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De-Risking the Procurement of the Next Generation National Resilience Extranet

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Contents

1. **Industry's Capability to Deliver**
2. Volumetrics, Billing, Charging
3. Contracting Models
4. Timescales & Delivering Change
5. Risks, Impacts, and Mitigations
6. Conclusions: Trade-Offs and Procurement Options

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Introduction & Context

- Cabinet Office (CCS) considering options for procuring a replacement of the National Resilience Extranet (NRE) = "Next Generation NRE" (NG-NRE)

- Current NRE contract, unless extended, expires Sep 2013

- **Task: <u>De-risking NRE Procurement Strategy</u>**
  - provide advice to de-risk the procurement strategy for delivering the NRE in line with the Government ICT strategy."

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Candidate Delivery Models

TECHNICAL
1. Current Functionality
2. Augment Functionality of current system (e.g. COP)
3. New industry-provided NG-NRE
4. Government Cloud-based solution

- Options 1 and 2 are “Continuity Options” from incumbent
- Options 3 and 4 are “Change Options” via competition
- Limited extension with incumbent can provide more time to exercise Option 3 or 4
- Could also unite NG-NRE with NERIMS and RIMNET

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Candidate Commercial Models

- This slide considers whether the supplier would provide a service, a system or a mixture of the two.

Commercial Model	Comment
1. Delivered system, operated by Resilience Community	Federated nature, breadth and ICT capabilities of the Resilience Community would probably make this option impracticable: rejected on grounds of risk
2. System + services	Delivered system, with services managed by the supplier.
3. Service, delivered to the Resilience Community	All set-up costs absorbed into service charges; industry unwilling to accept this arrangement unless risk of usage levels are retained by Government
4. Value added service enhancements	The option of providing service enhancements to any of Models 1-3, in order to enhance the overall system functionality during the contract. This could help to ensure that NG-NRE would not become obsolete during the contract.

- Models 2 and 3 are realistically possible
- Model 3 dependent on clear allocation of risk
- Model 4 is dependent on further budget for through-life enhancements

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Industry Consultation Workshop

- Niteworks held an industry workshop with ~20 staff from 14 different organisations, providing clear opinions (5/12/2012)
- UK industry is clearly capable of providing NG-NRE, adding mapping functionality if required
- Many UK companies would like to win the contract
- Industry would prefer a single contract
- Industry concerns about current contract that creates dependency on thousands of individual purchases; if repeated, industry would aim to recover its costs from the core NRE payments
- Industry could purchase the NG-NRE infrastructure from G-Cloud and place it within the PSN, preferring this option to Government providing the same infrastructure as GFX. Industry suggested that the latter could be more expensive, because of the additional work that would fall to industry, even though Government might expect the opposite to be the case.

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Assessment 1: Industry's Capability to Deliver

- Leaving to one side the extremely challenging timescales, UK industry can deliver the NG-NRE
- Within the capabilities of many ICT companies in UK
- Scope for healthy competition
- Industry has concerns over Metrics, Commercial terms, Governance, Charging, Billing, and others
- Unknowns ⇒ Risk ⇒ Provision ⇒ Cost ↑ ⇒ Price ↑
  - A company lacking knowledge on these issues will add provision for risk, which increases its costs, and hence its bid price
- The more information that Government shares with industry, the more that industry can reduce its risk provision in bids
- The more information that Government shares with industry, the greater the business interest and thus the competition

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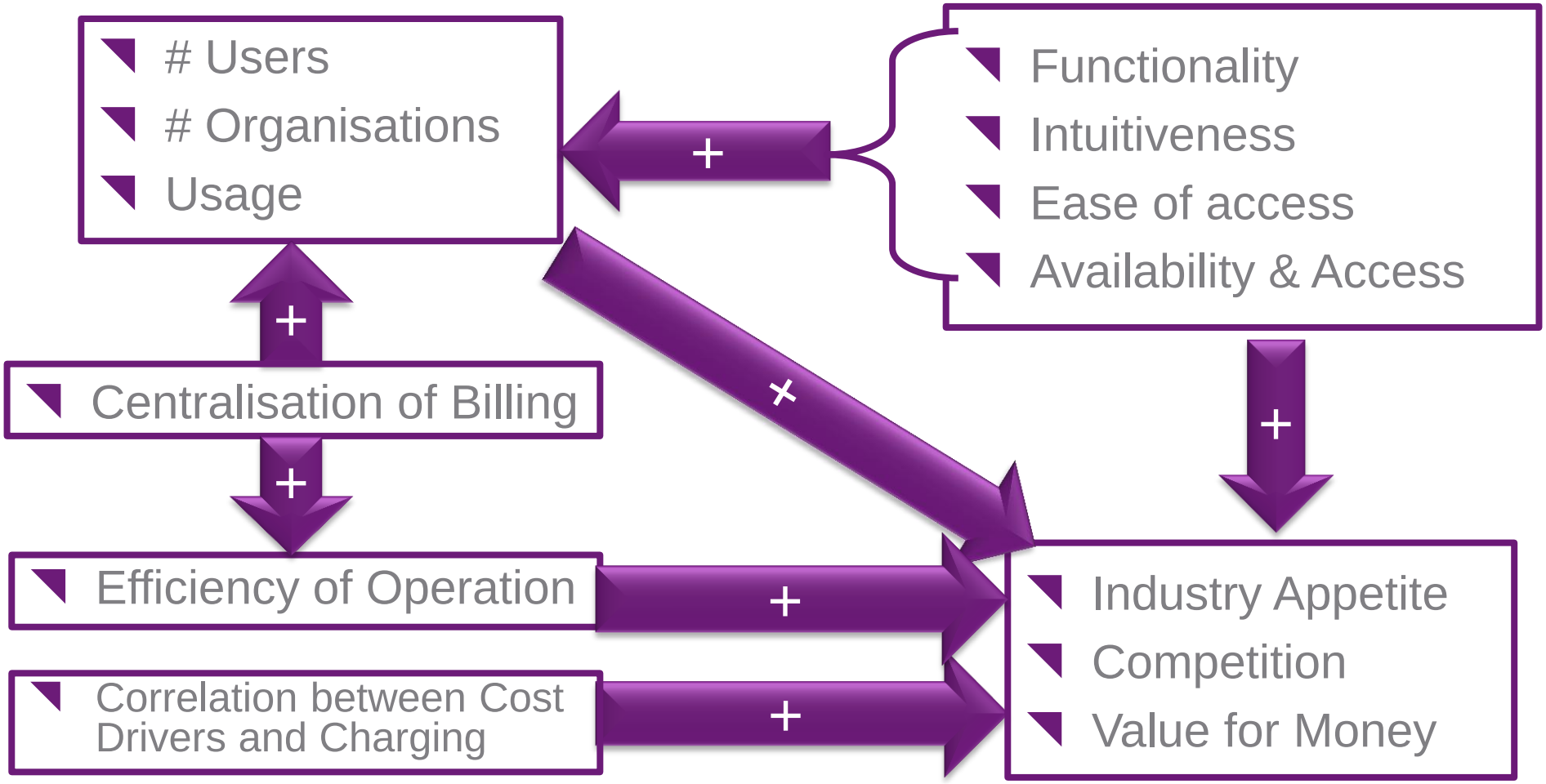
Volumetrics: Drivers & Influences

This diagram highlights how the following key factors influence one another, and therefore how they will influence industry appetite, the competition, and the consequent value for money. For further information, see Notes View.



Legend: + = positive correlation

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Billing v. Charging

Need to examine the two closely related systems

Working Definition, for this presentation:

- Billing ("who pays?"): the policy that determines which organisations should pay towards the creation and operation of the NRE.

- Charging ("how much?"): how the values of the payments to the NRE supplier(s) are determined;

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Billing

- Current billing regime adds cost to NRE operations
- Directly reduces the margin to the service provider, regardless of volume
- Provides an easy excuse to the Resilience Community to opt out of NRE (if they are looking for one)
- Current billing regime injects unpredictability of turnover, beyond the NRE provider's control
- Current billing regime is a disincentive to bidders in future competition, and is seen as such by industry

- Billing: Payments borne by:
  - Central Government? Cabinet Office? DCLG? Home Office?
  - Resilience Community? Local Authorities?

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Candidate Charging Strategies

- Charging regime could be simplified
- Chosen regime could select from the following:
  - Core payments, for creating the system, in stages
  - Managed Service payments:
    - Payment per seat (licence)
    - Payment per organisation
    - Payment for usage: time (hour), activity (click), access (Mb)
    - Payment for overall service
    - Payment per call to help-desk
  - Incentive payments:
    - User satisfaction, intuitiveness, softer measures?
- If charging regime proportionate to cost drivers of provider, then provider can minimise risk provision for other variables

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Assessment 2: Volumetrics, Billing, Charging

- NG-NRE free to users would reduce disincentive to sign up
- ⇒ Greater adoption by users & more complete coverage, thus delivering better knowledge sharing and UK Resilience
- ⇒ Charges more predictable
- ⇒ Lower (or no) volumetric risk to supplier
- ⇒ Greater attraction to industry to compete

- Procurement risk is reduced if the Resilience Community is not paying for NRE in “penny packets”

- Usage volumes, numbers of users and user organisations could still drive <u>charging</u> regime, preferably proportionate to cost drivers of provider

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Contents

1. Industry's Capability to Deliver
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3. **Contracting Models**
4. Timescales & Delivering Change
5. Risks, Impacts, and Mitigations
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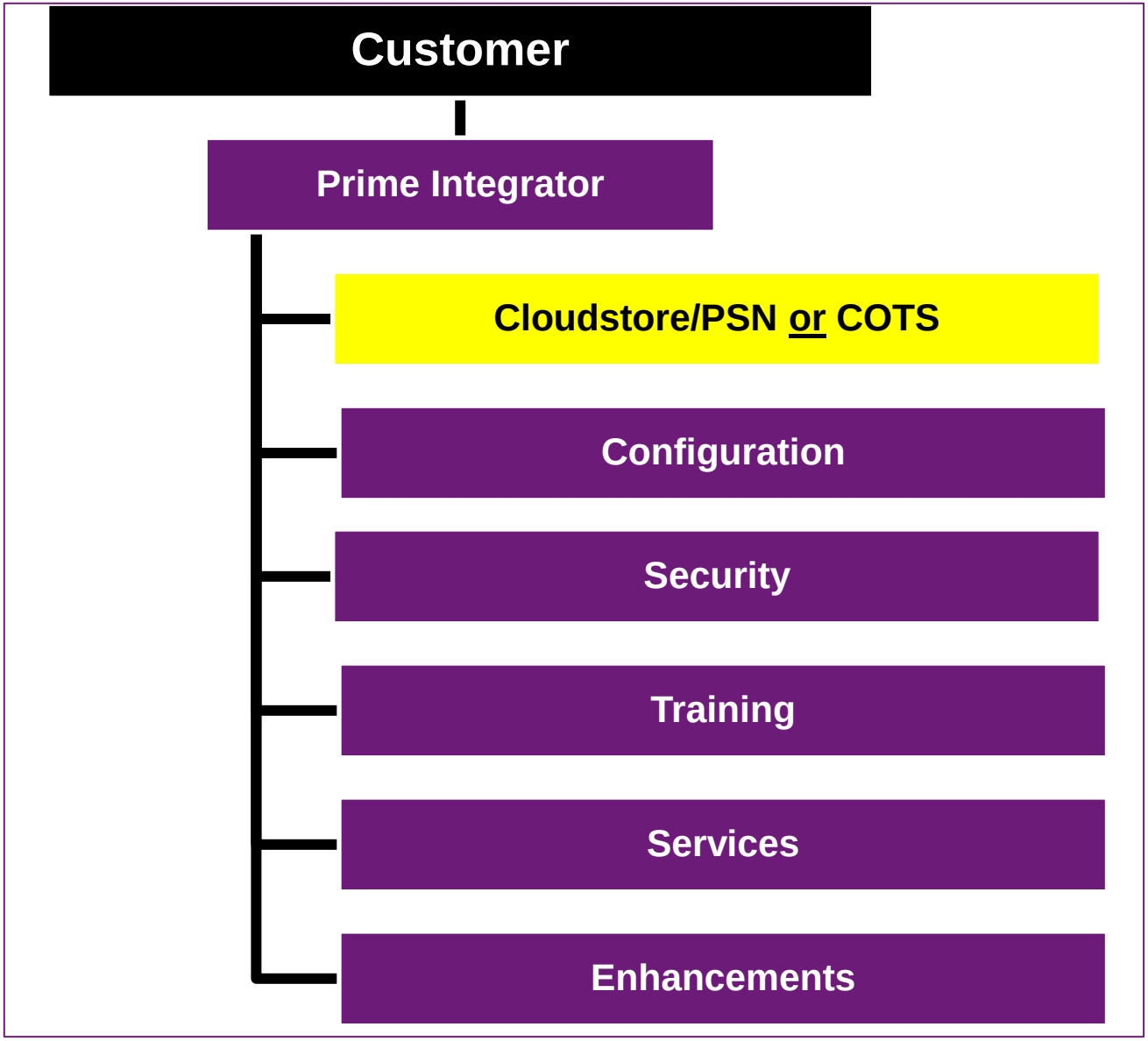
Contractual Option A: “Prime”



Prime integrator procures all subsystems, and delivers a total service to the Resilience Community.

Prime also manages the delivery of all NG-NRE services.

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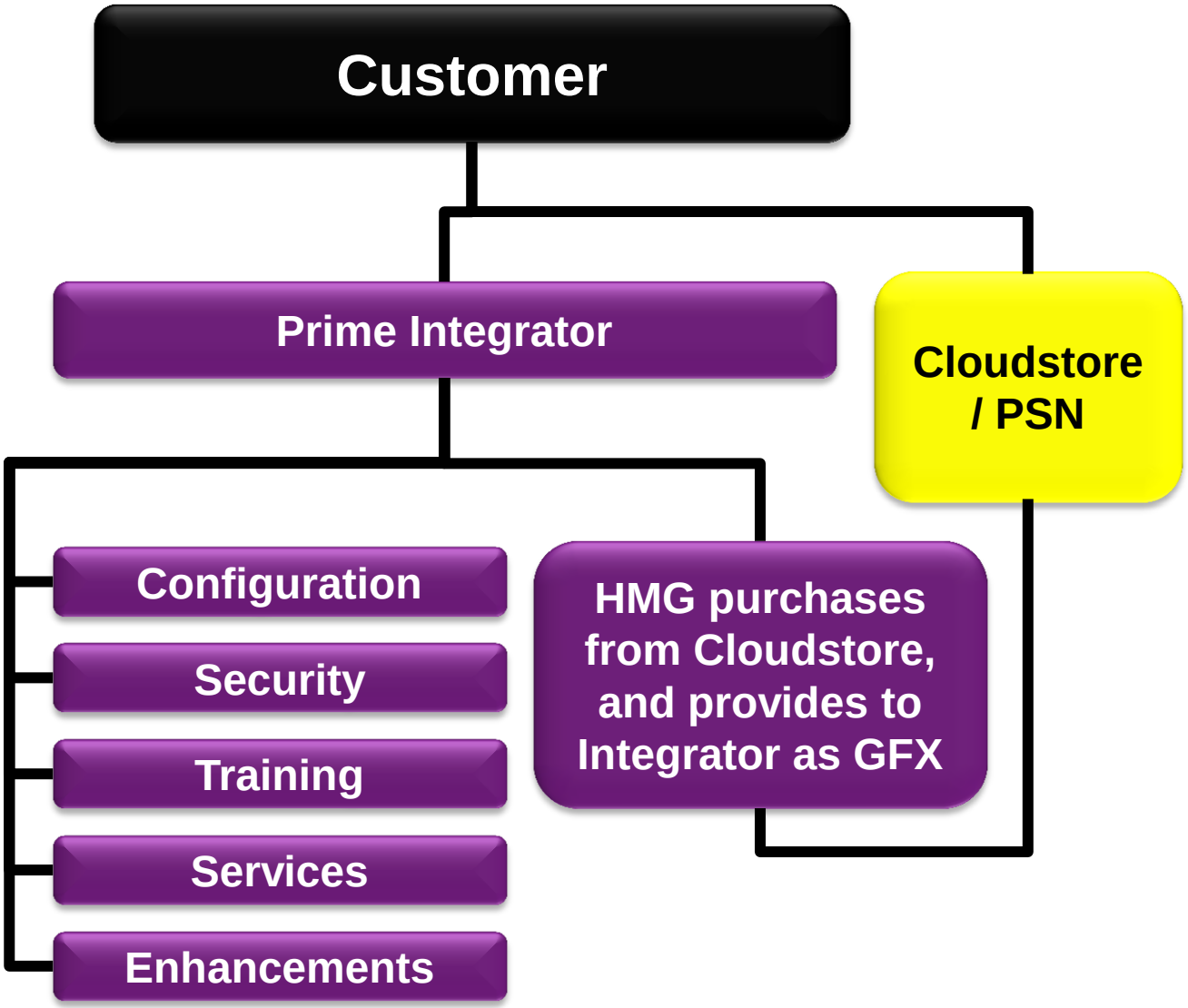
Contractual Option B: “Prime + GFX”



Prime integrator specifies the infrastructure needed from the G-Cloud.

Government procures the infrastructure and provides that as GFX to the Prime.

Prime manages the delivery of all NG-NRE services.

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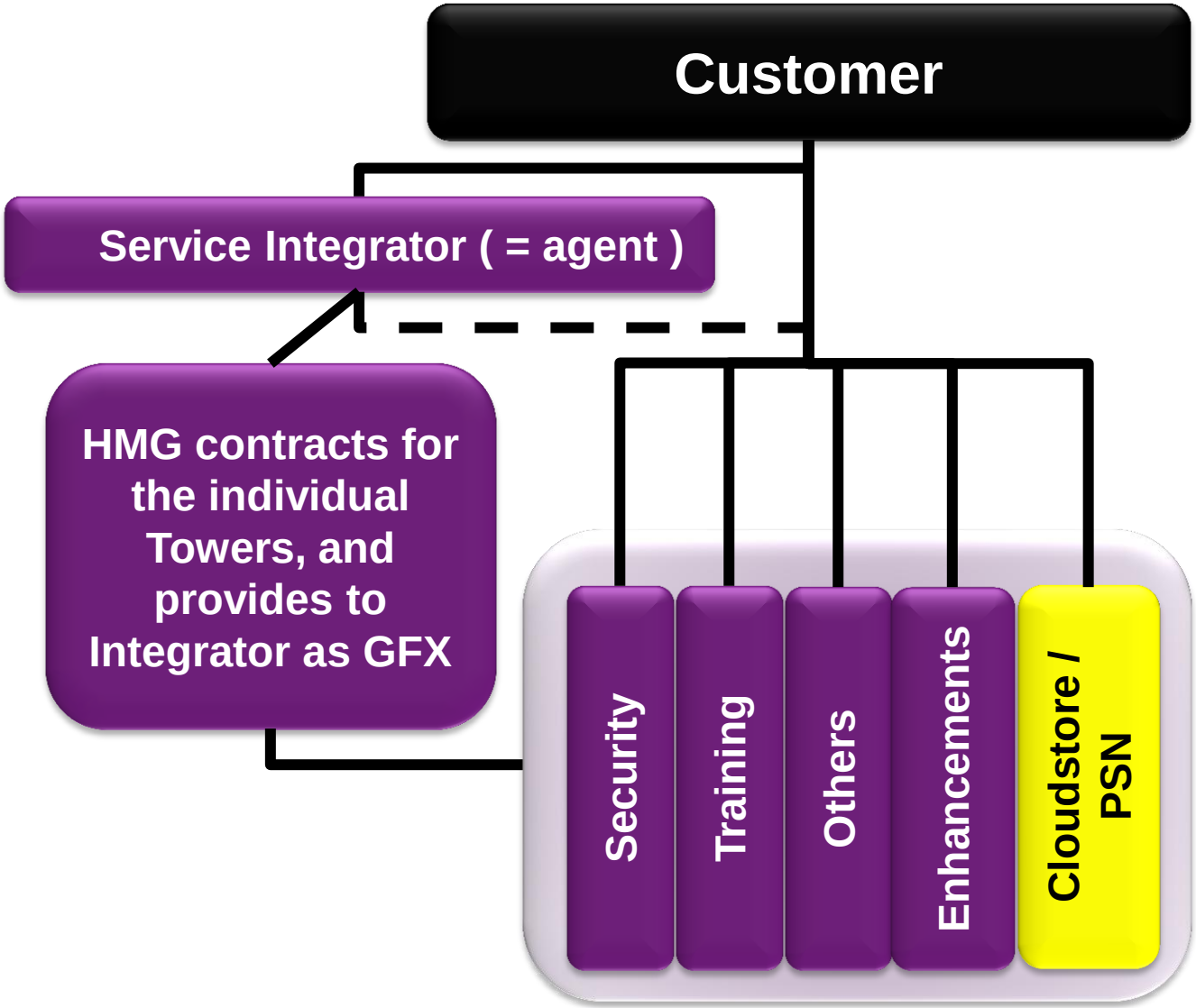
Contractual Option C: “Thin Service Integrator”

Service Integrator is contracted to be an agent of the Government

Towers have individual contracts with the Government customer.

Closest match to Government ICT Strategy.

Benefits on a contract of this scale would probably be less than on larger contracts.



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Assessment 3: Contractual Options

Option	Pros	Cons
Prime	• Industry understands, supports and prefers • Would generate most competition	• Risk that Cloudstore prices with industry margin added might erode economic benefit of Cloudstore in this procurement
Prime + GFX	• Avoids fixed margin for Cloudstore prices passing through	• Risk of dispute at contractual boundaries • Still requires effort to integrate GFX services
Service Integrator	• Closest match to ERG strategy • Ability to compete "towers" individually	• Depends on clear Technical Design Authority role • Unproven commercial model = risk • Efficiency gains & savings (%) expected from major ICT procurements are most unlikely to be achieved in small contracts such as NG-NRE • Uncertainty re the viability of this contracting model given potential risks

- The Service Integrator model implies increased risk to NG-NRE, and thus to the UK's resilience: recommendation is that it should not be pursued
- An ITT could allow bidders to submit bids on either the "Prime" or the "Prime + GFX" model. This would enable direct competition between the models, thus increasing price competition

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Contents

1. Industry's Capability to Deliver

2. Volumetrics, Billing, Charging

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Timescales for the "Change Options"

- Current NRE contract, unless extended, expires Sep 2013
- NG-NRE must continue seamlessly from current contract

"Change Options"

- Change options require a competition; planning must therefore assume a change of supplier;
- So under normal procurement timescales, plan includes:
  - ⇒ data migration must start by ~July 2013
  - ⇒ new contract must be placed by ~May/June 2013
  - ⇒ procurement activities must start in ~January 2013
- Change Options thus require more detailed examination …

- *Note: "Continuity Options" would resolve the timing issue*

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Change Options: Route to Competition

Decisions needed to go to competition
Ministerial Approval for Procurement Strategy
• System Functional Requirement (Must do/Should do/Could do), final version ready for competitive procurement
• Volumetrics: # users, # organisations: stable numbers, sufficient for competition
• Availability, Service Levels, Performance Metrics: Hard (measurable), Soft (intangible)
• Charging regime (how much?), Billing regime (who pays?): need stable proposals
• Commercial & Contractual arrangements: programme arrangements ready for contracting
Application of Government ICT Strategy: must establish how ICT Strategy will be applied
Training: Need? Access? On-line?
Rough order of magnitude Central Government budget available
Client-side team: need to identify how team will be obtained/recruited, and funding for team

- Note bulleted items have direct and significant impact on price

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Change Options: Indicative Route to Contract

Required to go to Contract
Confirm Central Government budget available
Issue of ITTs, management of the competition
Assurance & due diligence on supplier & capabilities
Data migration plan proven and assured
Negotiate Contract; Complete Commercial & Contractual schedules, agreements
Confirmation of Functional Requirement, Volumetrics, Availability, Service Levels, Performance Metrics, Service Levels, Agreements, Charging regime, Billing regime, Application of Government ICT Strategy
Change management programme defined and ready to be implemented
Training programme defined and ready to be implemented
Treasury Approval?

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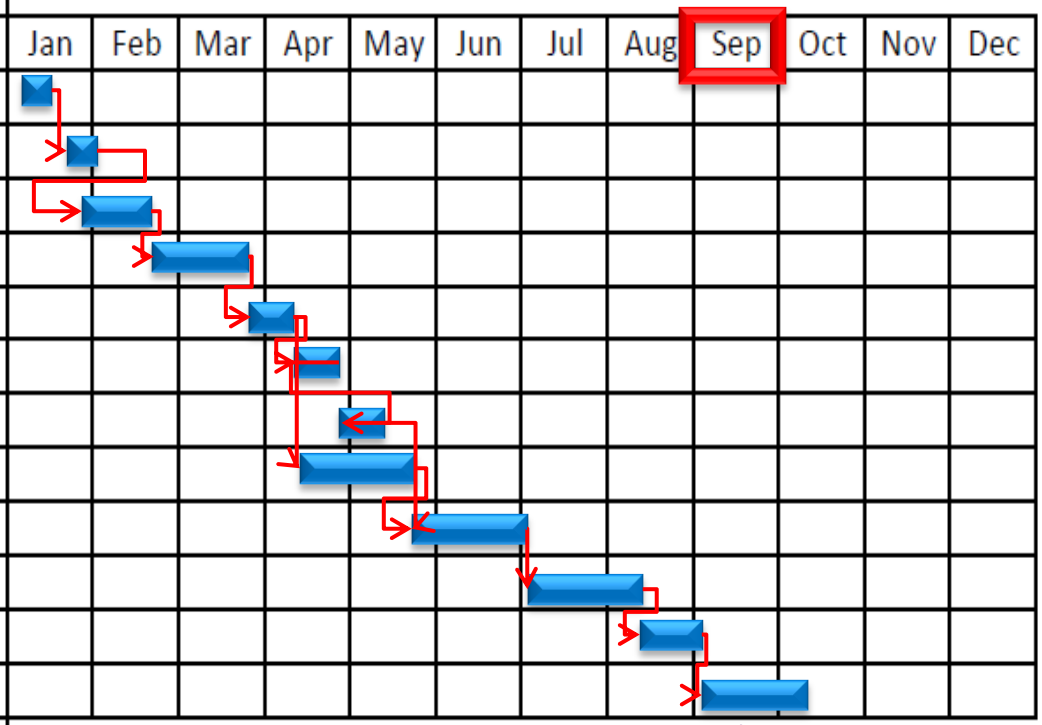
Change Options: Indicative Timetable

#	Activity	Dur'n (wks) ☺	Dur'n (wks) ☹
1	Receive Niteworks report & digest	1	2
2	Sub on procurement strategy	1	2
3	Recruit client procurement team	2	4
4	Produce User Requirement	3	6
5	Prepare & issue PQQ	2	2
6	Industry prepares PQQ responses	2	2
7	Select from PQQs	2	2
8	(Prepare & issue ITT – in parallel)	4	6
9	ITT responses	4	6
10	Select, Dialogue, Approve, Contract	4	6
11	Supplier prepares data migration	3	5
12	Data Migration	5	8
		33	51



Even with a compressed timetable, there is significant risk that procurement route will not produce a satisfactory result before contract expiry.
The above timetable has ignored the step of advertising in the OJEU: such an advertisement would inject a further delay.

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Change Options: Impact of Timescales

- Mid-January to Mid-September $\cong$ 35 weeks
- Activities until service transition completely fill time available
- $\Rightarrow$ No project float!
- $\Rightarrow$ All documentation must be right first time
- $\Rightarrow$ No scope for re-work during procurement
- $\Rightarrow$ Need skilled and effective client-side team, familiar with ICT requirements analysis, procurement, commercials, etc
- Team would need to start work very soon, and work with excellent co-ordination, at high speed

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Assessment 4: Change Options

- Change options in Sep 2013 only possible if production of requirements and procurement process are compressed
- Transition in Sep 2013 would impair NG-NRE capabilities
- ⇒ Limits opportunity to provide new capabilities in NG-NRE
- ⇒ Limits COP functionality
- Risks industry concluding that competition is closed

- Such a procurement is dependent upon there being at least one compliant bid within budget at bid submission
- ⇒ Significant risk of break in service in September

- ⇒ Already too late

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Contents

1. Industry's Capability to Deliver

2. Volumetrics, Billing, Charging

3. Contracting Models

4. Timescales & Delivering Change

5. **Risks, Impacts, and Mitigations**

6. Conclusions: Trade-Offs and Procurement Options

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"Change Options": Risks & Mitigations
Rapid Procurement Reduces Functionality

Risk: Rapid procurement reduces NG-NRE functionality.

The "Change Options" require time to create, consolidate and validate a coherent statement of requirement that will be ready to be presented to industry within the ITT.

Prob	Impact		
	Schedule	**Cost**	**Performance**
High	Nil	Nil, until further functionality is procured to fill the shortfall	Significant: NG-NRE functionality could be limited to not much more than today's

Mitigation: cannot mitigate the probability of this risk if procurement is driven by expiry of contract in September 2013.

Fallback: procure upgrades to an initial operating capability (to be defined), after service has transitioned to new supplier.

Drawback: such follow-on procurement of upgrades would need to be non-competitive with the new incumbent.

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"Change Options": Risks & Mitigations Procurement Delay

Risk: Any delay in procurement risks reaching current NRE contract expiry without a successor contractor being identified, appointed and ready to implement a transition to a new service, thus causing a break in service.

Both the UK Resilience Community and Government consider continuity of NRE service to be of paramount importance.

Prob	Impact		
	Schedule	Cost	Performance
Medium	None	Significant costs to procure an interim system to fill a gap in service.	Break in service = unacceptable

Mitigation/Fallback: need access to additional capability to create a client-side team, in order to accelerate procurement.

Drawback: Significant cost.

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"Change Options": Risks & Mitigations
No Compliant Bid Within Budget

Risk: No compliant bid submitted within budget, thus risking a break in service;.

Prob	Impact		
	Schedule	**Cost**	**Performance**
Medium	If risk occurs, would probably cause break in NRE service	Costs to repeat a procurement	Possibly leads to reduced functionality of system

Mitigation: ITT to contain a requirement for a base system with multiple enhancements (e.g. system functionality and higher service availability levels) as optional extras. This would increase the probability of being able to secure a compliant contract within the available budget.

Drawback: This procurement strategy would require companies to invest more time in preparing their bids so that they could offer these options.

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"Change Options": Risks & Mitigations Change Management

Risk: Timescales prevent adequate time for change management within Resilience Community.

Cabinet Office CCS's NG-NRE Change Manager will provide valuable support to this important procurement. But under this rapid procurement, the contractor will be appointed only a few weeks before the transition of service, which leaves little time for the Resilience Community users to learn and master the selected new system. Risk occurs if the total change programme requires more staff to support the wider Resilience Community.

Prob	Impact		
	Schedule	Cost	Performance
Low - Medium	Nil	Small	Performance of NG-NRE suffers some impairment through unfamiliarity with the new system.

Mitigation: will be dependent on timescales for procurement, intuitiveness of new system, resources committed by new supplier, etc.

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"Change Options": Risks & Mitigations PSN not ready to Host NG-NRE

Risk: PSN not ready to host NG-NRE in September.

Niteworks is unsighted as to the precise level of maturity of the PSN, and thus how ready it is to host an NG-NRE, and/or whether such hosting would enable the levels of access and functionality that will be required.

Prob	Impact		
	Schedule	**Cost**	**Performance**
Unknown	**Medium**: potentially a month or two, as an alternative hosting arrangement is identified, validated and implemented	**Medium**: cost of fallback solution net yet known, but implementation	Possible impacts

Mitigation: an evaluation of the PSN's maturity and readiness to host NG-NRE would confirm the PSN's state of readiness to host the NG-NRE.

Furthermore, this risk would be mitigated if Government decided to extend the current provision of NRE in order to allow more time for the procurement of NG-NRE.

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"Change Options": Risks & Mitigations: Billing and Charging Regimes

Risk: Billing and Charging Regimes could impair the competition and also the efficient operation and exploitation of the NG-NRE.

The current billing and charging regimes cause inefficiency, and would be disincentives to bidders. This risk will exist unless the regimes are changed.

Prob	Impact		
	Schedule	Cost	Performance
Unknown	Nil	Disincentives to industry could increase the bid prices. Inefficient system would reduce value for money from NG-NRE	Maintenance of the current regimes, impacting to some extent the number of users, would reduce the benefits from the NG-NRE

Mitigation: Central Government can mitigate this risk by making policy decisions to move away from the current Billing and Charging Regimes.

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Risk Ownership (Proposed)

Central Government	User Community	System Provider
# Civil contingencies		Usability
# Users and # Organisational users		Intuitiveness
Stability of requirement; impacts of rapid procurement		Service credits
Changes in usage due to different charging regime	Data volumes stored	User satisfaction
PSN functionality & readiness to host NG-NRE	Value & professionalism of operational exploitation	System performance & availability: BAU + crisis
Higher profile system increases appeal to hackers	Short time from contract to transition handicaps change management for users	Changes in usage due to user-friendliness
Benefits (+/-) of Government mandate (or absence)		Security protection against threats
No compliant bid within budget		Delay: Contract-Delivery
PSN not ready to host NG-NRE		
Costs of responding to civil contingencies		
Procurement delays contract let, & consequent break in service		

Principle: organisation that drives or can best manage the risk should carry the risk

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Assessment 5: Risks, Impacts, Mitigations

- Change options in Sep 2013 only possible if production of requirements and procurement process are compressed
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Contents

1. Industry's Capability to Deliver
2. Volumetrics, Billing, Charging
3. Contracting Models
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6. **Conclusions: Trade-Offs & Procurement Options**

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Trade-offs

The above evidence reveals a number of trade-offs:

- Procurement Timescale v. Functionality: choosing to replace current NRE in September 2013 will reduce NG-NRE functionality
- Procurement Timescale v. Value of longer-term benefits to UK Resilience: choosing to replace the current NRE in September 2013 increases the risk of a reduction in the UK's level of resilience in the longer-term
- Procurement Timescale v. Cost & Risk: choosing to replace current NRE in September 2013 will increase cost and risk
- But, must not allow a break in service

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Conclusions: Procurement Options

- Very rapid competition for new NG-NRE in September 2013
  - Significant additional costs from expensive client-side team
  - Significant cost, schedule and performance risks
- Extend Contract
  - Continuity Option + Change Option later
  - Extension of 6 – 12 months would ease the pressure and deliver benefits to UK Resilience
- Extend Contract + Transitional Steps:
  - Take advantage of extension to prepare for the future
  - Consider introducing concept demonstrations
  - Consider change of Billing Regime, to provide central payment
  - Therefore increase users / better volumetrics
  - Therefore a more attractive competition in due course

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Alternative Procurement Option

- An alternative option to the procurement of NG-NRE would be to consider linking it to the re-procurement of other government systems, in particular to systems of a similar size that also manage UK-geographic information
- Niteworks understands that the following two government systems are due for renewal in March 2014:
  - Nuclear Emergency Response Information Management System (NERIMS), provided by Ultra
  - Radioactive Incident Monitoring Network (RIMNET)
- There may be scope for benefits to be derived from looking at these projects together, but this would require further investigation.

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Recommendations to De-Risk

Niteworks recommends the following courses of action in order to de-risk the procurement strategy:

- Instigate urgently an extension of the NRE with incumbent
- Explore with incumbent the scope for augmentation of NRE provision or for concept demonstration in support of NRE, principally straightforward map functionality (including costs)
- Consider a change to the Billing Regime, in order to simplify the NRE provision and increase take-up rates
- Conduct a short study to evaluate the state of readiness of PSN to host NG-NRE
- Consider within Government the scope to involve other projects in a unified procurement and service
- Initiate a competitive procurement of NG-NRE to commence service in spring to summer 2014

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