- Infrastructure Refresh and Expansion
- Operating Systems Upgrade
- Software Maintenance and Refresh
- Mobility Infrastructure

Business as Usual

- ICT Operations and Support
- IT Service Management Improvements
- ACTEW – CSA/ CSCSA

Legend:
- Part of Network's ICT Regulatory Submission
- Non-Regulatory Project
- Business as Usual Activities
- In progress Initiatives
- Part of Network's Regulatory Submission (Secondary Systems)

6.2 Initiative Summary

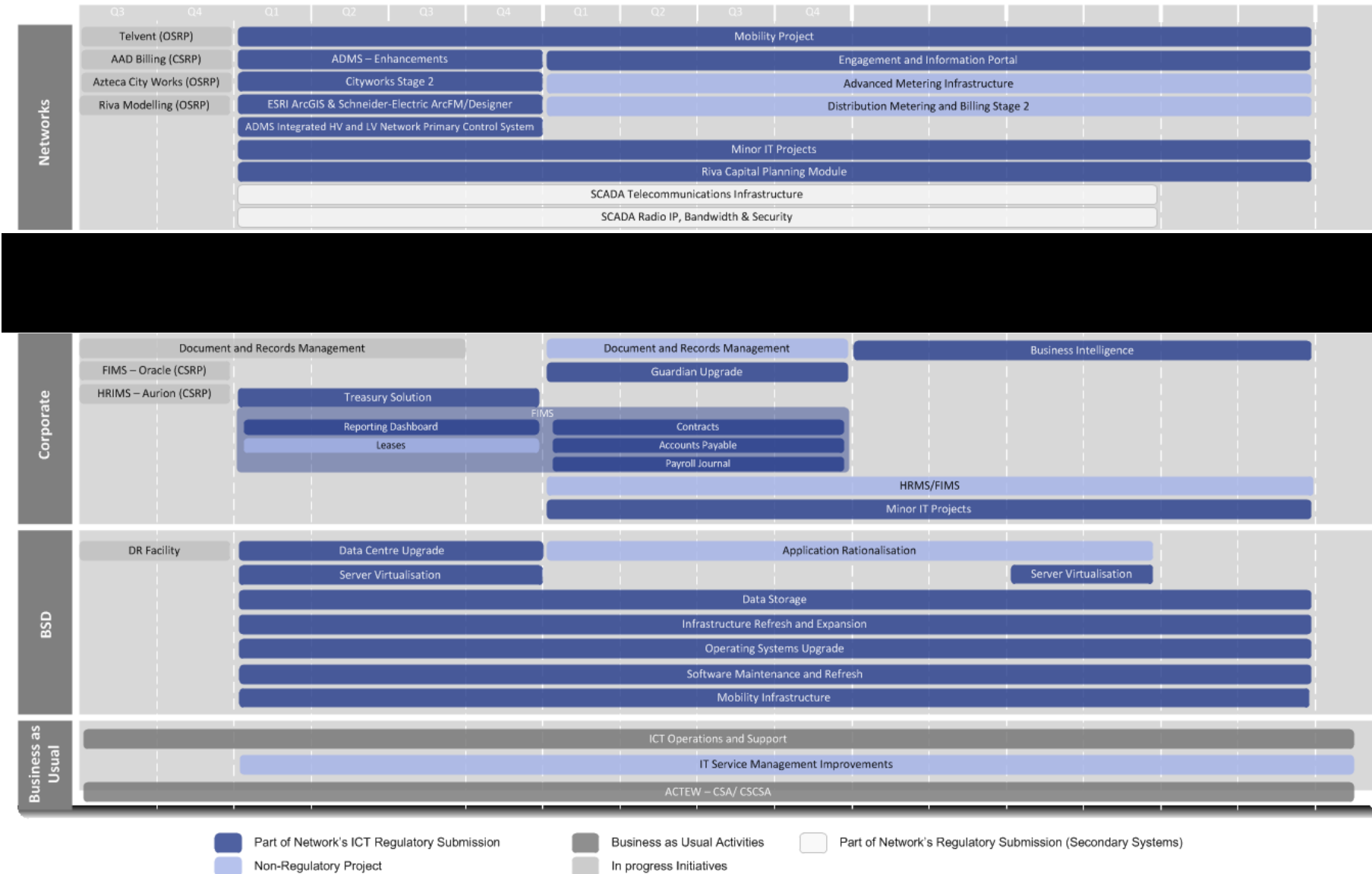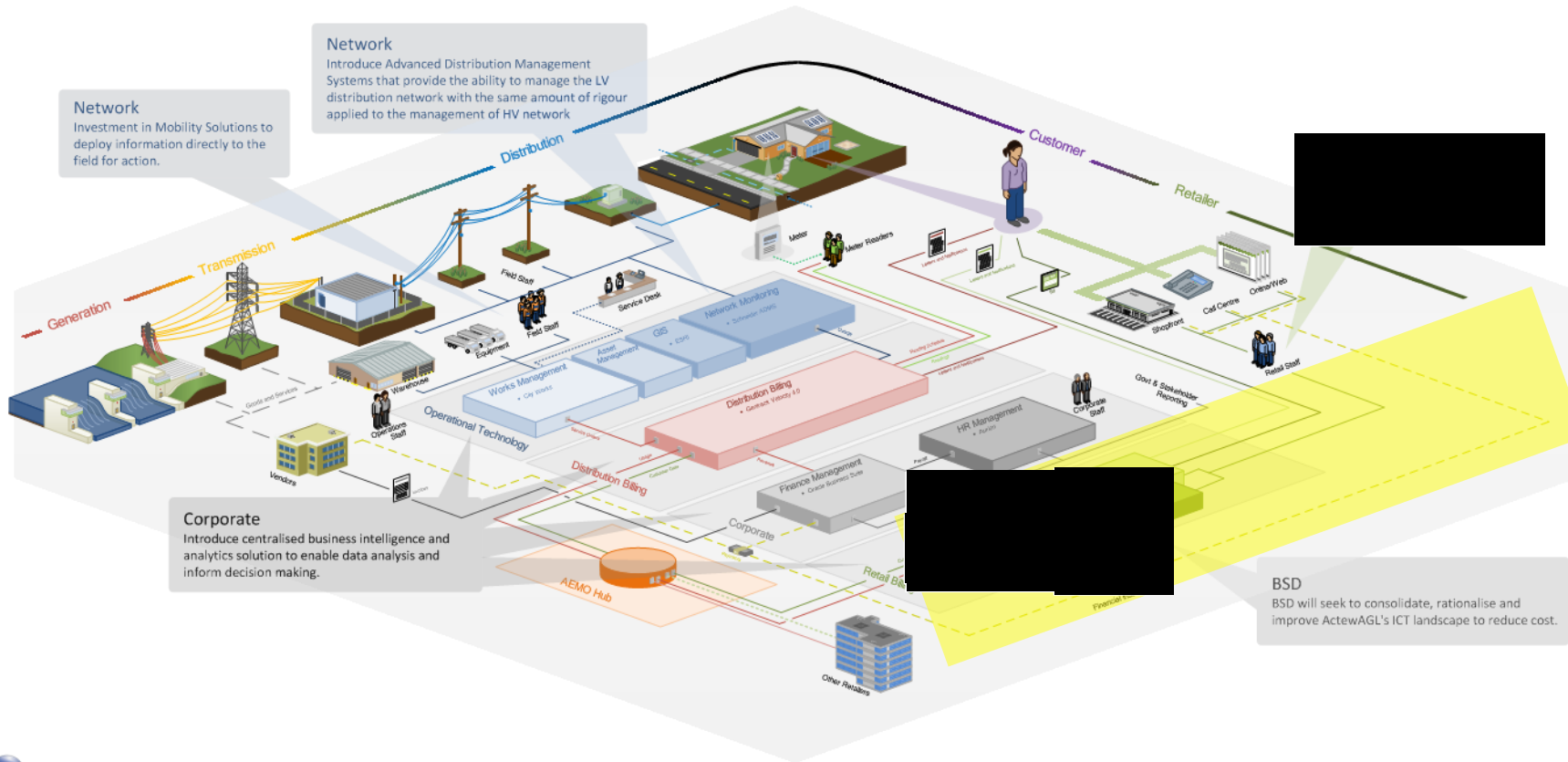|	Initiative	Description	Timeframes
Networks	ESRI ArcGIS & Schneider-Electric ArcFM/Designer	Provides ActewAGL with the ability to draft network designs directly in the GIS, conducive to a geospatially-centred environment.	FY15
	Mobility Project	Introduce the ability to deploy works and network information directly to the field for action, removing any avoidable travel between sites and the depot, improving data capture processes and applying more rigour to works performed.	FY15 – FY19
	ADMS Enhancements	Provides a platform for continued improvement in network management as well as providing tools to meet ActewAGL's future requirements (particularly regarding transmission network management).	FY15
	Riva Capital Planning Module	Expands on the ability to perform what-if scenario analysis on the distribution network to improve project delivery governance through portfolio analysis and management.	FY15 – FY19
	Engagement and Information Portal	Provides ActewAGL customers with tools to manage their consumption as well as necessary electricity distribution information. This complements demand management solutions and improves customer service.	FY16 – FY19
	▮▮▮▮▮▮▮▮▮▮	▮▮ ▮▮▮▮▮▮▮▮▮▮	▮▮▮▮▮▮
	ADMS Integrated High Voltage and Low Voltage Network Implementation	Provides the ability to manage3 the LV distribution network with the same amount of rigour applied to the management of HV network. This has significant benefits in terms of safety and productivity, as well as providing a platform for meeting statutory obligations.	FY15
	Cityworks Stage 2	Cityworks Stage 2 will focus on integrations with key systems within ActewAGL to build on the base established within its stage one project. Through the streamlining of processes and removal of data double handling, work force productivity is enhanced.	FY15
	SCADA Telecommunications Infrastructure	Delivery of an MPLS network covering the main control centre at Fyshwick, the future DRF facility at Civic Zone substation and connecting to all zone substations. The multi service network will provide individual virtual private networks for different services such as protection, SCADA, ▮▮▮▮▮ ▮▮▮▮▮ and corporate services.	FY 15 – FY18
	SCADA Radio IP, Bandwidth & Security	Delivery of an upgraded wireless communications network servicing the more remote assets in ActewAGL's Distribution Network. The current network is heavily strained and bandwidth restricted.	FY 15 – FY18

	Initiative	Description	Timeframes
Retail	██████████	██	██
	██████████	██	██████
	██████████	████████████████████████	██████
Corporate	FIMS	Will deliver a contracts management system integrated with ActewAGL's new (Oracle) FIMS. Electronic version of AP invoices stored with the relevant payment record and accessible through Financial Management System. Provides the ability to record and manage financial lease information through ActewAGL's Oracle based FIMS.	FY15 – FY16
	HRMS and FIMS	Outlines the costs to support the investment in the Financial and Human Resource management systems.	FY16 – FY19
	Treasury Systems Upgrade	Seeks to replace the current banking arrangement to leverage new services and expiring agreements with existing providers.	FY15
	Business Intelligence (Corporate component)	A centralised business intelligence and analytics solution to enable business function and cross business function data analysis including retrospective and prospective analysis.	FY17 – FY19
	Guardian Upgrade	Extends the Guardian software to include Health Monitoring; and replaces Microsoft SharePoint (Sentinel) with a Guardian module for Safety Audit documentation (and allowing integrated record keeping between incidents and audit).	FY16
	Document and records Management	A SharePoint-based electronic document and records management system called AIMS intended to be completed by end March 2015; a replacement corporate intranet to be built using the AIMS divisional sites; followed by a series of projects to interconnect all ActewAGL electronic applications	FY16

using SharePoint.

	Initiative	Description	Timeframes
BSD	Data Centre Upgrade	Refurbishment and upgrade of ActewAGL's primary data centre in Fyshwick.	FY15
	Server Virtualisation	Proposal is for the further adoption of virtualised servers to increase the efficiency of physical infrastructure used to support ActewAGL's processing needs..	FY15, FY18
	Infrastructure Refresh	ActewAGL must upgrade and replace its ICT Infrastructure hardware as machines become obsolete. This investment item makes provision for upgrading and replacing hardware.	FY15 – FY19
	Software Refresh	ActewAGL must upgrade and replace its ICT Applications as software becomes unsupported. This investment item makes provision for upgrading and replacing Software.	FY15 – FY19
	Mobility Infrastructure	As part of the mobility deployment establish common mobility infrastructure that can support the mobile platforms being deployed.	FY15 – FY19
	Data Storage	Proposal is to maintain a robust data storage solution to enable ongoing business system support and development.	FY15 – FY19
	Operating Systems Upgrade	Periodically ActewAGL must upgrade the operating systems used to manage our ICT hardware and applications.	FY15 – FY19
	Application Rationalisation	Consolidation, rationalisation and decommissioning of legacy applications across the application portfolio.	FY16 – FY18

7 ICT Strategic Summary

8 Strategic ICT Product Partners

ActewAGL utilises a select number of major partners to provide essential products, services and support to complement its existing in-house ICT capabilities. The establishment of vendor partnerships allows the organisation to:

- Reduce the cost of managing multiple vendor contracts;
- Acquire broader skillsets and expertise; and
- Simplify procurement processes and increase bargaining power (especially for major programs of work such as SRP).

PART B – ICT Operational Framework

1 Technology at ActewAGL

Technology is a key enabling asset for ActewAGL in meeting its core business of providing energy services to customers. It is used, in accordance with people and processes, to provide a comprehensive, efficient and effective integrated set of business capabilities. It encompasses both the technology managed and owned centrally by BSD and the technology managed directly by Networks to meet ActewAGL's business needs.

The technology utilised within the environment is governed by the Architecture Framework (as detailed in the Architecture Framework document) and presented in the Technology Roadmap.

1.1 Landscape

Over the next five years, ActewAGL's technology landscape is expected to significantly change the way the organisation uses technology for critical business functions. The introduction of new technologies such as mobility and business intelligence will provide a greater ability to capture and analyse data to improve the way energy services are delivered to customers.
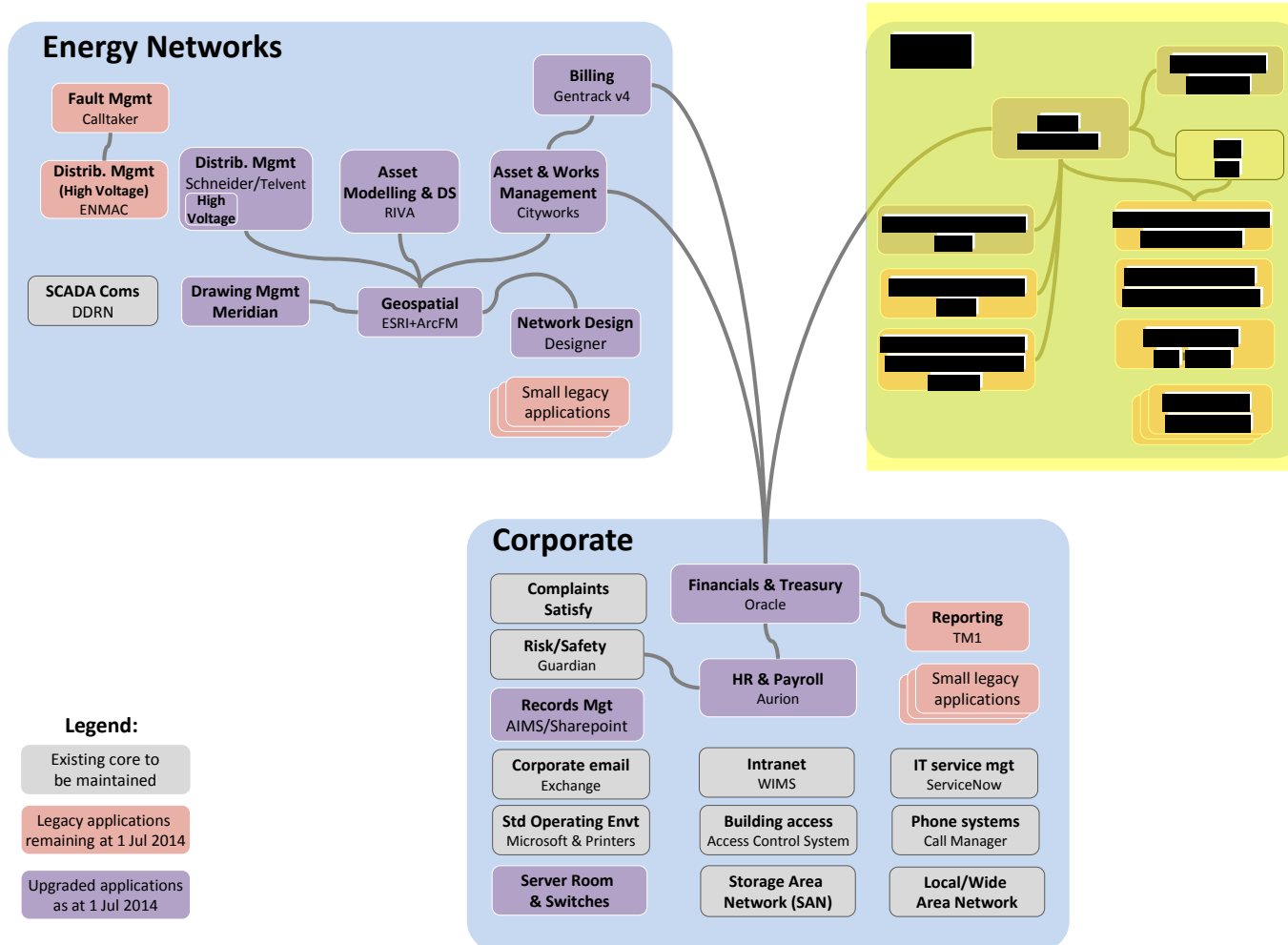
The table below outlines the key areas of the Current and Future Landscape.

Current Landscape – 1 July 2014	Future Landscape – 1 July 2019
• More than 100 specialist technology staff across the enterprise. • More than 450[1] business applications and supporting applications. • Communications infrastructure including Wi-Fi, radios and microwave. • A range of mobile and desktop computing technologies including desktop processors, Smart Phones, Tough Books, standard laptops and tablets. • Two data centres –Fyshwick and Greenway. • A Crisis Management facility. • A network including five main work sites and over 320 remote sites across the network. • An internal information and document repository enabled through an intranet.	• Consolidate and streamline the number of specialist technology staff across the enterprise. • A reduction in legacy business and supporting applications. • Communications infrastructure including Wi-Fi, radios and microwave. • A range of mobile and desktop computing technologies including desktop processors, Smart Phones, Tough Books, standard laptops and tablets. • Increased mobility capabilities for the organisation. • Three data centres – Fyshwick, Greenway and Civic. • A Crisis Management facility. • A network including five main work sites and over 320 remote sites across the network. • An internal information and document repository enabled through an intranet. • Business Intelligence capabilities. • Refresh of IT hardware and technologies (such as virtualisation).

The changes in the technology landscape are illustrated in the diagrams below.

---

[1] ActewAGL has approximately 451 applications. 216 are in-house developed applications, 153 purchased server-based applications, 22 online applications, 26 Windows based utilities and 30 applications specific to ActewAGL (ActewAGL – Application Rationalisation Review (June 2013) – PricewaterhouseCoopers)

1.1.1 ActewAGL Core Application Landscape – 1 July 2014

Energy Networks

- **Fault Mgmt** Calltaker
- **Distrib. Mgmt (High Voltage)** ENMAC
- **Distrib. Mgmt** Schneider/Telvent **High Voltage**
- **Asset Modelling & DS** RIVA
- **Billing** Gentrack v4
- **Asset & Works Management** Cityworks
- **SCADA Coms** DDRN
- **Drawing Mgmt** Meridian
- **Geospatial** ESRI+ArcFM
- **Network Design** Designer
- Small legacy applications

Corporate

- **Complaints** Satisfy
- **Financials & Treasury** Oracle
- **Reporting** TM1
- **Risk/Safety** Guardian
- **HR & Payroll** Aurion
- Small legacy applications
- **Records Mgt** AIMS/Sharepoint
- **Corporate email** Exchange
- **Intranet** WIMS
- **IT service mgt** ServiceNow
- **Std Operating Envt** Microsoft & Printers
- **Building access** Access Control System
- **Phone systems** Call Manager
- **Server Room & Switches**
- **Storage Area Network (SAN)**
- **Local/Wide Area Network**

Legend:
- Existing core to be maintained
- Legacy applications remaining at 1 Jul 2014
- Upgraded applications as at 1 Jul 2014

* The ActewAGL Landscape is currently undergoing a significant transformation with the upgrade of the major core and operational systems.

1.1.2 ActewAGL Core Application Landscape – 1 July 2019

Energy Networks

Fault Mgmt Calltaker

Billing Gentrack v4

Distrib. Mgmt
Schneider/Telvent
High Voltage | Low Voltage

Asset Modelling & DS
RIVA

Asset & Works Management
Cityworks

SCADA Coms
DDRN

Drawing Mgmt
Meridian

Geospatial
ESRI+ArcFM

Network Design
Designer

Advanced Metering Infrastructure

Engagement & Information Portal

Mobility Solution

Corporate

Complaints
Satisfy

Financials & Treasury
Oracle

Business Intelligence

Risk/Safety
Guardian

HR & Payroll
Aurion

Records Mgt
AIMS/Sharepoint

Corporate email
Exchange

Intranet
WIMS

IT service mgt
ServiceNow

Std Operating Envt
Microsoft & Printers

Building access
Access Control System

Phone systems
Call Manager

Server Room & Switches

Storage Area Network (SAN)

Local/Wide Area Network

Legend:

Existing core to be maintained

Legacy applications remaining at 1 Jul 2019

ICT Strategy 2019

Partially remediated (Core remaining legacy)

- *Initiatives outlined in the technology roadmap will continue to upgrade key systems and refresh infrastructure throughout the five year period, ultimately reducing the number of legacy systems within the environment and streamlining support processes.*

1.2 ICT Operational Framework

The ICT operational framework consists of three major components that underpin how ICT will be governed and managed within the organisation.

- Governance;
- ICT Application Responsibilities; and
- Financial Model.

2 Governance Structure

The ActewAGL ICT governance structure is designed to provide a basis to manage and deliver ICT solutions. It is modelled upon the forums established as part of the existing SRP and is intended to replace existing arrangements once the SRP is delivered.

The governance structure is intended to reduce complexity in decision making, whilst putting in place the necessary controls to reduce ICT risk across ActewAGL.

An overview of the governance framework is as follows:

2.1 ICT Governance Framework
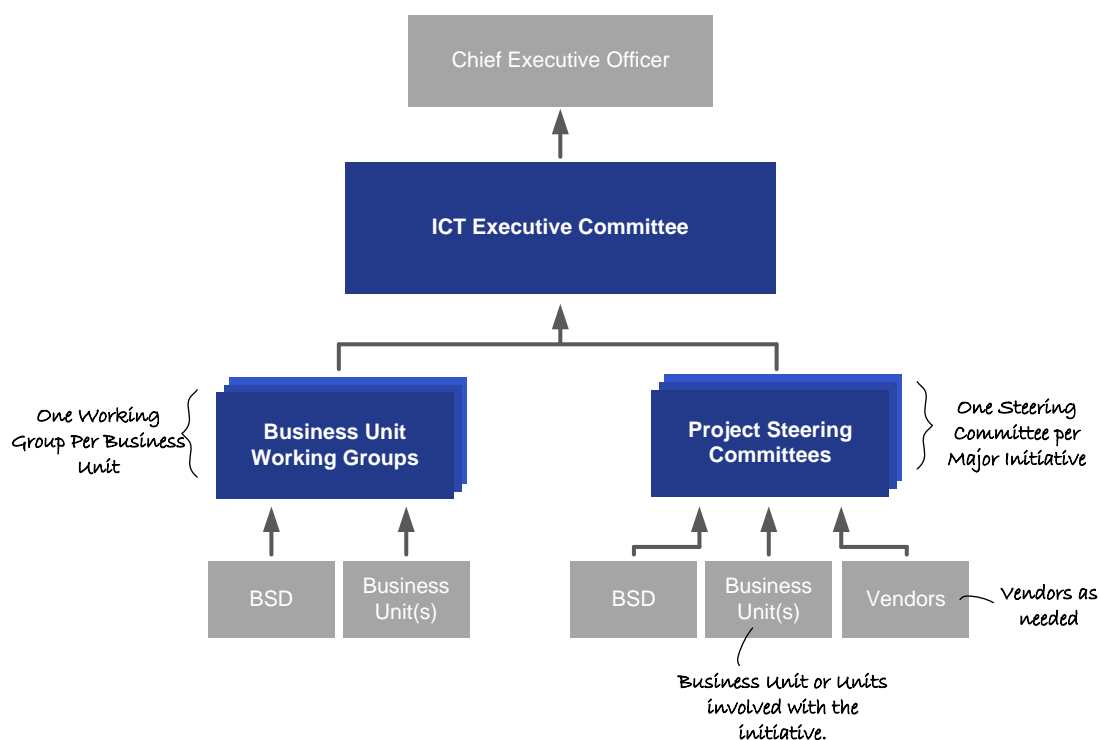
This governance arrangement serves a dual purpose to set the future direction of ICT and resolve issues that may arise from BaU as well as monitor and oversee the delivery of major ICT initiatives. To be effective the ICT governance framework needs to be applied to all ActewAGL ICT Systems.

While this governance framework does not specifically cover ACTEW, similar and complementary governances are in place to cover this[2].

---

[2] ACTEW Corporation ICT Executive Committee Board paper November 2013

2.2 Governance Detail

ICT Executive Committee	
Charter	**Scope**
The ICT Executive Committee will oversee ActewAGL's ICT from inception, delivery and operations. • Set the ICT direction for the organisation. • Make decisions on ICT priorities and the ICT initiatives that will be undertaken. • Monitor the progress and risks with delivery of ICT initiatives.	The core focus of the committee is to make decisions on: • Large ICT projects or programs in accordance with the relevant financial delegation; • Deviations from ICT strategy and the impact on business risk; and • Complex, High Risk or High Impact ICT projects. In addition the committee will review and acknowledge operational reports from the business unit working groups.
Membership	
The current SRP Board becomes the new ICT Executive Committee.	

Business Unit Working Groups	
Charter	**Scope**
The Business Unit Working groups will ensure that ICT is being used effectively within each Business Unit and addresses issues that impact the business unit operations. In particular; • Discuss how ICT can solve Business Unit operational issues including reviewing new and emerging technology trends; • Develop and review business cases for new ICT Initiatives; • Review and Address ICT issues that impact the business unit operations; • Present major new ICT Initiatives to the ICT Executive Committee for prioritisation and consideration; and • Report on minor and BaU operations to the ICT Executive Committee.	All ICT interaction with the relevant business unit.
Membership	
Business unit and BSD representation.	

Project Steering Committees

Charter	Scope
The Project Steering Committee will oversee the implementation of a particular ICT initiative including: • Scope; • Progress; • Issues / Risk and Assurance; and • Project finance. The Project Steering Committee's aim is to ensure the timely and successful delivery of the initiative and reporting back to the ICT Executive Committee.	All items impacting project delivery.

Membership

Respective affected Business Unit Project Management Offices (PMO), BSD and vendors as required.
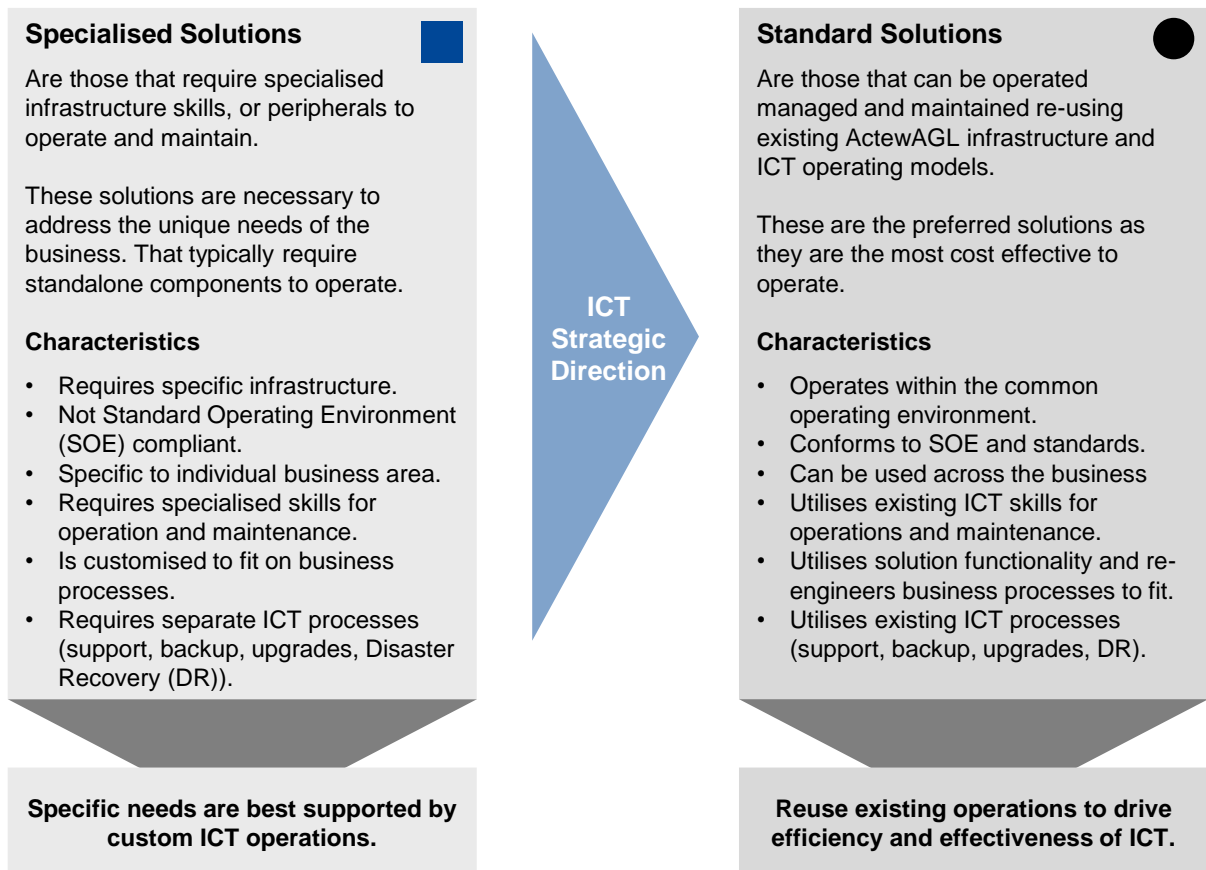
3 ICT Application Responsibilities

ActewAGL has a unique blend of ICT assets needed to operate its business. Some of these assets such as telemetry systems are specific to particular areas, while some assets such as finance are common and are used across the business.

To be cost effective, the challenge for ActewAGL, as highlighted in the technology landscape, is to ensure that the best or most appropriate organisational unit manages the ICT asset without the duplication of services or infrastructure.

3.1 Specialised and Standard Solutions

In keeping with the shared ICT focus where possible, ActewAGL will look for a standard solution for the operation of systems but acknowledge that in some circumstances a specialist solution is needed.

Specialised Solutions

Are those that require specialised infrastructure skills, or peripherals to operate and maintain.

These solutions are necessary to address the unique needs of the business. That typically require standalone components to operate.

Characteristics

- Requires specific infrastructure.
- Not Standard Operating Environment (SOE) compliant.
- Specific to individual business area.
- Requires specialised skills for operation and maintenance.
- Is customised to fit on business processes.
- Requires separate ICT processes (support, backup, upgrades, Disaster Recovery (DR)).

Specific needs are best supported by custom ICT operations.

ICT Strategic Direction

Standard Solutions

Are those that can be operated managed and maintained re-using existing ActewAGL infrastructure and ICT operating models.

These are the preferred solutions as they are the most cost effective to operate.

Characteristics

- Operates within the common operating environment.
- Conforms to SOE and standards.
- Can be used across the business
- Utilises existing ICT skills for operations and maintenance.
- Utilises solution functionality and re-engineers business processes to fit.
- Utilises existing ICT processes (support, backup, upgrades, DR).

Reuse existing operations to drive efficiency and effectiveness of ICT.

Note that presence of more specialised solutions will increase risk and ongoing operating costs. Hence the preferred strategy is to adopt standard solutions across ActewAGL.

3.2 Business Systems Division

BSD is the primary provider of standards and shared ICT infrastructure and service delivery, system operations, and local area networks at ActewAGL. Currently BSD manage and maintain:

- Underlying technology infrastructure.
- Business service technology.
- Common systems.
- The Help Desk function.

3.3 Application Responsibility Matrix

The application responsibility matrix is designed to streamline the way in which support services are delivered across the organisation by applying a shared services model. Adopting a standard approach where possible, to the ongoing support of each system will reduce the cost of support and aim to reduce the overall risk to business operations.

The application responsibility matrix is an appendix to the ICT Strategy. It is intended to be updated from time to time to reflect changing responsibilities and ActewAGL's changing ICT assets.

3.4 Deciding how an ICT application / asset will be managed

While the application responsibility has default responsibilities, the aim is to make the right decision in the best interest of ActewAGL as a whole. Where there is disagreement as to responsibilities, the ICT Executive Committee will make a decision as to the management and operation of a particular ICT asset.

4 ICT Security Strategy

The five year ICT Security Strategy details the application of critical ICT Security functions across the organisation. A major component of the Strategy will be to embed security governance and IT security risk management processes into the design and implementation stages of ICT projects (this will be particularly crucial in the implementation of new and emerging technologies such as mobility) to ensure the IT environment remains resilient to security threats.

ICT security makes up a critical component of the Architecture Framework (as detailed in the Architecture Framework document).

The Strategy also details the following key aspects of ICT Security:

- Guidance on compliance with external certifications such as PCI DSS and ISO 27001;
- Ongoing monitoring of the ICT environment;
- Incident response processes; and
- Ongoing security testing, audit compliance and process improvements.

5 Financial Models

The following model will be applied to apportion the cost of ICT across ActewAGL's business units. The intent of this financial model is to ensure a fair distribution of costs whilst ensuring that the model does not create undesired outcomes such as duplication of infrastructure of functionality because 'it was cheaper that way'.

The financial model used for ICT is the same as that used for apportion all corporate service costs.

5.1 Cost Breakdown

ActewAGL's business unit ICT costs are broken down into three core components; the ICT cost directly incurred by the Business Unit such as specific software licences, BSD ICT costs that can directly be attributed to the Business Unit such as project resources, and BSD costs that cannot be directly attributed and need to be generic allocated such as management overheads.
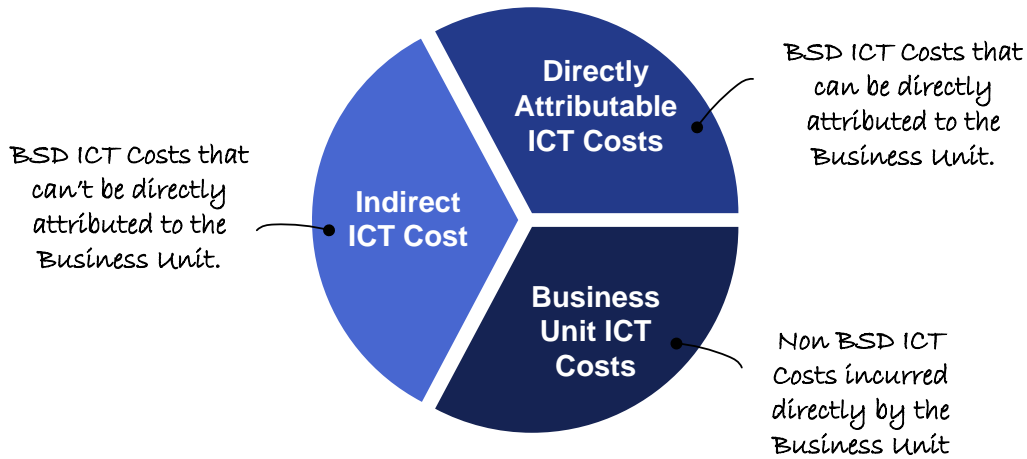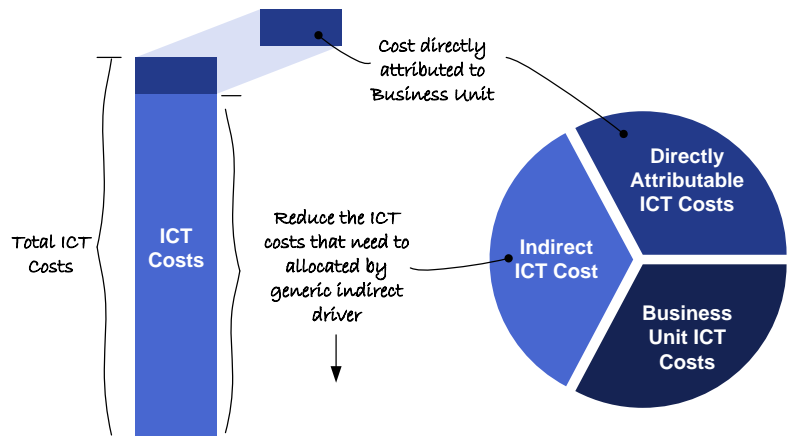

5.2 Indirect ICT Costs

ActewAGL's corporate strategy is to reduce the generic indirect costs through greater direct allocation of costs. The intent is twofold, firstly it allows for fairer cost allocation and secondly it provides greater transparency of costs which leads to more informed decision making and greater efficiency.

The introduction of the corporate services catalogue is the first step in the process, here ICT services are defined along with other corporate services. These services can then be directly attributed to the business unit.

As the BSD component of ICT cost that are directly attributed increases, the indirect ICT costs are reduced, leading to lower indirect ICT costs for each business unit.

5.3 Direct ICT Costs

The draft ActewAGL corporate strategy currently identifies the following ICT service which can be directly attributed to business units. It is anticipated that this list of services will grow and change overtime.

Corporate Application Support (100)	• Applications Hosting (101) • Upgrades (102) • Applications Maintenance & Support (103) • Database (104) • SharePoint Platform Support (105) • Application Development (150) • Application Enhancement (151) • Application Integration (152) • Application Provisioning (153)
Integrated Messaging (200)	
Infrastructure Services (300)	• Server and Storage Infrastructure (301) • Backup and Recovery (302) • Maintenance (303) • Security Management (304) • Patching Infrastructure (305) • Patching Applications (306) • Licensing (below the line) (307) • Licensing (above the line) (308) • Provision - Server and Storage Infrastructure (309) • IT Service Continuity Design & Delivery (310)
Desktop and Mobile Devices (400)	• I*Net (401) • Remote Access (402) • Standard Operating Environment (403) • Email Service (404) • Desktop COTS Provisioning (405)

Communications (500)	- Telephony (501) - LAN/WAN (502) - Wireless (503) - Trunk Mobile Radio (504) - Digital Data Radio Network (505) - VHF Radio Network (506) - Provision-Telephony (507) - Provision-LAN/WAN (508) - Provision-Wireless (509) - Provision-TMR (510) - Provision-DDRN (511) - Provision – VPN (512) - Provision-Solar (513)
Service Desk and Desktop Support (600)	- Service Desk (601) - Desktop Support (602) - Desktop Support (Executive and Board Member) (603) - Move Add Change (604) - Telephony Support (605) - Hosted Applications Support (606) - Access management (607) - Incident Management (608) - ICT Hardware Removal (609) - ICT Sterilisation (610)
Portfolio and Project Management Office (700)	- Portfolio Management (701) - Project Management (702)
ICT Purchasing (800)	- Asset Purchasing (801) - ICT Asset Management (802) - ICT Telephony Purchasing (803) - Telephony Reporting (804) - Managed Print Services (805) - Managed Print Service Reporting (806)
Business Improvement (900)	- Business Analysis (901) - Enterprise Architecture (902)