

1.	Overview.....	2
2.	ICT Governance	3
2.1	ICT Planning Process.....	4
2.2	ICT Initiative Prioritisation.....	7
2.3	Benchmarked ICT Governance	7
3.	Consultancy Budget.....	10
3.1	Efficiency of Consultancy budget.....	10
4.	Staffing Levels	12
4.1	Cloud Services (14 FTE Reduction)	12
4.2	Efficiency – FTEs	15
4.3	Efficiency – Current Service Delivery	17
5.	Recommendations.....	18
6.	APPENDICES	19
6.1	APPENDIX 1 – Comparison To CH2M Hill Assessment Process	19
6.2	APPENDIX 2 - KPMG Review Key Observations	20
6.3	APPENDIX 3 – ICT Cost Estimation Process 2014/15	22
6.4	APPENDIX 4 – Consultancy Budget Reclassification	25
6.5	APPENDIX 5 – Supporting Documentation	26

1. OVERVIEW

Seqwater issued its Regulatory Submission to the Queensland Competition Authority (QCA) on 14 July 2014¹ setting out (amongst other things) its proposed capital and operational expenditure for future years.

In November 2014 the QCA released a Draft Operating and Capital Expenditure Review Report (Draft Report)² prepared by consultants CH2M Hill. The Draft Report advised that certain expenditures warrant additional detailed justification and proposed: “in the absence of valid substantiation of these costs”, significant reductions to future ICT operating expenditures.³

This submission responds to the Draft Report and provides additional information to support the proposed ICT expenditures consistent with the prudence and efficiency definitions of the QCA. The specific items from the Draft Report addressed here are:

1. Information Technology Consultancy – the proposed reduction from \$4,067,233 in the 2014/15 forecast year to the FY2013/14 amount of \$2,193,669. (refer p93 of Draft Report).
2. Full Time Equivalent (FTE) staff – the proposed reduction from 44 FTEs to 30 FTEs over a two year period. CH2M Hill proposed this reduction based on their own estimate of potential savings resulting from a change in service delivery model from in-house asset ownership to an As a Service (Cloud Services) model. (refer p66 of Draft Report).

If accepted, the reductions proposed in the Draft Report would impact ICT programs that have been planned and approved to support the operations of Seqwater and are consistent with the approved Board Strategy and in line with ICT risk identified by the board.

In addressing the concerns raised by CH2M Hill, this submission focusses on the following:

1. ICT Governance:

¹ *Seqwater Bulk Water Prices Seqwater Bulk Water Prices 2015 to 2018, Submission to the Queensland Competition Authority, Issued: 31 July 2014*

² *CH2M Hill (November 2014) Queensland Competition Authority Seqwater Operating and Capital Expenditure Review Assessment of Prudence and Efficiency*

³ *CH2M Hill (November 2014) Queensland Competition Authority Seqwater Operating and Capital Expenditure Review Assessment of Prudence and Efficiency p93*

- demonstration of adequate governance structures and supporting processes for project identification and prioritisation to ensure the **prudence** of proposed expenditures
2. ICT Consultancy (OPEX):
- provision of detailed supporting information to demonstrate the efficiency of the proposed expenditures. This includes detailing the process used for the development of the preliminary cost estimates for the initiatives on which the 2014/15 budget is based.
3. FTEs (OPEX):
- analysis to support a longer time period for achieving reductions in FTEs as a result of moving to a 'Cloud Services' model (for software and infrastructure) from the CH2M Hill proposed 2 years to 4 years to better manage implementation risks.
 - provision of additional information to demonstrate the prudence and efficiency of the proposed FTE levels based on the specific initiatives planned and approved consistent with the objectives of the Seqwater Strategic Plan.

The following sections set out the detailed planning behind the proposed ICT initiative and demonstrate alignment with the QCA's definitions for prudence and efficiency.

In summary, all of the proposed ICT initiatives:

- are aligned to the Seqwater strategy and business requirements
- have been through appropriate planning and approval processes reflective of good business practice
- estimated costs have been developed appropriately for their stage of development having been prepared by industry professionals and include (amongst other things) reference to benchmarks and industry information sources.

2. ICT GOVERNANCE

This section provides an overview of the planning and development process behind the ICT operational expenditure initiatives.

The Business System Steering Committee (BSSC) has been established under the authority of the Executive Leadership Team (ELT) to oversee the ICT function. The BSSC role includes capturing, evaluating and prioritising all new initiatives and has the pre-eminent role in influencing both ICT strategy and governance.

The BSSC has implemented governance processes to ensure only those initiatives required to meet legal and regulatory obligations are approved and included in the ICT budget.

2.1 ICT PLANNING PROCESS

Figure 1 (below) sets out the planning processes (blue areas) for the development and approval of ICT initiatives. The figure also shows the governance functions (green areas) that oversee the development of expenditure programs and ensure alignment with strategic objectives.

Alignment with corporate strategy and objectives is assured via a combination of ‘top down’ and ‘bottom up’ planning and approval processes. The ‘top-down’ corporate strategy is developed by the Board in consultation with the business and captured in the approved Strategic Plan. The ‘bottom-up’ Business Planning process identifies potential new initiatives and assesses these to ensure alignment with the objectives of the Strategic Plan.

The BSSC has been established by the Executive Leadership Team (ELT) with responsibility for the ICT strategy and for the endorsement of all ICT related initiatives⁴ that support business operations. Refer to **Highlight Box 1: Business System Steering Committee (BSSC)** below for a more detailed explanation of the role of the BSSC.

All initiatives proposed during the Business Planning process are supported by an Initial Advice Statement (IAS). The IAS identifies the business need for the project and this must be aligned to a specific corporate driver (e.g. growth, compliance etc).

The IASs that are put forward to the BSSC for approval identify (amongst other things) consideration of alternatives, project risks and estimates of costs.

Figure 3 below provides a schematic of the Seqwater Business System Project Delivery Framework showing that the IAS is the preliminary assessment gateway and that IAS approval precedes the development of a detailed business case. The level of investigation and rigour applied in developing the IASs is considered appropriate⁵ for a Gate-0 approval.⁶

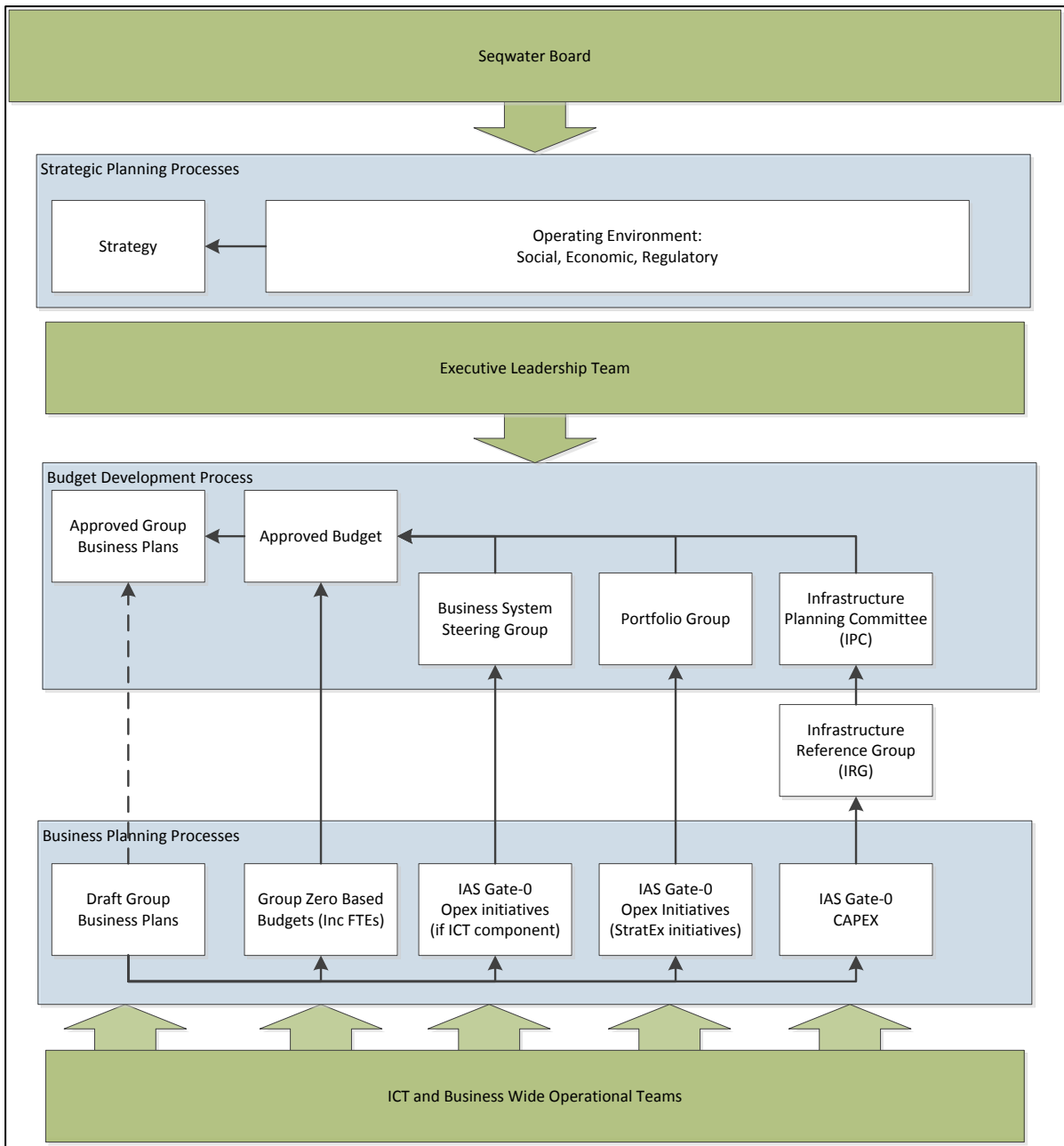
To ensure costs reflect efficient practice, cost estimates were prepared by industry professionals, with reference to benchmarks and industry information sources and were compared to previous year’s programs for consistency.

⁴ BSSC Charter 20130828.docx p8

⁵ Refer findings in KPMG ICT Strategy Expenditure Readiness Assessment - Final Report - 31 July 2014p7

⁶ An overview of the cost estimation process undertaken for the ICT IASs is included in Section 6.3 Appendix 3 p22

Figure 1 Overview of the Seqwater strategic business planning environment



The governance arrangements in place ensured that only prudent initiatives, where the identified business need was assessed against Seqwater's legal and regulatory obligations, were included in the Regulatory Submission.

Highlight Box 1: Business System Steering Committee (BSSC)

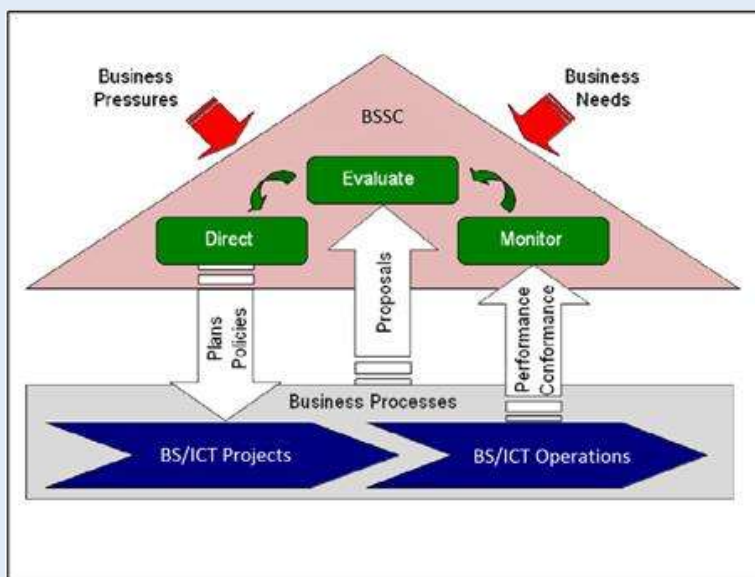
The BSSC is established under the authority of the Executive Leadership Team (ELT), with GM SP&T accountable for its operation. The BSSC oversees the ICT function and its role includes:

- Providing a link between ICT and the business to achieve the highest level of shared vision
- Ensuring alignment between Seqwater’s strategic information needs and ICT capability by overseeing and endorsing the ICT Strategy
- Capturing, evaluating and prioritising all initiatives:
 - Consider/reject/endorse and/or recommend changes on proposed initiatives;
 - Consider/endorse proposed project plans;
 - Identify conflicts in relation to existing projects, give consideration to reprioritise and redirect, and reject a proposal for a new project if warranted;
 - Provide an oversight with regards to agreed parameters, benefits and resources
 - Identifying any Seqwater-related dependencies
- Identifying opportunities for innovation and investment in ICT and initiating feasibility assessments
- Maintaining BS/ICT-related risk at an acceptable level
- Monitoring the progress of major BS /ICT initiatives;
- Ensuring security and integrity of business systems;

The BSSC has the pre-eminent role in influencing both ICT strategy and governance. It extends the governance of ICT in Seqwater through three main tasks:

- **Evaluate** the current and future use of ICT-enabled Business Systems (BS).
- **Direct** preparation and implementation of plans and policies to ensure the use of BS/ICT meets business objectives.
- **Monitor** conformance to policies, and performance against the plans.

Figure 1 models the relationship of the Evaluate-Direct-Monitor task cycle as explained in Standard ISO/IEC 38500:2010 Model for Corporate Governance of IT.

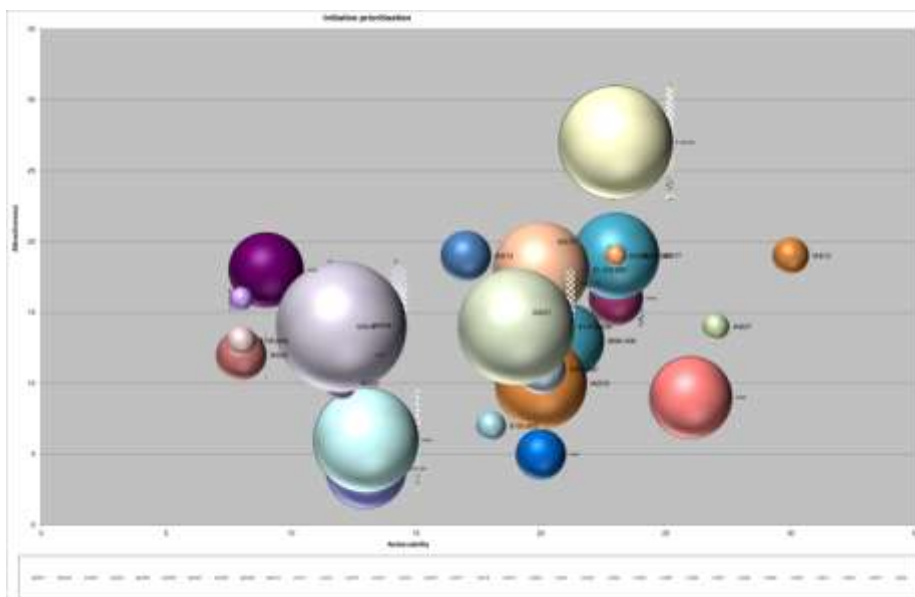


2.2 ICT INITIATIVE PRIORITISATION

The 'bottom-up' planning process generates a wide pool of possible projects. This pool of projects is prioritised by comparing the business need and the strategic alignment with further consideration of the achievability of each initiative.

This prioritisation step applies an additional filter to ensure only priority projects are approved for further investigation via a business case and ensures the investment program reflects only those initiatives it is efficient to undertake.

Figure 2 Example IAS prioritization matrix from business planning activity



2.3 BENCHMARKED ICT GOVERNANCE

Since the 2013 merger ICT Governance has progressively improved including the implementation of:

- 1) ICT Strategy - The ICT Strategy identifies adherence to QLD Government ICT objectives and the inclusion of ICT capability to support business initiatives such as Business Intelligence and Monitoring Control Systems. The strategy was introduced to the Board at the April 2014 Board meeting, with the final version endorsed at the October 2014 Board meeting,
- 2) Zero based 2014-15 budget - The ICT budget was built based on actual invoicing and approved FTE costs that reflect operating costs across the merged entities. These are ICT's fixed costs (licensing and other contractual obligations), which amount to 80% of budget.
- 3) ICT initiative portfolio -A portfolio of ICT initiatives had been developed consistent with the ICT Strategy, and supported by individual cost estimates.

The initiative portfolio, including the methodology supporting the budget has been independently reviewed by KPMG. This review included benchmarking against other utilities based on proprietary information from ICT industry specialists Gartner. The review of existing Governance concluded:

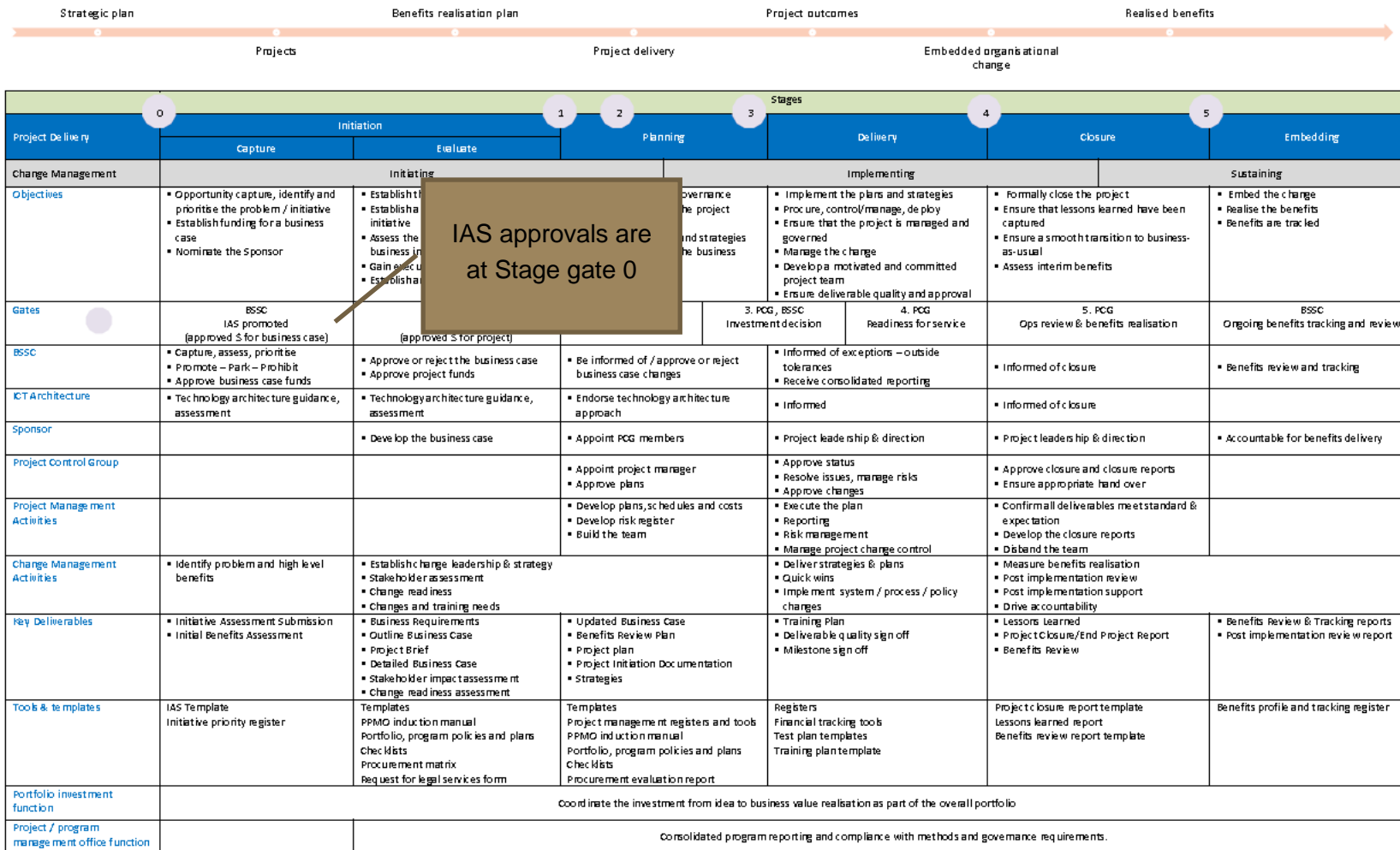
- ICT strategic priorities and initiatives align with the Seqwater Corporate Strategy 2013-2018.
- The BSSC operates as a key governance forum to ensure strong business consultation for ICT initiatives.
- Initiative business cases consider risk and risk mitigation activities.⁷

⁷ KPMG ICT Strategy Expenditure Readiness Assessment - Final Report - 31 July 2014 p7

Figure 3: Seqwater Business System Project Delivery Framework

Seqwater Business Systems Project Delivery Framework

August 2013



3. CONSULTANCY BUDGET

This section addresses the proposed reduction in the consultancy budget from \$4.01m to \$2.19m.

The Draft Report advised that the budget for Information Technology Consultancy warranted additional detailed justification and proposed: “in the absence of valid substantiation of these costs”, significant reductions to future operating expenditures. Specifically – a proposed reduction from \$4,067,233 in the 2014/15 forecast year to the FY2013/14 amount of \$2,193,669.⁸

The consultancy budget is made up of the aggregated cost estimates for a portfolio of approved IASs. Section 3 above, **ICT GOVERNANCE** deals with the issue of prudence of the proposed initiatives and (as stated previously) demonstrates that only prudent initiatives, where the identified business need was assessed against Seqwater's legal and regulatory obligations, were included in the Regulatory Submission.

This section therefore seeks to provide the substantiation of costs to support the *efficiency* assessment of the consultancy budget, per the CH2M Hill requirements in the Draft Report.

A cashflow analysis showing the costs for the various approved IASs has been provided as supporting information report (refer table at Appendix 3).

3.1 EFFICIENCY OF CONSULTANCY BUDGET

As stated previously, the IAS approval is the preliminary assessment gateway and precedes the development of a detailed business case. The IASs put forward to the BSSC for approval identify (amongst other things) alternatives, project risks and estimates of costs.

Given that detailed investigation and planning is undertaken at the business case stage, the level of investigation and rigour applied in developing the IASs needs to be considered against the cost to generate the estimate and other associated inputs.

To ensure proposed costs reflect efficient practice, the IAS estimates were prepared by industry professionals using a three step process that included:

- **Stage 1** – establishment of initial costing assumptions (rates and hours etc)

⁸ CH2M Hill (November 2014) Queensland Competition Authority Seqwater Operating and Capital Expenditure Review Assessment of Prudence and Efficiency p93

- **Stage 2** – population of a Component Level Estimation Model based on varied sources (e.g. SLIM method) and comparison against empirical data sets to allow for size, complexity, impact
- **Stage 3** – compared budget to averages of past year totals to ensure estimates were in the range of these previous budgets and that ratio of Opex and Capex reflected the strategy and ICT Roadmap.

The costs estimation processes for justifying the portfolio of ICT initiatives is considered appropriate for a Gate-0 approval.^{9,10} The methodology for forecasting the ICT initiatives has been independently reviewed by KPMG and concluded that forecasting methods are:

- In line with industry practice and organisational governance policies, detailed business cases will be prepared for all ICT initiatives included in the expenditure forecasts.
- Seqwater subject matter experts have leveraged their knowledge of market and past experience in estimating the future cost of projects.
- A Component Level Estimation Model has been used and documented to support the expenditure forecasts.¹¹

⁹ A detailed explanation of the cost estimation process undertaken for the ICT IASs is included at Appendix Section 6.3 Appendix 3 p22

¹⁰ Notwithstanding potential improvements recommended at Section 6 of this submission.

¹¹ KPMG ICT Strategy Expenditure Readiness Assessment - Final Report - 31 July 2014 p7

4. STAFFING LEVELS

This section addresses the proposed reduction of FTEs from 44 to 30.

The 2014/15 FTE count reflects the approved establishment numbers required to support the current ICT business as usual (BAU) services. The current ICT establishment incorporates efficiencies already achieved via the restructuring activities post the bulk water entity merger of 1 January 2013.

The Draft Report states: *“CH2M HILL accepts that the 43 FTE allocated to this area in 2013/14 and the 44 FTE forecast for 2014/15 has been and may continue to be required to facilitate consolidation of the merged entity business systems in the short-term.”*¹²

However CH2M Hill go on to recommend significant reductions in FTEs based on an assumed two-year implementation timeframe for the proposed Software as a Service (SaaS) initiative. *(Note for the discussion that follows SaaS and Infrastructure as a Service (IaaS) have been combined under the generic term ‘Cloud Services’).*

Section 3 above, **ICT GOVERNANCE** deals with the issue of prudence of the proposed initiatives and demonstrates that only prudent initiatives, where the identified business need was assessed against Seqwater's legal and regulatory obligations, were included in the Regulatory Submission.

This section therefore, seeks to provide:

- a detailed response to the feasibility of the 14 FTE reduction proposed in the Draft Report as a result of moving to a Cloud Services model (including the proposed timeframe for achieving implementation).
- substantiation of an additional 10 FTEs required for approved new initiatives
- benchmarking data to demonstrate current service delivery is at the efficient end of ICT service provision for comparator organisations

4.1 CLOUD SERVICES (14 FTE REDUCTION)

In the Draft Report CH2M Hill proposed a reduction of 14 FTEs based on the following assumptions:

- 1) that Cloud Services could be implemented from Seqwater's current state within two years

¹² CH2M Hill (November 2014) Queensland Competition Authority Seqwater Operating and Capital Expenditure Review Assessment of Prudence and Efficiency p66

- 2) that 80% of staff involved in the areas of database administration, software support and server maintenance would be redundant (14 FTEs)
- 3) (inferred by omission) nil new initiatives to support Seqwater operations that would require additional FTEs were allowed for in the Draft Report (this assumption is discussed at Section 4.2 below).

Each of the above assumptions has been based on insufficient information. The following sections provide the necessary additional information to demonstrate that the proposed reductions are not considered achievable nor prudent.

Our analysis, supported by Gartner research of the Cloud Services market is set out at Table 1 below, and supports:

- a longer transition period to a Cloud Services model (four years instead of two)¹³
- achievable staff reductions on business as usual (BAU) of 10 FTEs as a result of a transition to Cloud Services model
- FTE reductions may be greater but for specialist Seqwater functions that are likely to be retained post transition to Cloud Services pending maturity of the Cloud Services applications market.

In summary, the CH2M Hill assumptions for FTE reductions in the Draft Report should be reconsidered given the level of planning (pre-business case) undertaken within Seqwater to date, as well as the maturity of the Cloud Services market generally. As an essential service provider, Seqwater will need to allow for extensive planning prior to implementation of Cloud Services to ensure that whilst pursuing this Government Strategy, risks to the community are managed and mitigated. On this basis a longer transition period to achieve reductions is considered prudent.

¹³ Gartner 2013 Strategic Road Map for Outsourcing Competencies (2013_strategic_road_map_for__250619.pdf Inc G00250619) p9

Gartner, Inc. (NYSE: IT) is the world's leading information technology research and advisory company. Source: <http://www.gartner.com/technology/about.jsp>

Table 1: Analysis of FTE assumptions in the Draft Report

Assumption	Analysis	Conclusion
<p>Cloud Services to be implemented from Seqwater's current state within two years</p>	<p>Gartner currently place Cloud Services (Saas and IaaS) at the 'adolescent' stage of its Hype Cycle and consider it will take 2-5 years for the product to reach maturity. For instance, there is currently only 5-20% market penetration for IaaS.</p> <p>For Seqwater the Cloud Services initiative is at the IAS stage (i.e. Gate-O). There is no approved business case in place setting out options analysis, risks, costs and timeframes. The development of the business case is expected to take a minimum of 12 months from commencement to approval given the extensive planning and market engagement required to manage anticipated risks during transition.</p> <p>For a detailed understanding of the issues to be addressed in the development of a cloud computing business case refer to the Commonwealth Government Department of Finance and Deregulation publication: <i>A Guide to Implementing Cloud Services - Better Practice Guide</i></p> <p>http://www.finance.gov.au/files/2012/09/a-guide-to-implementing-cloud-services.pdf</p>	<p>The two year implementation time frame is not supported by prudent business practices given the Cloud Services market maturity.</p> <p>A graduated implementation, with benefits in terms of FTE reductions is considered feasible over a four year period rather than two years.¹⁴</p>
<p>80% of staff involved in specific technical areas of XYZ would no longer be required</p>	<p>A review of Seqwater ICT resources has identified that there are only 15 technical roles that support services eligible to transition to Cloud Services¹⁵ rather than the ~18 identified in the Draft Report.¹⁶</p> <p>CH2M Hill postulated that 80% of these staff may be able to be reduced via a move to Cloud Services.</p> <p>This assumption is considered highly ambitious considering the range of critical platforms operated by Seqwater that are not currently delivered in the 'as a service' market (e.g. specialist systems for flood operation or water quality).</p> <p>As stated above, Cloud Services is not a mature product offering. There is high likelihood that Seqwater will still need to host some services where the market does not provide a particular functionality.</p>	<p>FTE reductions achieved via transition to Cloud Services is likely to be in the range 9-10 rather than 14 proposed by CH2M Hill.¹⁷</p>

¹⁴ Gartner 2013 Strategic Road Map for Outsourcing Competencies (2013_strategic_road_map_for__250619.pdf Inc G00250619) p9

¹⁵ Technical Operations = 15 FTE. Other FTEs are Management 1; Strategy, Architecture and Governance (including Assets and Finance) 8; Business Improvement 4; Procurement, Sourcing and Contracts 2; PMO 6; Business Intelligence 5; Information and Records Management 3

¹⁶ CH2M Hill assumed 40% of ICT staff performs technical roles. Seqwater's 44 ICT FTEs perform various functions such as business process improvement, procurement and records management that are not

4.2 EFFICIENCY – FTEs

Implicit in the CH2M Hill FTE analysis is the assumption that nil new ICT initiatives to support Seqwater operations would require additional FTEs. However, there are 10 additional FTEs required for prudent non-BAU initiatives that have been planned and approved consistent with the Seqwater governance processes.

The initiatives and associated FTEs are:

- Monitoring & control systems (4 FTE) Cyber security, BI, Network vendor mgt
- Water Quality management system (2 FTE) Reporting, Data Quality management
- Corporate reporting (2 FTE)
- Mobility (2 FTE)

ICT is an enabler of the business – ultimately ICT FTE numbers are driven by business initiatives, such as water quality management or mobile computing applications. This estimate of 10 additional FTEs is considered conservative and is based only on known initiatives identified via business planning.

The cost (in terms of FTEs) associated with these initiatives has been identified as part of the business planning process. As stated previously, the cost estimation processes that supports the justification of the portfolio of ICT initiatives is considered appropriate for a Gate-0 approval^{18,19}.

The methodology for forecasting the ICT initiatives was independently reviewed by KPMG who concluded the methods are:

- In line with industry practice and organisational governance policies, detailed business cases will be prepared for all ICT initiatives included in the expenditure forecasts.

anticipated to be reduced via the Cloud Solution under consideration. The scope for FTE reductions is to be confirmed at the Business Case stage.

¹⁷ Assumes 60% of 15 FTE roles are able to be made redundant as a result of transition to Cloud Services model.

¹⁸ A detailed explanation of the cost estimation process undertaken for the ICT IASs is included at Section 6.3 Appendix 3 p22.

¹⁹ Notwithstanding potential improvements recommended at Section 6 of this submission.

- Seqwater subject matter experts have leveraged their knowledge of market and past experience in estimating the future cost of projects.
- A Component Level Estimation Model has been used and documented to support the expenditure forecasts.

The impacts of various assumptions (including the planned Cloud Services reductions) are shown in the graph at *Figure 4 FTE Number under various investment scenarios*, below.

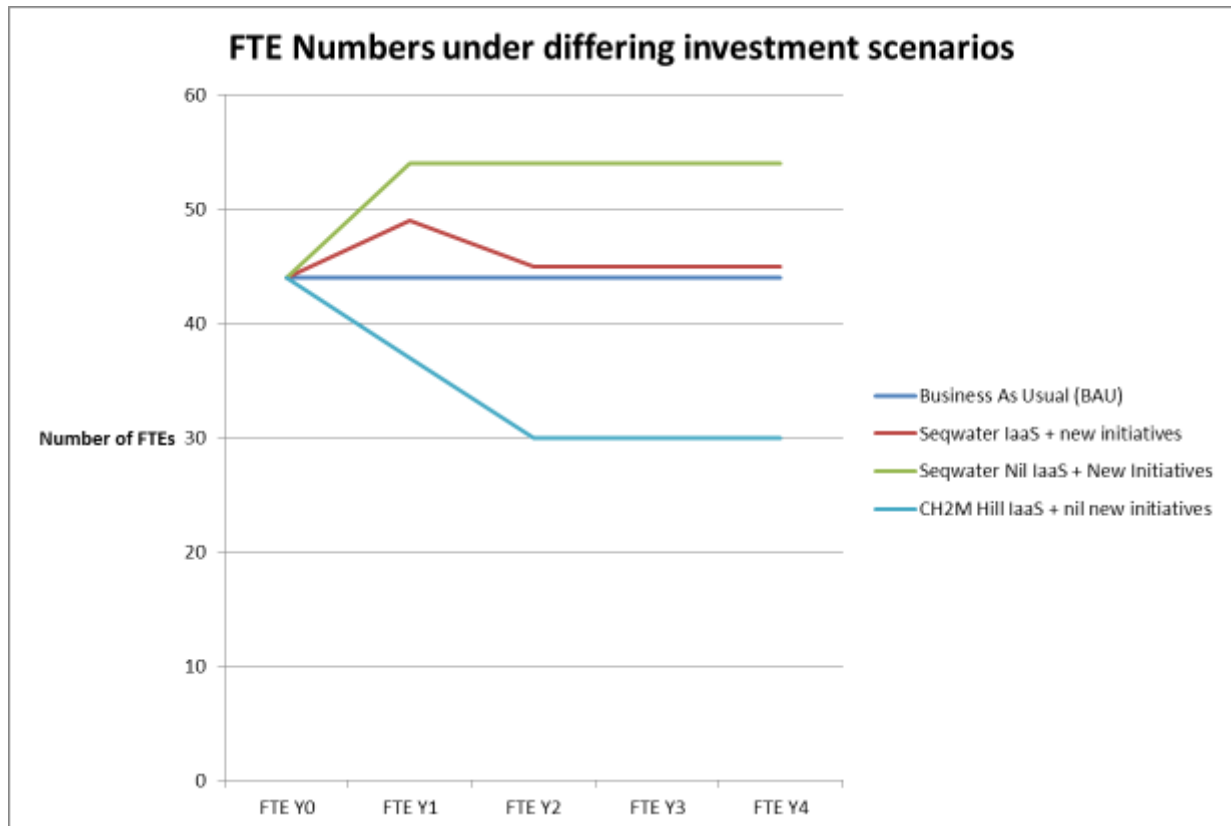
The reductions proposed in the Draft Report do not allow for any planned increases for new business initiatives and result in only 30 FTEs. This is some 14 below the BAU scenario.

If the Cloud Services reductions in FTEs were not to be achievable due to operational risks, this would result in a shortfall of some 24 FTE positions compared to the scenario *Business As Usual + New Initiatives*. Reductions of this extent would represent a significant risk to business operations as well as jeopardising planned *prudent* business initiatives.

Seqwater suggests that the scenario *Seqwater laas + New Initiatives* where reductions of 9 FTEs are achieved over a four year period, offset by a 10 FTE increase over the same period *better represents prudent planning in this current environment where detailed business cases are yet to be developed*.

This scenario is also consistent with the Business As Usual approach, therefore, Seqwater recommends nil changes to FTE levels at this time.

Figure 4 FTE Number under various investment scenarios

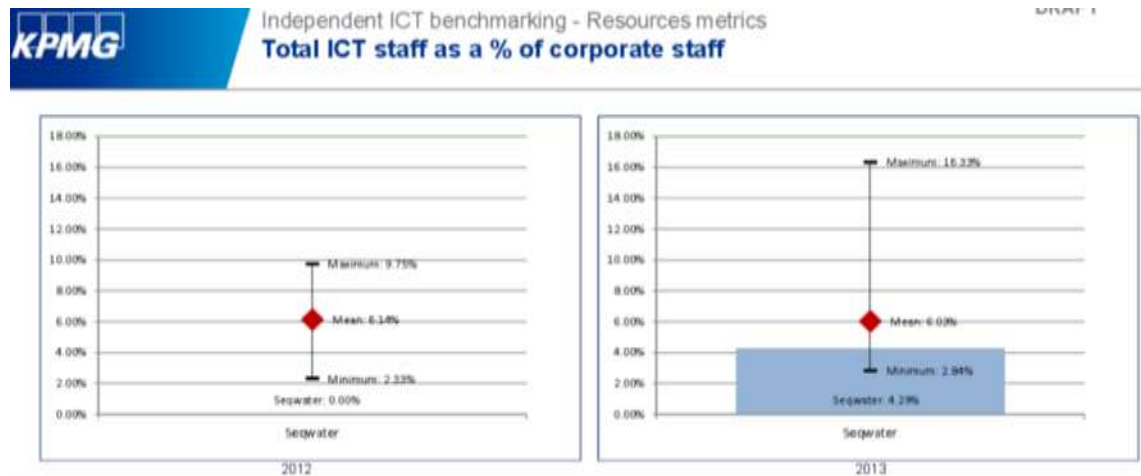


4.3 EFFICIENCY – CURRENT SERVICE DELIVERY

KPMG undertook a comparative assessment of ICT performance, investments and operating activities for the financial years 2012 and 2013 comparing the Seqwater ICT investments and operations at enterprise level to the recently completed 2013 KPMG utilities ICT benchmarking survey.

In terms of ICT FTEs KPMG (based on Gartner research) found that Seqwater has a lower than average number of ICT staff as a percentage of corporate staff.

Figure 5 Total ICT staff as % of corporate staff – showing Seqwater below the mean



5. RECOMMENDATIONS

In responding to the Draft Report a number of opportunities to improve current practice in the oversight of the ICT function have been identified. These improvement opportunities include:

- 1) Development of BSSC secretariat functions to include:
 - a) maintenance of a centrally held register of all decisions made in relation to project approvals
 - b) development of a centrally held register to track ICT initiatives across the stage gates consistent with the Seqwater Business System Project Delivery Framework
- 2) Development and implementation of cost estimation guidelines for ICT initiatives to be applied at the key approval stage gates for IASs and Business Cases
- 3) Development of additional guidance material for completing the IASs with an ICT focus
- 4) Review of current practices in relation to version control during budget development to be ensure traceability of decisions and/or funding changes

These changes to current practice will be presented at a future next meeting of the BSSC for endorsement prior to implementation.

6. APPENDICES

6.1 APPENDIX 1 – COMPARISON TO CH2M HILL ASSESSMENT PROCESS

In assessing the prudence of capital and operating expenditure, CH2M HILL considered the following: *(Blue indicates how each item is addressed by Seqwater ICT)*

- The basis (driver) for the investment *(Project need identified in IAS and linked to strategic objective)*
- The outputs (and benefits) associated with each project or expenditure program *(Set out in benefits in IASs, Project Briefs and to be expanded upon in the Business Cases to be developed at a subsequent stage gate)*
- The methods by which projects and initiatives were identified and developed, including the application of any risk based processes used to prioritise projects or initiatives *(IAS generated via 'top down' and 'bottom up' planning processes including the business planning processes of operational areas as well as ICT. All initiatives captured via IASs and checked for ICT strategic alignment / achievability.)*
- The planning and design processes used to develop projects, and evidence of options considered and design development. *(IAS development process and basic cost estimation process appropriate for stage gate-0. The business cases to be developed at the subsequent stage gate will incorporate additional detail and greater accuracy of costings)*

In undertaking the assessment of expenditure efficiency, CH2M HILL undertook an assessment of the following:

- Project needs analysis, options studies and business cases to ascertain whether the preferred investment will achieve both the service level required and the lowest sustainable, whole-of-life cost. *(per above - IAS noting these are gate 0)*
- The current stage of the design development (as this provides an indication of the likely accuracy of any cost estimates) *(per above – refer Seqwater Business System Project Delivery Framework)*
- The processes used to develop cost estimates, including a review of key cost components, unit rates and escalation factors *(per above – refer also Appendix 3)*
- Assumptions made for overheads, contingencies, taking into account the stage of design development and typical allowances made within the industry *(per above)*
- The proposed method of procurement, taking into account the stage of design development *(All procurement activity is to be consistent with Seqwater Procurement Policy. This policy is designed to achieve efficient procurement outcomes with the adoption of competitive market based supply solutions wherever possible.)*

6.2 APPENDIX 2 - KPMG REVIEW KEY OBSERVATIONS

KPMG ICT Strategy Expenditure Readiness Assessment - Final Report - 31 July 2014 **(blue highlight denotes key points)**

Area	Key Observations
<p>Investment Context Provides the economic rationale justifying the proposed expenditure in alignment with QCA expenditure objectives.</p>	<p>Seqwater is in the process of finalising its ICT Strategy. The status of this undertaking is in line with our expectations given the recent merging of the three entities (Seqwater, LinkWater, SeqBulk), and the associated transition program of work.</p> <ul style="list-style-type: none"> ■ Seqwater's ICT vision and proposed expenditure is aligned with Seqwater Corporate Strategy 2013-2018 and Queensland Government ICT Strategy 2013-2017.
<p>2. Governance / Process Describes the governance practices and models applied to the production of the submission, as well as the processes followed.</p>	<p>Policies and processes are in place to continue to develop and refine the ICT Strategy.</p> <ul style="list-style-type: none"> ■ ICT strategic priorities and initiatives align with the Seqwater Corporate Strategy 2013-2018. ■ A Business Systems Solutions Committee (BSSC) operates as a key governance forum to ensure strong business consultation for ICT initiatives. ■ Initiative business cases consider risk and risk mitigation activities.
<p>3. Forecasting Methodology Describes the methodology for forecasting the ICT initiatives which support the submission.</p>	<p>In line with industry practice and organisational governance policies, detailed business cases will be prepared for all ICT initiatives included in the expenditure forecasts.</p> <ul style="list-style-type: none"> ■ Seqwater subject matter experts have leveraged their knowledge of market and past experience in estimating the future cost of projects. ■ A Component Level Estimation Model has been used and documented to support the expenditure forecasts.
<p>4. ICT Capital Expenditure Provides an explanation of the ICT capital expenditure programme(s) of work and alignment to the QCA capital expenditure objectives and criteria.</p>	<p>The rationale for the proposed ICT capital expenditure is articulated, justified and consistent with the Investment Context.</p> <ul style="list-style-type: none"> ■ The overall ICT expenditure forecast for the 2014 through to 2028 period remains constant at \$22m. The breakdown of the ICT expenditure forecast for 2014/2015 is: <ul style="list-style-type: none"> ■ ICT CAPEX forecast: \$3m ■ ICT OPEX forecast: \$19.5m ■ Whilst we agree CAPEX will reduce significantly over the period, we recommend Seqwater reconsider the expectation that CAPEX will reduce to zero under an ICT-as-a-Service environment and the significance of the commitment as it relates to future cash flows. We note the assumption that any major structural investment that is not known will be justified and prioritised separately. ■ The nature of the top six of the 50 initiatives, each estimated to be >\$1m, align with the SeqWater's Corporate Strategy 2013-2018 and Queensland Government ICT Strategy 2013-2017, specifically the focus on contestability of ICT services and the transition of SeqWater ICT function to 'ICT-as-a-service'. The top six initiatives by value are as follows: <ul style="list-style-type: none"> ■ Assets – Infrastructure, Server, SAN, Telephony, F/Wall, etc. - \$2m ■ SCADA - \$2m ■ Contestability Assessment of ICT Services - \$1.5m ■ ICT Assets – Network, Software, ITSM, Pen Test, etc. (+ACT Logistics)

	<p>- \$1.6m</p> <ul style="list-style-type: none"> ■ Readiness Assessment ICTaaS - \$1.3m ■ EVM digitisation & reporting - \$1.3m ■ Although well developed, Seqwater was still in the process of completing its detailed ICT and business case documentation supporting the ICT proposal for regulatory purposes at the time of this review. The multi-year Strategic ICT roadmap includes high level financial modelling and alignment to regulatory and strategic drivers. ■ Of the 50 initiatives identified in the 2014-2028 ICT expenditure forecast: <ul style="list-style-type: none"> ■ 6 initiatives are estimated to be >\$1M; ■ 13 initiatives are estimated to be >\$500k; and ■ the average project size is \$420k. ■ Of the 50 initiatives, 22 are yet to receive business case approval. This includes: <ul style="list-style-type: none"> ■ 2 initiatives that are estimated to be >\$1M; and ■ 3 initiatives that are estimated to be > \$500k
<p>5. ICT Operational Expenditure</p> <p>Provides an explanation of the ICT operational expenditure programme(s) of work and alignment to the QCA OPEX objectives and criteria.</p>	<p>The rationale for the proposed operating expenditure is articulated, justified and consistent with the Investment Context.</p> <ul style="list-style-type: none"> ■ The overall ICT expenditure forecast for the 2014 through to 2028 period remains constant at \$22m. The breakdown of the ICT expenditure forecast for 2014/2015 is: <ul style="list-style-type: none"> ■ ICT CAPEX forecast: \$3m ■ ICT OPEX forecast: \$19.5m ■ The majority of benchmark results were within and at the minimum end of the benchmark range. This trend may indicate an under investment in ICT to deliver operational efficiency however we note the significant step change in CAPEX to OPEX particularly over the period 2014 to 2018 that may influence Seqwater’s operational benchmark performance in future years. Where benchmark results were at the maximum end, these may be explained in the context of the recent merger and transition activities, office relocation and associated infrastructure to establish new ICT facilities. ■ Seqwater does not anticipate a change in ICT headcount as ICT services transition via the contestability mechanism and ICT becomes a broker of Information Management (IM) services. ■ Some benchmarks relating to the 2012/2013 and 2013/2014 financial years were not calculated due to missing data, including two benchmarks that are considered highly suitable in the context of comparing efficiency. These include: <ul style="list-style-type: none"> ■ ICT capital expenditure as a % of corporate capital expenditure ■ ICT total expenditure (capital + operating) as a % of corporate total expenditure (capital + operating) ■ The baseline ICT staff costs for benchmarking purposes includes Business Process Improvement and Document Management staff costs not typically considered within the scope of ICT service delivery.

6.3 APPENDIX 3 – ICT COST ESTIMATION PROCESS 2014/15

The following is a summary of the cost estimation process used to develop preliminary estimates for the various project initiatives in the 2014/15 budget.

Detailed investigation and planning is undertaken at the business case stage (stage gate-1). The level of investigation and rigour applied in developing the Initial Advice Statements (IAS) (Stage gate-0) is less than at business case stage and reflects the need to balance accuracy with the cost to generate the estimate and other associated inputs.

To ensure proposed costs reflect efficient practice, the IAS estimates were prepared by industry professionals using a three step process that included:

- Stage 1 – establishment of initial costing assumptions (rates and hours etc)
- Stage 2 – population of a Component Level Estimation Model based on varied sources (e.g. SLIM method) and comparison against empirical data sets to allow for size, complexity, impact
- Stage 3 – compared budget to averages of past year totals to ensure estimates were in the range of these previous budgets and that ratio of Opex and Capex reflected the strategy and ICT Roadmap.

These stages are discussed further below.

Stage 1 – base assumptions

- Effort estimates by two experienced ICT professionals, including one who created the ICT Directional Strategy 2013-2017
- An hourly rate of \$110 was judged by these two professionals as representative of salary ranges of ICT Labour Hire, Professional Services, Sub-contractor and Consulting Costs
- The number of hours estimated in the month is 150 per month (20 Days x 7.6)
- Each IAS was costed over multiyear
- A 20% reduction was then applied on the basis that establishment FTE's on operational activities would also provide input to IAS activities.

Stage 2 – component level estimation model

- Component Level Estimation Model produced for Seqwater from sources including:
 - Putnam, Larry - SLIM method

- Naval Centre for Cost Analysis (NCCA)
- US Air Force Software Technology Support Centre (STSC)

At IAS development (Stage gate 0) detailed functional specifications for the end state solutions are not available. The component level estimation model gives an indicative estimate of project size based on the complexity, impact, size, and resources.

This is then applied against a standard/average % distribution of effort over an entire project based on past empirical evidence.

Standardised assumptions used in the model include: Average hours per Functional Size Unit (FSU) was determined to be 5.20 @ Requirements Level (15% of Project Estimate), making a Function Point (FP) = 35 hrs which is the average hours per FP (SoftwareMetrics.com - OneHour.pdf)

Projects deemed to be at the extremes (too large/small) were removed so as not to be biased by the scale of the project.

Stage 3 – benchmarking to previous year

Budget was then compared to averages of past year total budgets to determine that Budget estimates were in the range of these previous budgets and that ratio of Opex and Capex reflected strategy and ICT Roadmap.

Efficiency

ICT team recognise limitations to the accuracy of this estimating method, however the approach adopted is considered suitable for projects that of between 3-30 person years of effort, or an elapsed time of 0.5 to 3 years. The majority of projects in the ICT portfolio fulfil these criteria.

This cost estimation approach is considered an efficient method of ensuring consistency of the cost estimates across the ICT portfolio without incurring significant development costs. This is important given that project IASs are still at early stage development and may not proceed beyond the next approval stage gate.

KPMG Review Findings

The methodology for forecasting the ICT initiatives has been independently reviewed by KPMG. KPMG concluded that forecasting methods are:

- In line with industry practice and organisational governance policies, detailed business cases will be prepared for all ICT initiatives included in the expenditure forecasts.
- Seqwater subject matter experts have leveraged their knowledge of market and past experience in estimating the future cost of projects.

- A Component Level Estimation Model has been used and documented to support the expenditure forecasts.

6.4 APPENDIX 4 – CONSULTANCY BUDGET RECLASSIFICATION

Section three of this document identifies that the consultancy budget is made up of the aggregated cost estimates for a portfolio of approved IASs. This table reflects the reclassification of the consultancy funds to natural accounts that are more reflective of the aggregated cost estimates of the IASs.

SPT – Information and Communications Technology	FY13/14A	FY14/15 Q1	FY14/15 Q1 revised
522207 – Consultancy – Others	11,700		
522209 – Consultancy – Information Technology	1,651,327	3,796,350	42,662
522214 – Consultancy – Process Improvement	38,429	20,000	
(proposed new natural) Contractor - ICT Professional			3,357,721
(new natural) – ICT Professional Services			415,967
Grand Total	\$1,701,456	\$3,816,350	\$3,816,350

6.5 APPENDIX 5 – SUPPORTING DOCUMENTATION

The following is a listing of documents that support this response to the QCA Draft Report. Additional information to support the expenditure claims is available upon request.

File name	Description
BSSC Charter 20130828.docx	Original BSSC Charter Document
Business Systems Steering Committee Charter – draft v0-2.docx	This progression from earlier BSSC charters has been endorsed by the BSSC and is now going through the review process to become a controlled document.
ICT Program Delivery Office Charter v0-2.docx	The charter for the Program Delivery Office has been tabled at BSSC for review and we are currently capturing feedback and will present a revised version to the January BSSC.
ICT Strategy Expenditure Readiness Assessment - Final Report - 31 July 2014.pdf	Independent review of Seqwater ICT conducted by KPMG prior to lodgement of Regulatory Submission.
20141211 ICT Initiatives portfolio.xlsx	Summary spreadsheet tracking IASs that makes up the ICT expenditure programs.
Seqwater Business Systems Delivery Integrated Framework.pdf	Overview of the Seqwater project delivery framework inclusive of stage gate process.
03.4 A - The Role of ICT - Board Meeting October 2014	ICT Strategy
Delivering the ICT Vision (v0 6).pptx	Presentation of ICT Vision and strategy to the Seqwater Board. Board endorsed approach.
ICT Transition Options Analysis 2014.pdf	Analysis of options for the future delivery of ICT, with Option 3 being recommended in alignment with the endorsed ICT Strategy. This includes a cover note from Glentworth Consulting agreeing with option three.
Cashflow 2014-2015 v0-3.pdf	Cost build up FY 2014/2015 Q1 to Q2 of the IASs.
2013_strategic_road_map_for__250619.pdf	Identification by Gartner of a multiyear transition to IaaS
Approved Project Brief - Performance and Resilience Program.pdf	Project Brief – developed for the performance and resilience program of work.

File name	Description
Project Brief IAS34 Control Domain for SCADA Signed.pdf	Project Brief – developed for the SCADA Control Domain.