ICT Business case: Non-Recurrent: Click Replacement

2025-30 Regulatory Proposal

Supporting document [5.12.10]

January 2024

Contents

Glossary

Acronym/term	Definition
AER	Australian Energy Regulator
Augex	Augmentation expenditure
BI	Business intelligence
Capex	Capital expenditure
Click, Click FSE	Click FSE is the current Field Work Scheduling and Mobile Workforce Management [software] system used at SA Power Networks
Field Work Scheduling	The process of creating and maintaining the schedules of individuals, teams and non-human resources within an organisation. This requires allocating the appropriately skilled human resources and necessary non-human resources (eg, elevated work platforms) and support services (eg, traffic management) for safe and timely completion of work tasks.
FSE	Field Service Edge
FSM	Field Service Management
GIS	Geographic Information System
ICT	Information and communication technology
KIOSK	A web interface used to display work, resources, notes, and availability in a depot-friendly view.
MWM	Mobile workforce management [software]
NER	National Electricity Rules
NPV	Net present value
Opex	Operating expenditure
RCP	Regulatory control period
Repex	Replacement expenditure
SA	South Australia
SaaS	Software as a service
SAP	Enterprise resource management system

1. About this document

1.1 Purpose

This document details the justification for non-recurrent Information and communication technology (**ICT**) expenditure to deliver a replacement of our core Field crew scheduling and mobility software, Click, which will reach end of life in the 2025–30 Regulatory Control Period (**RCP**).

1.2 Expenditure category

- Non-network ICT capital expenditure (**capex**): Non-Recurrent – major replacements or upgrades
- Non-network ICT operating expenditure (**opex**): Base year Software as a service (**SaaS**) Adjustment

1.3 Related documents

Table 1: Related documents

Title	Author	Version / date
5.12.1 - IT Investment Plan 2025-30	SA Power Networks	Jan 2024
Digital and Data Strategy	SA Power Networks	Jan 2024
IT Asset Management Plan	SA Power Networks	Jan 2024

2. Executive summary

This business case details the justification for the non-recurrent ICT expenditure required to ensure that our critical Field Service management systems and services are maintained and secure with the current acceptable levels of risk. These critical systems and services are utilised for:

- planning, scheduling, dispatch and update of all planned and unplanned work (including outage and restoration work) for both SA Power Networks field crews and contracted third party field service suppliers;
- driving the outage and incident notifications for customers;
- providing relevant safety and map data for dispatched work tasks, and
- capturing job close out, asset information update, field crew timesheet and allowance data.

The primary software used to support these systems and services is Click Field Service Edge (**Click FSE**). In 2019, Click was acquired by a competitor, Salesforce Inc. Salesforce has recently indicated that there is no forward roadmap for the Click FSE product and stated it will only provide two to three years of notice of end of life[1], and will not provide any extended support option beyond that period. Being a subscription-based, cloud-hosted solution, this means that the software will be switched off and will no longer be useable. Salesforce has already ceased support for all other versions of Click as at the end of 2023.

SA Power Networks has been using scheduling and mobility software since the first version of Click was rolled out in 2005. Loss of this functionality for more than a brief period would require a significant amount of IT investment to remediate the associated connected systems and applications and develop manual processes and workarounds. Many staff would also be needed to cover the additional activities that would be required to be performed. In this situation, it would be unlikely that SA Power Networks could achieve equivalent levels of efficiency of operation; our customers would immediately feel the impact of the resulting reduced service levels. The most recent project for the upgrade of SA Power Networks' Field Service management system took around three years to complete, hence we expect the replacement to take a similar length of time.

SA Power Networks performed an initial market scan, to inform our estimates, which considered three alternative products from different vendors[2]. This business case recommends the timely and prudent replacement of the end-of-life product mid 2025–30 period with a solution, to be selected at that time, that provides equivalent services. The total expenditure for this preferred option **is $21.9 million, of which $18.8 million is within the 2025–30 RCP.** The 2025–30 RCP forecast includes **$3.9 million of non-recurrent capex and $14.3 million of non-recurrent SaaS-related opex.**[3] The project also requires recurrent opex of $0.6 million [total] in the 2025-30 RCP – this will be funded through business efficiencies. The net present value (**NPV**) over the 10-year period is -$3.5 million and the overall residual risk rating is Minimal.

Other options considered were:

- Revert to manual (non-credible): This option was investigated but deemed non-credible due to the combination of increased safety risks for both field workers and the public, significant impacts on customers (ie, delays to restoration times and planned work activities due to the need to manually schedule and dispatch jobs, and then manually reschedule weeks of planned work for dispatch after significant weather events), and increased costs due to the additional staff required for scheduling and data collection/data entry activities.

[1] Salesforce Correspondence dated 6 Apr 2023 confirming no support beyond provided notice period for End of Life.
[2] The three vendors were selected from those listed in Gartner's Magic Quadrant for Field Service Management (Gartner Reprint: Magic Quadrant for Field Service Management, published 24 October 2022).
[3] Unless otherwise specified, all financial figures in this business case are in real Jun 2022 dollars.

- Defer the replacement to the 2030–35 period: This option was not selected due to the risks of incurring significant additional costs and/or significant impacts on other planned critical activities during 2025–30, in the event the Click FSE's end of life is announced during the 2025–30 period. The NPV (over a 10-year period) for this option is -$11.5 million, the residual risk is Extreme.
- Replace over 2 years at start of 2025-30 period (base case): This option was not chosen as it is not considered to mitigate any more risk than the preferred option, relative to the cost of three additional extra years of recurrent opex expenditure. From a delivery perspective this is a slightly riskier option requiring the implementation and rollout to be undertaken over 2 years, a year less that the last Click implementation. The total cost of this option (over 10 years) is $23.1 million. The NPV (over a 10-year period) for this option is -$6.2 million, the residual risk is Minimal.

The preferred option was selected because it:

- ensures a timely and prudent replacement activity of the critical Field Service management system and services with a minimal residual risk at the lowest cost for that risk;
- maintains our existing systems and services at the current acceptable levels of risk; and
- secures the system and services with appropriate levels of updates and patching.

Table 2: Options assessment summary ($m June 2022 Real).[4]

	2025–30 costs			10-year project costs			10-year estimates		Residual risk rating[5]
Option	**Capex**	**Opex**	**Total**	**Capex**	**Opex**	**Total**	**Risk-reduction benefits**	**NPV[6]**	
Option 1 – Replace over 2 years at start of 2025–30 period (base case)	3.9	16.1	20.0	3.9	19.2	23.1	19.9	-6.2	**Minimal**
Option 2 – Defer replacement to 2030–35 period	-	-	-	3.9	16.1	20.0	5.7	-11.5	**Extreme**
Option 3 – Defer replacement to begin in 2027 (preferred)	3.9	14.9	18.8	3.9	18.0	21.9	19.9	-3.5	**Minimal**

[4] Note: Totals presented in tables throughout this document may not exactly match the sums of individual figures due to rounding. Note also that these figures represent the total spend (ie. They include the recurrent opex spend (e.g. $0.6 million during 2025-30 period or $3.5 million over 10 years for preferred option) that will be funded through business efficiencies.)
[5] See Appendix C – Risk assessment for further details.
[6] NPV of the proposal over 10-year cash flow period from 1 July 2025 to 30 June 2035, based on discount rate of 4.05%.

3. Background

SA Power Networks field crews and contracted third parties currently perform more than $400 million worth of asset maintenance and construction work annually over a large, geographically dispersed and diverse electricity network, covering 180,000 km^2 across 458 sites, including 42 offices and depots and over 400 substations – see Figure 1.

Figure 1: SA Power Networks state distribution

SA Power Networks employs around 1000 Field Service workers who perform around 250,000 individual jobs every year. The types of work encompassed by these jobs vary significantly, from those that take only 15 minutes, to jobs that take many months to complete. Some jobs are planned preventative maintenance tasks, while others are unplanned supply restoration work to resolve customer outages.

To perform this work efficiently, it is critical that we manage our mobile crews as effectively as possible. We need our crews to spend less time travelling to and from sites, to be performing the highest value work possible, with the least amount of churn in the schedule once it has been set. The ability to reschedule our planned work rapidly and efficiently after storm activity, or other significant events, is essential to ensuring minimum loss of time to complete that planned work. Efficiently scheduling both planned and unplanned work while communicating that work in a timely fashion to the most appropriate crews, is key to maintaining and improving the quality and reliability of our service. In addition, the data gathered from our crews is also used to keep customers informed through outage and incident notifications.

Since our current scheduling solution, Click FSE, was first rolled out in 2005, the functionality provided by, and the associated usage of the product, has considerably expanded across SA Power Networks' Field Services department. In addition, we have rolled it out to several of our third-party contractors to improve visibility of their completion of our scheduled planned work. It has become central to our Field Service processes and is used to lead our field workers through those processes by directing them not just to dispatched work tasks but also to related safety and map data for those tasks, and to activities that are used to update customer notifications about outage and incidents, update our asset data, and capture data for field crew time sheet information, allowance and crew utilisation.

3.1 The scope of this business case

This business case covers the replacement of Click FSE, SA Power Networks' current scheduling and mobility solution. This solution is cloud hosted and used by more than 1000 personnel, both internal and external, to manage job scheduling, resources, and field work execution to deliver a reliable electricity supply to its customer throughout South Australia.

Click FSE integrates with a number of other key systems and applications including:

- SAP - where work is initiated, planned, and defined, to:
  - provide customer connections data for booking customer connection appointments;
  - pass information about crew timesheet and allowance data, and staff booked leave;
  - store data in the data warehouse; and
  - update work closeout information;
- KIOSK – a web interface used to display work, resources, notes, and availability in a depot-friendly view;
- Enterprise Geographic Information System (**GIS**) /Mapping system for GIS and mapping data;
- Power Business Intelligence (**BI**), which is used for operational and historical reporting of crew utilisation and other data; and
- the outage management system for unplanned work.

In addition, Click FSE has been embedded as the centre of the field work process. It integrates with a number of applications used by crews on their mobile devices to lead them to those applications and hence through those processes. It directs them not just to dispatched work but also guides them to related safety and map data – so they can capture data that is then used to update customers with information about outage and restoration timeframes – and to job closeout activities that capture updates to asset data. This helps standardise our field work processes, increasing the efficiency, safety and consistency of field crew activity, reminds them to keep our customers updated, and prompts them to update asset data that contributes to improvement and maintenance of our asset data quality.

The scope of this business case covers:

- procurement of an appropriate Mobile Workforce Management (**MWM**) system to replace Click FSE;
- like-for-like implementation and integration of the selected product and updating of related processes; and
- associated change management and training required to support the efficient and effective rollout of the selected product.

3.2 Drivers for change

In 2019, Salesforce purchased ClickSoftware with the view to incorporate the technology in its optimisation engine into their existing competitive field service product offering, Salesforce Field Service. Salesforce has recently indicated that there is no forward roadmap for the Click software and has stated that, while it will provide three years of notice of end of life,[7] there will be no extended support options provided beyond that three-year period. As a subscription-based, cloud-hosted solution, this means that the software will be switched off and at that point will no longer be useable[8].

SA Power Networks will seek to prudently replace Click FSE with an equivalent system before it reaches end of life. The process to replace the product is expected to take three years (based on our previous experience of replacing Click V8 in 2018–2020).

3.3 Industry practice

As described in a recent Gartner paper[9], utilities are increasingly leveraging digital MWM capabilities to manage their field operations. These tools enable utilities to manage productivity, outage durations, travel time and fleet mileage. These tools also contribute to improved data integrity arising from having a single view of truth supported by integration of these systems and their data.

Several other utilities in Australia have recently been implementing or upgrading/replacing their MWM systems, for example:

- Tasnetworks: Implementation of a works management tool[10].
- Essential Energy: Significant mid-life upgrade investment in their MWM system[11].
- Powercor & Citipower: Replacement of their MWM system (Click V8), which was approaching end of life[12]. The Australian Energy Regulator (**AER**) agreed this was a necessary replacement activity as part of the Regulatory submission.

[7] Salesforce Correspondence dated 6 Apr 2023 confirming no support beyond provided notice period for End of Life.

[8] A breakdown of the impacts of not replacing Click FSE is provided in Appendix D.

[9] Market_Guide_for_Mob_752275_ndx.pdf (Gartner.com).

[10] TN434 TasNetworks-Works Management Tool Upgrades Investment Evaluation Summary-Dec 22-Public.pdf.

[11] Essential Energy - 10.07.06 Mobile Workforce Management Upgrade Investment Case - Jan23 - Public.pdf.

[12] Powercor - Revised Regulatory Proposal - 2021-26 - MOD 7.22 - Field service management solution - December 2020.xlsx & CitiPower - Revised Regulatory Proposal - 2021-26 - MOD 7.22 - Field service management solution - December 2020.xlsx.

4. The identified need

The underlying driver for investment action described by this business case is the need to manage and maintain our existing customer, network and business service levels, and manage our risk through replacing our core field management software, Click FSE, prudently before it reaches end of life.

If Click FSE is not replaced, by a product of equivalent functionality, when it reaches end of life, we will lose access to functionality that supports SA Power Network's ability to plan, dispatch and close out work efficiently and safely on the network. Without Click orchestrating the field work process, crews will not have ready access to the information they need to operate as safely and efficiently. This will increase the risk to our crews and to the public and will impact service levels, restoration times and communications about restoration times.

In considering potential responses to this driver, we weighed up service level outcomes, balanced against price outcomes, and considered our regulatory requirements under the National Electricity Rules (**NER**), National Electricity Law and jurisdictional regulations a result of these considerations, the identified need is as follows:

a. To respond to customers' concerns[13], identified through our consumer and stakeholder engagement process, regarding their explicit service level recommendations that we:
   - maintain reliability service performance – driven by a desire to not see outages;
   - maintain safety service performance – driven by a desire to not see deterioration in the safety risk posed by the network; and
   - maintain safety in general – driven by the desire to not see harm come our customers, the community or to our staff.

b. To ensure that our services can continue to be delivered for the lowest possible long-term cost – through prudent, systematic, and timely replacement of this critical system before it reaches end of life.

[13] This is pursuant to Clause 6.5.7(c)(5A) of the NER, which requires regard to be had to the extent to which forecast expenditure seeks to address the concerns of distribution service end users identified by the distributor's engagement process.

5. Comparison of options

5.1 The options considered

Table 3: Summary of options considered

Option	Description
The base case **Option 1 – Replace over two years at start of 2025-30 period**	This option aims to ensure Click FSE is prudently replaced early in 2025–30 reset period, before Click FSE is switched off, to ensure continuity of access to the system and its functions while mitigating the risk and cost of having to revert to manual processes that would occur if Click FSE was not replaced before it reached end of life. This option assumes a 2-year notice period. Implementation and delivery of this option is therefore undertaken over 2 years to ensure that Click is replaced by mid-2027.
Alternative options	
Option 2 – Defer replacement to 2030–35 period.	This option aims to defer the replacement of Click FSE to the 2030–35 period to defer the expense of this project to that period. The key risks inherent in this option is that Click FSE reaches end of life before 2030–2035 and becomes unusable before it can be replaced.
Option 3 – Defer replacement to begin in 2027	This option assumes that Click FSE's end of life is not announced before the first half of 2027, and hence there would still be time to replace Click FSE before the end of the 2025–30 period before Click FSE was switched off. The key risk inherent in this option is that Click FSE's end of life is announced before this time.

5.2 Options investigated but deemed non-credible

Option	Description
Option 0 – Revert to manual processes	This option would reduce non-recurrent IT capital expenditure, but these savings would be offset by: • The initial, significant, IT expenditure required to remediate upstream and downstream systems, processes and applications that currently integrate with Click FSE. • The cost of developing new manual scheduling and field work processes and the associated significant change and training effort required to train out planners, schedulers, business support officers and field crew members in their use. • The loss of efficiency in the scheduling and dispatch processes that will occur from reverting to manual processes and will have knock-on effects to overall productivity of both our field work force and those administrative activities that will have new manual activities associated with them. • Recruitment of additional ongoing (recurrent) resources, including additional schedulers, planners, administrative and business support officers, and field crew to support: – the additional time required to manually schedule and reschedule work; – the loss of productivity from a less efficient manual scheduling and job distribution process; – increased amounts of manual handling required for access, update and distribution of crew, job status, and asset data; – a lag in timeliness of asset, job and crew-related data and a potential reduction in the quality of that data (associated with higher levels of manual handling of that data); and – a reduction in productivity and associated reduction from existing levels of customer service.

5.3 Analysis summary and recommended option

5.3.1 Options assessment results

Table 4: Costs, benefits, and risks of alternative options relative to the base case over the 10-year period ($m June 2022 Real)[14]

Option	10-year program costs			2025–30 program costs			10-year risk reduction benefits [15]	10-year NPV[16]	Overall risk rating[17]	Ranking
	Capex	Opex	Total	Capex	Opex	Total				
Option 1 – Replace over two years at start of 2025-30 period	3.9	19.2	23.1	3.9	16.1	20.0	19.9	-6.2	Minimal	2
Option 2 – Defer replacement to 2030–35 period	3.9	16.1	20.0	-	-	-	5.7	-11.5	Extreme	3
Option 3 – Defer replacement to begin in 2027	3.9	18.0	21.9	3.9	14.9	18.8	19.9	-3.5	Minimal	1

Assumptions

- Click FSE will reach its end-of-life date at by the end of the 2025–2030 period[18].
- There will be no extended support beyond that end-of-life date and Click FSE will be switched off at that point.
- SA Power Networks will require two to three years to perform this replacement activity.
- SA Power Networks will replace Click FSE with a like-for-like MWM system.
- No substantial increase in the number of human/non-human licenses required.

5.3.2 Recommended option

We recommend **Option 3 – Defer replacement to begin in 2027.** This option defers the expense of the replacement to the second half of the period. This is on the assumption that Click FSE's end of life is not announced before the first half of 2027 and hence there would still be time to replace Click FSE before the end of the 2025–30 period before Click FSE was switched off. The key risk inherent in this option is that Click FSE's end of life is announced before this time.

[14] Note: Totals presented in tables throughout this document may not exactly match the sums of individual figures due to rounding. Note also that these figures represent the total spend (ie. They include the recurrent opex spend (e.g. $0.6 m during 2025-30 period or $3.5 m over 10 years for preferred option) that will be funded through business efficiencies.)

[15] Represents the total capital and operating benefits, including any quantified risk reduction/management benefits, over the 5-year cash flow period from 1 July 2025 to 30 June 2030 expected across the organisation as a result of implementing the proposed option.

[16] Net present value (NPV) of the proposal over 10-year cash flow period from 1 July 2025 to 30 June 2035, based on discount rate of 4.05%.

[17] See Appendix C – Risk assessment for further details.

[18] See Section 10 - Reasonableness of input assumptions for the analysis underlying these assumptions.

5.4 Scenario and sensitivity analysis

The specific replacement product will be determined by more detailed analysis at the appropriate time.

The options are not sensitive to product choice because:

1. SA Power Networks proposes to absorb any difference in recurrent opex costs between the current Click FSE solution, and any future solutions.
2. The cost of vendor support for implementation is not significantly different between the products investigated during our market scan.

Sensitivity analysis was undertaken on the NPV calculation. The key sensitivities for these scenarios are the date at which Click FSE reaches end of life as the avoidance of this monetized risk. Our key assumption is that Click FSE will certainly reach end of life within the 2025-30 RCP, and probably towards the end of that period. Under this assumption Option 3 has the better NPV relative to its cost. This assumption is based on the most current information we have at this time[19].

Our option ranking would be impacted by changing our assumptions around the date at which Click FSE would be at end of life. An end-of-life date mid 2025-30 RCP would give Option 1 the lowest NPV for cost, conversely an end-of-life date post mid-2033 would give Option 2 the lowest NPV for cost. We believe the assumptions underlying Option 2 are highly unlikely given that Salesforce have already discontinued older versions of the Click software and are not investing in the FSE version beyond required patching.

Appendix A provides the details of the cost and benefit model spreadsheets for each option. Appendix B details the opex base-year adjustment for the preferred option. Appendix C provides the detailed risk analysis for each option.

5.5 Option 1 – Replace over two years at start of 2025-30 period (base case)

5.5.1 Description

This option aims to ensure Click FSE is prudently replaced early in 2025–30 reset period, before Click FSE is switched off, to ensure continuity of access to the system and its functions while mitigating the risk and cost of having to revert to manual processes that would occur if Click FSE was not replaced before it reached end of life. Implementation and delivery of this option is undertaken over 2 years to ensure that Click is replaced by mid-2027, assuming a 2-year notice period.

5.5.2 Costs

The forecast for Option 1 has been prepared on a bottom-up basis, through a combination of high-level vendor pricing (obtained through a market scan) and the creation of a high-level plan for delivering Click FSE based on our original experience of rolling out the Click FSE product, combined with learnings on projects rolled out since that time. The project requires additional recurrent opex of $1.8 million in RCP 2025–30, which will be funded through benefits from elsewhere in the portfolio. A more detailed breakdown of costs subset is provided in the associated costing spreadsheet listed in Appendix A. Total costs for this option are provided in Table 5.

[19] See section 10 - Reasonableness of input assumptions for the analysis underlying these assumptions.

Table 5: Option 1 – Costs by cost type ($m June 2022 Real)[20]

Cost type	2025 H1	2025–26	2026–27	2027–28	2028–29	2029–30	Total 2025–30	2030–31	2031–32	2032–33	2033–34	2034–35	Total 2025–35
Capex	-	2.5	1.4	-	-	-	**3.9**	-	-	-	-	-	**3.9**
Opex – Non-recurrent	-	6.7	7.6	-	-	-	**14.3**	-	-	-	-	-	**14.3**
Opex – Recurrent	-	-	-	0.6	0.6	0.6	**1.8**	0.6	0.6	0.6	0.6	0.6	**4.9**
TOTAL	-	**9.2**	**9.0**	**0.6**	**0.6**	**0.6**	**20.0**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**23.1**

5.5.3 Risks

Table 6: Option 1 – Risk assessment summary

Risk consequence category	Current risk level[21] (Option 0)	Residual risk level[22] (Option 1)
Safety – Harm to a worker, contractor or member of the public.	High	Minimal
Performance and growth – Financial impact.	High	Minimal
Performance and growth – Loss of productivity.	High	Minimal
Network – Failure to deliver from source to load.	High	Minimal
Customer – Failure to deliver on customer expectations.	High	Minimal
Technology and data capabilities – Disruption of access to, or use of, systems.	Extreme	Minimal
Culture and workforce – Workforce misalignment/disengagement.	High	Minimal
Overall risk level	**Extreme**	**Minimal**

Aside from the risks described above, from a delivery perspective this is riskier option requiring the implementation and rollout to be compressed into 2 years, a year less than SA Power Networks required to roll out the last implementation of Click. There would also be additional complexity associated with running this project in parallel with other large replacement activities scheduled at the same time, such as the Integration Platform Replacement, where there are high levels of interdependency between projects.

5.5.4 Quantified benefits

The benefits of this option would be the risk-reduction benefits of $19.9 million[23], comprising the estimated costs that would likely be incurred in the event the Click FSE system replacement was deferred to the 2030–35 RCP and Click FSE reached end of life in the years prior to the replacement project being completed. These costs include:

- Costs of remediation to all affected IT systems and processes

[20] Note: Totals presented in tables throughout this document may not exactly match the sums of individual figures due to rounding. Note also that these figures represent the total spend (ie. They include the recurrent opex spend that will be funded through benefits from elsewhere in the portfolio.)
[21] The level of risk post current controls (i.e. after considering what we currently do to mitigate the risk).
[22] See Appendix C – Risk assessment for further details.
[23] Estimated avoidance benefit of cost of consequence(s) to SA Power Networks or its customers, relative to probability of this risk eventuating over the NPV analysis period for this option ($m Jun 2022 Real).

- Change management and training required to implement those processes, and
- The annual recurrent costs involved in the additional FTE required to replace lost efficiencies of using Click FSE, including additional planners, schedulers, administrative support workers, works coordinators and field staff.

5.5.5 Unquantified benefits

The unquantified benefits would be maintaining access to a MWM system and the equivalent functionality to what is used now.

5.6 Option 2 – Defer replacement to 2030–35 period

5.6.1 Description

This option aims to defer the replacement of Click FSE to the 2030–35 period to defer the expense of this project to that period. The key risk inherent in this option is that, if Click FSE reaches end of life before 2030–35, it becomes unusable before it can be replaced.

5.6.2 Costs

The forecast for Option 2 has been prepared on a bottom-up basis, through a combination of high-level vendor pricing (obtained through a market scan) and the creation of a high-level plan for delivering Click FSE, based on our original experience of rolling out the Click FSE product combined with learnings on projects rolled out since that time. The project also requires recurrent opex of $1.8 million over 5 years, and this would be funded through benefits from elsewhere in the portfolio. A more detailed breakdown of costs subset is provided in the associated costing spreadsheet listed in Appendix A.

Total costs for this option are provided in Table 7.

Table 7: Option 2 – Costs by cost type ($m June 2022 Real)[24]

Cost type	2025 H1	2025–26	2026–27	2027–28	2028–29	2029–30	Total 2025–30	2030–31	2031–32	2032–33	2033–34	2034–35	Total 2025–35
Capex	-	-	-	-	-	-	-	0.2	3.3	0.4	-	-	**3.9**
Opex – Non-recurrent	-	-	-	-	-	-	-	4.9	7.1	2.3	-	-	**14.3**
Opex – Recurrent	-	-	-	-	-	-	-	-	-	0.6	0.6	0.6	**1.8**
TOTAL	-	**-**	**-**	**-**	**-**	**-**	**-**	**5.1**	**10.4**	**3.3**	**0.6**	**0.6**	**20.0**

[24] Note: Totals presented in tables throughout this document may not exactly match the sums of individual figures due to rounding. Note also that these figures represent the total spend (i.e. they include the recurrent opex spend).

5.6.3 Risks

Table 8: Risk assessment summary

Risk consequence category	Current risk level (Option 0)	Current risk level[25] (Option 2)
Safety – Harm to a worker, contractor or member of the public.	High	High
Performance and growth – Financial impact.	High	High
Performance and growth – Loss of productivity.	High	High
Network – Failure to deliver from source to load.	High	High
Customer – Failure to deliver on customer expectations.	High	High
Technology and data capabilities – Disruption of access to, or use of, systems.	Extreme	Extreme
Culture and workforce – Workforce misalignment/disengagement.	High	High
Overall risk level	**Extreme**	**Extreme**

The estimated rough order of magnitude cost of the risk of Click FSE being switched off by the vendor being realised, before it has been replaced, is $21.8 million[26]. This cost includes:

- Costs of remediation to all affected IT systems and processes
- Change management and training required to implement those processes, and
- The annual recurrent costs involved in the additional FTE required to replace lost efficiencies of using Click FSE, including additional planners, schedulers, administrative support workers, works coordinators and field staff.

5.6.4 Quantified benefits

The benefits of this option would be the risk-reduction benefits of $5.7 million[27], comprising the estimated costs that would likely be incurred in the event the Click FSE system replacement was deferred to the 2030–35 RCP and Click FSE reached end of life in the years prior to the replacement project being completed. These costs include:

- Costs of remediation to all affected IT systems and processes
- Change management and training required to implement those processes, and
- The annual recurrent costs involved in the additional FTE required to replace lost efficiencies of using Click FSE, including additional planners, schedulers, administrative support workers, works coordinators and field staff.

5.6.5 Unquantified benefits

The unquantified benefits would be maintaining access to a MWM system and the equivalent functionality to what is used now.

[25] The level of risk post current controls (i.e. after considering what we currently do to mitigate the risk).
[26] See Appendix D – Impacts of not replacing Click FSE, and Appendix C – Risk assessment for additional context.
[27] Estimated avoidance benefit of cost of consequence(s) to SA Power Networks or its customers, relative to probability of this risk eventuating over the NPV analysis period for this option ($m Jun 2022 Real).

5.7 Option 3 – Defer replacement to begin in 2027 (preferred)

5.7.1 Description

This option aims to defer the replacement of Click FSE to the 2030–35 period to defer the expense of this project to that period. The key risks inherent in this option is that, if Click FSE reaches end of life before 2030–35, it becomes unusable before it can be replaced.

5.7.2 Costs

The forecast for Option 3 has been prepared on a bottom-up basis through a combination of high-level vendor pricing (obtained through a market scan) and the creation of a high-level plan for delivering Click FSE based on our original experience of rolling out the Click FSE product, combined with learnings on projects rolled out since that time. The project also requires recurrent opex of $0.6 million in RCP 2025–30 ($3.6 million over 10 years) – this will be funded through benefits from elsewhere in the portfolio. A more detailed breakdown of costs subset is provided in the associated costing spreadsheet listed in Appendix A.

Total costs for this option are provided in Table 9.

Table 9: Option 3 Costs by Cost Type ($m June 2022 Real)[28]

Cost type	2025 H1	2025–26	2026–27	2027–28	2028–29	2029–30	Total 2025–30	2030–31	2031–32	2032–33	2033–34	2034–35	Total 2025–35
Capex	-	-	-	0.2	3.3	0.4	**3.9**	-	-	-	-	-	**3.9**
Opex – Non-recurrent	-	-	-	4.9	7.1	2.3	**14.3**	-	-	-	-	-	**14.3**
Opex – Recurrent	-	-	-	-	-	0.6	**0.6**	0.6	0.6	0.6	0.6	0.6	**3.6**
TOTAL	-	-	-	**5.1**	**10.4**	**3.3**	**18.8**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**21.9**

5.7.3 Risks

Table 10: Risk assessment summary

Risk consequence category	Current risk level[29] (Option 0)	Residual risk level[30] (Option 1)
Safety – Harm to a worker, contractor or member of the public.	High	Minimal
Performance and growth – Financial impact.	High	Minimal
Performance and growth – Loss of productivity.	High	Minimal
Network – Failure to deliver from source to load.	High	Minimal
Customer – Failure to deliver on customer expectations.	High	Minimal
Technology and data capabilities – Disruption of access to, or use of, systems.	Extreme	Minimal
Culture and workforce – Workforce misalignment/disengagement.	High	Minimal
Overall risk level	**Extreme**	**Minimal**

[28] Note: Totals presented in tables throughout this document may not exactly match the sums of individual figures due to rounding. Note also that these figures represent the total spend (i.e. They include the recurrent opex spend (e.g. $0.6 million during 2025-30 period or $3.5 million over 10 years for Option 3)).
[29] The level of risk post current controls (i.e. after considering what we currently do to mitigate the risk).
[30] See Appendix C – Risk assessment for further details.

5.7.4 Quantified benefits

The benefits of this option would be the risk-reduction benefits of $19.9 million[31], comprising the estimated costs that would likely be incurred in the event the Click FSE system replacement was deferred to the 2030–35 RCP and Click FSE reached end of life in the years prior to the replacement project being completed. These costs include:

- Costs of remediation to all affected IT systems and processes
- Change management and training required to implement those processes, and
- The annual recurrent costs involved in the additional FTE required to replace lost efficiencies of using Click FSE, including additional planners, schedulers, administrative support workers, works coordinators and field staff.

5.7.5 Unquantified benefits

The unquantified benefits would be maintaining access to a MWM system and the equivalent functionality to what is used now.

[31] Estimated avoidance benefit of cost of consequence(s) to SA Power Networks or its customers, relative to probability of this risk eventuating over the NPV analysis period for this option ($m Jun 2022 Real).

6. Deliverability of recommended option

SA Power Networks delivered a project of equivalent size, complexity, and functionality, when Click FSE implementation was successfully rolled out in 2018–2020.

Further to this, the timing of the recommended option for Click FSE has been considered in the context of the other deliverables in the 2025–30 period and we have assessed it as deliverable. In addition, given the size, criticality of the system and the importance of meeting the delivery date, this will be a priority project for SA Power Networks.

7. Alignment to customer expectations

Customers expect that we will maintain our existing levels of service and risk. This investment meets those requirements in a cost-effective manner. Maintained and fit-for-purpose devices enable SA Power Networks to achieve components of these themes by ensuring our workforce can access data, respond to jobs and manage the network to expectations and within specified key performance requirements.

8. Alignment with our vision and strategy

Our Digital & Data Strategy outlines the long-term strategic direction for ICT. The focus of the strategy is on the provision of efficient and reliable core systems, and a range of digitisation that ensures our workforce has appropriate skills for the technology implemented. A high-level view of our Digital & Data Strategy is depicted in Figure 1, below.

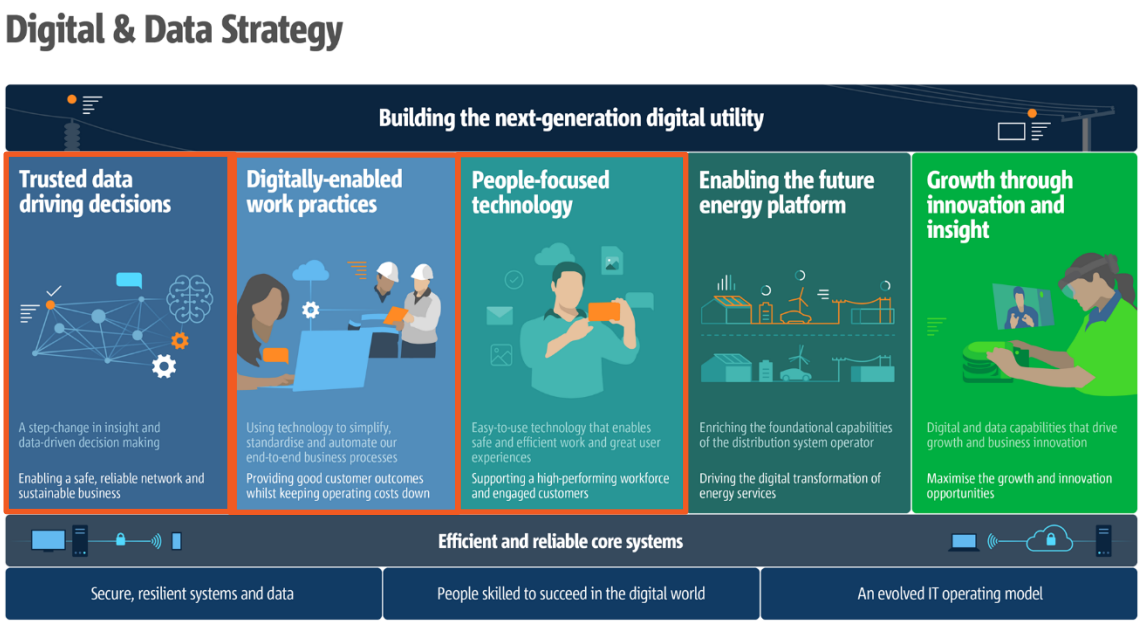

Figure 1: Digital & Data Strategy

The importance of the strategic role that our current MWM system (Click FSE) has in the ongoing delivery of network and customer service services is highlighted by the fact that:

1. it enables us to digitally enable our field and scheduling workforce through activities such as:
   - Planning and balancing workload across field crews
   - Forecasting shift requirements
   - Optimising schedules and routing to complete work requests
   - Dispatching planned and unplanned work to field crews
   - Connecting to mapping data, site access, known hazards and job location information
2. it provides people-focused technology through integration, such as with timesheet systems, removing the necessity for our field crew members to manually re-enter crew-related activity into their individual timesheets
3. it supports the collection of trusted data to driving decisions through both prompting of crews to record and update asset related information on job closeout, and the related integration with asset management systems.

The funding requested in this document is to enable the SA Power Networks' Mobile Workforce Management System to be replaced to maintain our 'Digitally-enabled work practices', 'People-focused technology', and 'Trusted data driving decisions'.

9. Reasonableness of cost and benefit estimates

We estimated the costs based on two sources:

1. For the costs of the related tool configuration, integration with our existing systems, testing, training and related change management efforts required to roll out the tool, we have utilised learnings from our project rollout of Click FSE in 2018–2020. The total cost of this project (escalated to $Jun 2022) was $17.4 million[32]. Our replacement forecast is of a similar magnitude and, we believe, similar complexity to the Click FSE rollout.

2. We undertook a high-level market scan to understand the costs for competing solutions where we assessed 3 competitor products, representing those mostly likely to be assessed as part of the selection process for a new solution. We expect to undertake a much more detailed market review and selection process at the appropriate time in the future. This market scan enabled us to understand the vendor costs, vendor support for data migration and ongoing licensing and support costs.

We have assumed the ongoing internal IT maintenance and support costs for the tools will be like-for-like (ie, netting the recurrent allowance off the total cost of replacing our Field Service Management (**FSM**) solution). The cost estimates ensure current levels of operational performance, reliability and safety by ensuring the capability of the existing FSM solution is maintained.

The costs of this Replace in 2025–30 option includes:

- internal resources, with work effort based on experience with projects of similar functionality, size and scale and independently benchmarked labour rates;
- vendor implementation quotes, and
- quoted on-going vendor licensing costs.

[32] $ Jun 2022 real cost is based on an escalator of 4.39%.

10. Reasonableness of input assumptions

The key input assumptions associated with the Click FSE replacement forecast are as follows:

- It is almost certain that the end-of-life for Click FSE will occur during next period (2025–30) per Salesforce's statement in April that it anticipates an update/announcement about Click end of life in the near future.[33]
- Feedback from other distributors about their experiences implementing the current generation of potential replacement products indicate these are currently at a relatively low level of maturity.
- Given the above, and the fact that no end-of-life announcement had been made by Dec 2023, it seems more likely that this announcement will occur by the beginning of 2027 than by the middle of 2025.
- There will be no extended support available beyond the announced end of life date (per Salesforce's statement that the period between the announcement of the end-of-life date and the end-of-life date (stated to be at least three years) will be the 'extended support period' and there will be no support provided beyond that date).
- Costs of vendor support for implementation and for licensing data is based on information provided by vendors of MWM systems as part of our market scan process.
- Costs of the project work and rollout estimates are based on learnings from the rollout of Click FSE in 2018–2020 and other projects performed since that date.
- There will be no substantial increase in the number of human/non-human licenses required.

[33] Salesforce Correspondence dated 6 Apr 2023 confirming no support beyond provided notice period for End of Life and indicating a potential update/announcement in the future

A. Appendix A – Cost models

Option 1 (base case):

5.12.10 Click Replacement estimate – Option 1 (Replace over two years from start of 2025-30 RCP).xlsm

Option 2:

5.12.10 Click Replacement estimate – Option 2 (Defer replacement to 2030-35 RCP).xlsm

Option 3 (preferred):

5.12.10 Click Replacement estimate – Option 3 Preferred (Defer replacement to begin in 2027).xlsm

B. Appendix B – Opex base year adjustment (Preferred Option)

Table 11: Opex Base Year Adjustment ($m June 2022)

Category	Application function	2025–26	2026–27	2027–28	2028–29	2029–30	Total 2025–30
Base Year Adjustment	Replacement of Click FSE system with an equivalent solution.	-	-	4.9	7.1	2.3	14.3
	Total opex base year adjustment	**-**	**-**	**4.9**	**7.1**	**2.3**	**14.3**

Request

Topic	Detail
Background	During the 2025–30 period we expect to replace Click FSE with a solution, to be selected at that time, that provides equivalent services. The solution is expected to be SaaS based. Click FSE is currently SaaS and the competitor products are SaaS.
Request	An opex base year adjustment of $14.3 million[34].

[34] Note that these figures exclude the recurrent opex of $0.6 million that will be funded through business efficiencies.

C. Appendix C – Risk assessment

				Current risk (Option 0 – Do nothing)			Residual risk (Option 1 – Replace over two years at start of 2025–30 RCP)			Residual risk (Option 2 – Defer to 2025–30 RCP)			Residual risk (Option 3 – Defer replacement to begin in 2027)		
ID	**Risk scenario**	**Consequence description**	**Consequence category**	**Consequence**	**Likelihood**	**Risk level**	**Consequence**	**Likelihood**	**Risk level**	**Consequence**	**Likelihood**	**Risk level**	**Consequence**	**Likelihood**	**Risk level**
1	**Click FSE is end of life before 2033**	Access to cloud-based Click FSE is lost at the end-of-life date when the servers are switched off. We are forced to revert to manual, incurring costs to efficiency, to remediate associated and integrated systems, to rebuild processes, to hire additional staff for planning, scheduling, business support and field work, and to associated training and change efforts. Associated impacts on customer activities/responsiveness, data quality and time to resolve outages. (All of this effort and cost must be replicated/reworked when we do eventually do the replacement.) $5.7m in IT remediation and rollout. At least $2.9m in annual FTE uplift of additional schedules, planners, BSOs, and TSWs etc due to additional manual scheduling/ rescheduling, schedule	**Technology and data capabilities** – Disruption of access to, or use of, systems.	4	5	**Extreme (9)**	1	1	**Minimal (2)**	4	5	**Extreme (9)**	1	1	**Minimal (2)**
			Customer – Failure to deliver on customer expectations.	2	5	**High (7)**	1	1	**Minimal (2)**	2	5	**High (7)**	1	1	**Minimal (2)**
			Network – Failure to transport electricity from source to load.	2	5	**High (7)**	1	1	**Minimal (2)**	5	5	**High (7)**	1	1	**Minimal (2)**
			Performance and growth – Financial.	4	4	**High (8)**	1	1	**Minimal (2)**	4	4	**High (8)**	1	1	**Minimal (2)**

		distribution/ redistribution and manual data collection activities. Total cost around six years of FTE uplift plus IT/process remediation/change rollout = $22.8m. This would more than double the costs of the deferred option as all the work to implement a new system would have to be done in 2030–35. To pay for this, we would have to defer some other critical work, and the benefits arising out of that deferred work or risks mitigated by that deferred work would be foregone. Costs to do the replacement work would increase as the change impacts, both to IT systems, processes and staff roles, will be larger than previously anticipated. This could be accompanied by significant and widespread field workforce resistance to so much change plus significant reduction in user experience/increase in workload. Widespread material dissatisfaction could impact SA Power Networks' ability to deliver work.	**Performance and growth** – Loss of productivity.	4	4	**High (8)**	1	1	**Minimal (2)**	4	4	**High (8)**	1	1	**Minimal (2)**
			Safety – Harm to a worker, contractor or member of the public.	4	4	**High (8)**	1	1	**Minimal (2)**	4	4	**High (8)**	1	1	**Minimal (2)**
			Culture and workforce – Workforce misalignment/ disengagement.	3	5	**High (8)**	1	1	**Minimal (2)**	3	5	**High (8)**	1	1	**Minimal (2)**
		Risk of impacting other significant/critical programs activities and the benefits to be achieved from them, such as replacement (repex) / augmentation (augex) activities while reverting to manual	**Performance and growth** – Financial.	3	5	**High (8)**	1	1	**Minimal (2)**	3	5	**High (8)**	1	1	**Minimal (2)**

		processes and due to reduced data quality/lag effects of manual data collection/less efficient scheduling etc. if revert to manual scheduling/dispatch activities.														
			Overall risk level[35]			**Extreme**			**Minimal**			**Extreme**			**Minimal**	

[35] For each option, the overall risk level is the highest of the individual risk levels.

D. Appendix D – Impacts of not replacing Click FSE

Should Click FSE become suddenly unavailable today, around three weeks of pre-planned schedule would be extracted from the KIOSK web interface. Hardcopy printouts of those three weeks of planned work schedule would be used in conjunction with manual whiteboards for any replanning, with photos of these distributed via email or otherwise to depot crews. It should be noted that this type of activity is only intended to be used to cover a temporary loss of access to the Scheduling and Mobility system to enable work to continue while allowing some time for system access to be restored. After that, it would be back to a fully manual scheduling process. It is not intended or feasible to run operations in this manner on an ongoing basis.

While the situation described in this business case is not one of sudden unavailability, the above is illustrative of the situation that we would be seeking to avoid via a timely, orderly and prudent replacement process.

We conservatively estimate that reverting to manual performance of the functions currently provided by Click FSE would result in a cost to the business of a similar order of magnitude to the costs of replacing the system. Some functionality would be lost in this process leading to increased safety risks both to our field personnel and customers, significant lags in asset data capture times, and associated reductions in asset data quality would occur. Additionally, the likelihood of extended outage durations would increase at the same time as increased lag would occur in restoration time estimation processes. This combination would result in widespread customer dissatisfaction.

Reversion to a fully manual scheduling and dispatch process would necessitate:

- significant IT investment to remediate the many IT systems and processes that currently rely on input to, or output from, Click FSE, including other applications used by our field crews and to create IT-hosted forms or develop other data collection, ingestion and/or distribution methods;
- development of new manual scheduling and field work processes and an associated significant change effort to train our planners, schedulers, business support officers and field crew members in their use; and
- recruitment of additional ongoing resources, including schedulers, planners, administrative and business support officers, and field crew to support:
  - the additional time required to manually schedule and reschedule work;
  - the loss of productivity from a less efficient manual scheduling and job distribution process; and
  - the increased amounts of manual handling required for capture, update and distribution of crew, job status, and asset data and associated insights.

We estimate the rough order of magnitude for total costs of this activity alone would be $22.8 million[36] across the 10 years 2025-35 and these additional costs would be incurred at the same time as SA Power Networks experienced an accompanying reduction in productivity, safety, efficiency and a reduction from existing customer service levels. The costs associated with the productivity losses, safety risk and customer disruption have not been included in this figure. It is for these reasons that SA Power Networks would seek to replace Click FSE with an equivalent MWM system before it reaches end of life.

[36] Estimated cost of consequence(s) to SA Power Networks or its customers in an event this risk eventuates ($m Jun 2022 Real).