

REDACTED

Agenda 

Topic	Time	Presenter
Opening Remarks	2 min	JJ
Procurement Updates	15 min	JJ / NRW / EB
Regulatory Update	20 min	PV / CD
Value Framework	20 min	RIF
Meeting Close & Feedback	3 min	JJ



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Meeting Objectives

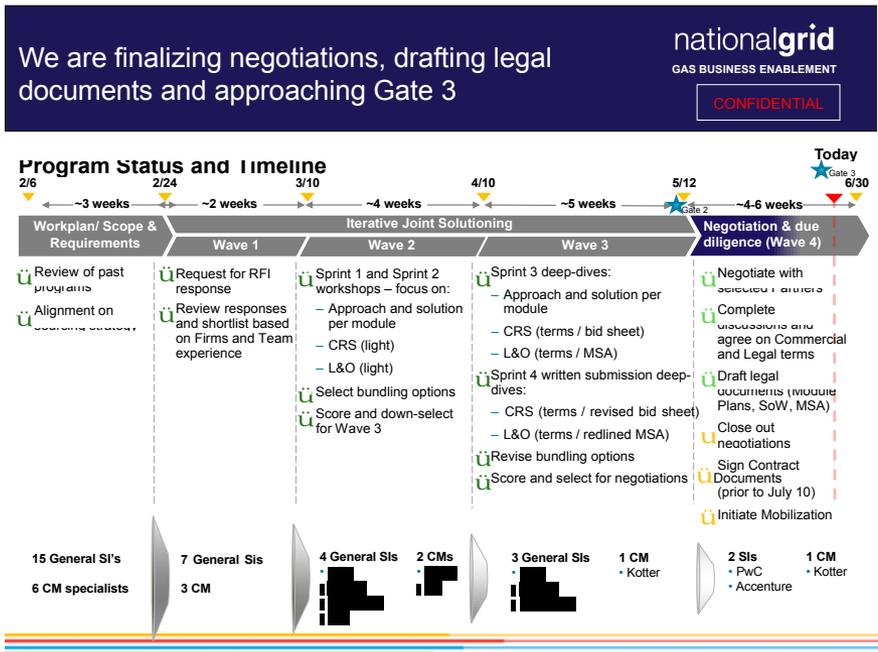
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- Provide update on SI Sourcing negotiations and progress to date
- Provide overview of GBE Value Framework
- Legal construct and final positions
- Review next steps to finalize contracts
- Propose Gate 3 recommendation approach



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Boston Gas Company and Colonial Gas Company
each d/b/a National Grid
D.P.U. 17-170
Attachment AG 24-3-2 - Redacted
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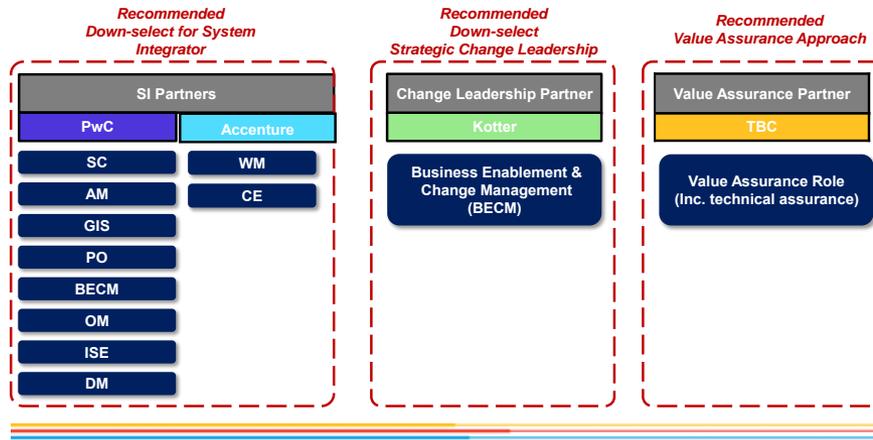
GBE Steering Group (5/17) endorsed the following recommendation for SI & Other Strategic vendors



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Endorsed Recommendation for Down-select Options (Gate 2)



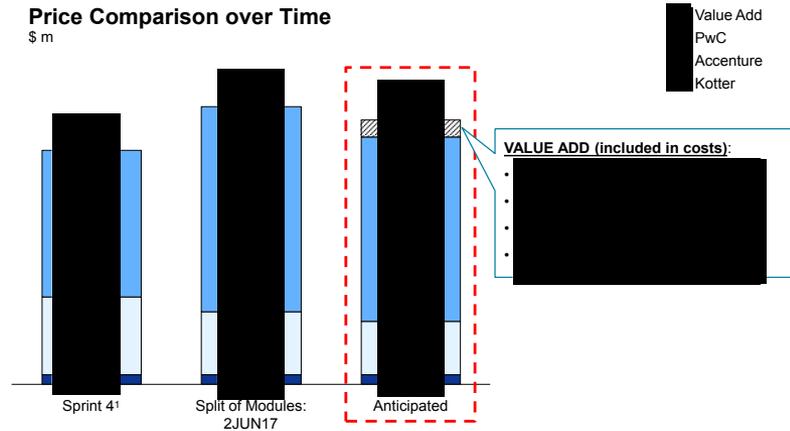
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Total cost expected to be within Target Range
(~\$ [REDACTED] SI + [REDACTED] CM)

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Price Comparison over Time
\$ m



1. In Sprint 4, Accenture Work Management module cost is used to calculate numbers (Vendor submissions final by May 11, 2017)
Note: Includes discounts, excludes expenses. FYI, total numbers may not "add" due to rounding

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The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4770
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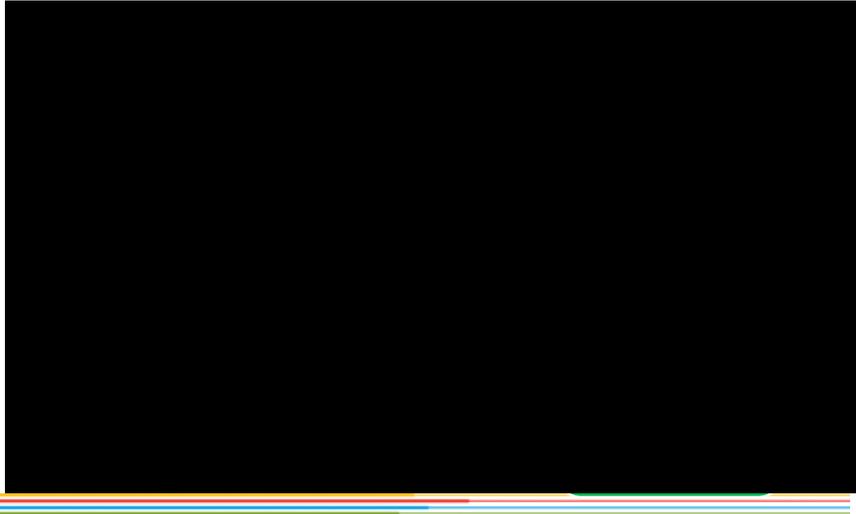
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Commercial Framework
Summary

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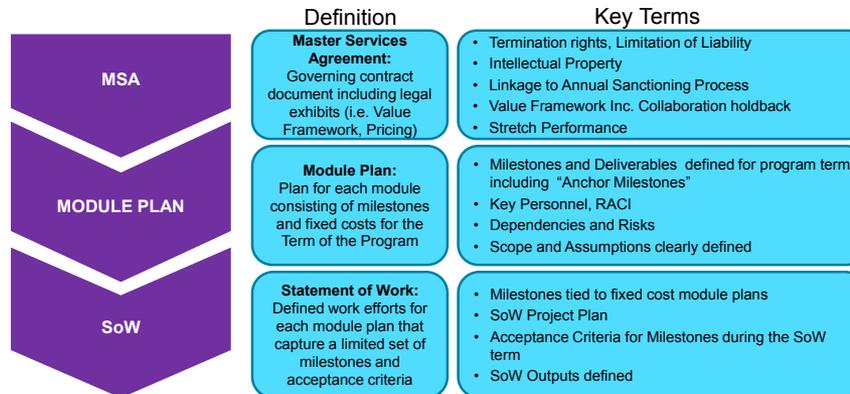
The contract is constructed via a 3-tier structure flowing from MSA to Statement of Work (SoWs)



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High Level Summary of Legal Documents / Technical Delivery Documents



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Legal Update – Accenture and PwC		
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Key Terms/Items	PwC	Accenture
Value Framework	[REDACTED]	
Change Control		
Termination		
Indemnities		
Intellectual Property		



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Next Steps & Recommendation



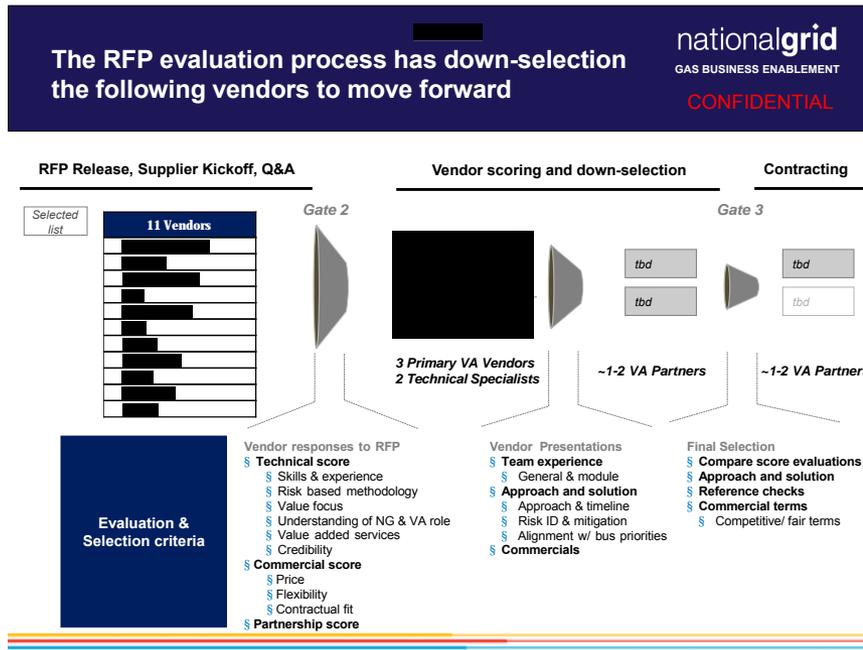
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- Request GBE Steering Group to confirm final positions of awards to vendors (Gate 3) for:
 - System Integration (SI) to PwC and Accenture
 - Strategic Change Management to Kotter International
- Pending Gate 3 approval, proceed to contract award and signature;
 - Effective date July 10th for Accenture and Kotter agreements
 - Execute 12 week PwC SoW (July 10 through September 29)
 - Following the 12 week PwC SoW, execute “Amended and Restated” contract for PwC module plans and SoWs, effective 30 September 2017



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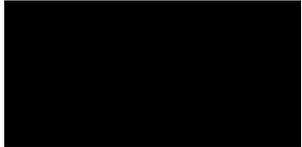
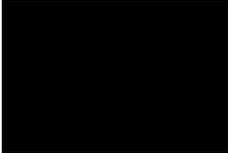
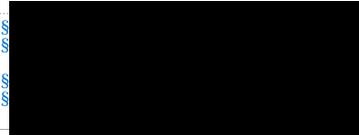
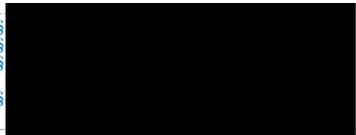
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Gate 2 Recommendation:
Down-select for “Primary” Value Assurance with
option to review “Technical Assurance” vendors

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3 Primary Value Assurance Down-selected Providers	2 Technical Assurance Down-selected Providers
	
	

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Gas Business Enablement Financing Third Party Option (“TPO”)



June 2017

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TPO Introduction

§ Gas Business Enablement is a foundational investment in the future of our US gas business that will deliver significant operational, safety, and customer service benefits

- § Because GBE is being deployed across multiple jurisdictions, and on a staggered schedule to mitigate execution risk, the project faces a number of regulatory challenges
- § Existing Service Company accounting rules would have first company to use GBE absorbing 100% of the costs
- § Customer benefits - lag cost incurrence
- § High upfront design/build O&M expenses - driving spikes in short-term customer impacts

§ We have identified a potential third-party financing option for GBE that will reduce the overall costs to customers while allowing the Company to address these challenges

- § Interest Rates (100% debt) will be lower than traditional WACC
- § Ability to levelize OpCo payment stream to align better with benefits and drive customer benefit on NPC basis
- § Address Service Company accounting concerns - OpCo will pay only based on in-service date
- § In some instances (depending on the timing of rate case filings) reduce regulatory lag for an OpCo, eliminating an incentive to delay investment

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TPO Structure

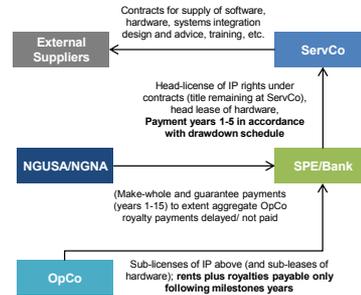
Key Concepts

- § NG controls investment and retains rights to intellectual property
- § All GBE costs financed through a third party/bank, including capex, opex and financing costs
- § OpCos charged rent payments on a schedule that aligns with implementation of GBE functionality
- § Levelized payments over amortization period

Glossary

- § **Project Costs:** Project costs at the OpCo/ServCo level
- § **NPC:** Net Present Costs
- § **TPO:** Third Party Option

Proposed Structure – Contract Arrangements and Payment Flow



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Customer and Rate Making Benefits

Reduces overall costs to customers

- Customer net present costs are more favorable as a result of total costs being levelized when compared to traditional recovery, which has greater upfront payments
- Company will forego a return on invested capital
- Based on current assumptions and indicative pricing range, the costs to customers is approximately c.\$10M - \$36M more favorable under this option
- NMPC customer approximately \$4M-\$7M more favorable in total; c.\$17M during the Rate Year and Data Years

Aligns recovery with operational benefits to customers

- Project will be charged to OpCos based on in-service date for systems (i.e., when utilized)
- Avoids any perception that the early adopting jurisdictions are subsidizing investment in system

Encourages investments to modernize systems by facilitating timely recovery

- Prudent costs for systems investments borne by benefiting customers through timely recovery
- TPO eliminates any incentive to delay needed asset investments based on timing of recovery
- Allows for economies of scale and reduces execution risk by supporting implementation across multiple operating companies

Transparency and Risk Mitigation

- Full transparency on system costs and rent payments charged to OpCos
- Easily audited in rate proceedings
- NG guarantees payments; assumes all risk of default

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TPO Structure

§ NG controls investment and retains rights to intellectual property

- § The GBE program would be managed by National Grid and full transparency to costs retained on the project.
- § NG would confer to SPE-Bank the right to the intellectual property for the duration of that license (title remains at NG)
- § Rights obtained by OpCos; may only be entered into once each Opco starts to using assets
- § On expiration, all rights of the SPE - Bank under the head-license would cease, i.e. ownership of fully depreciated asset would remain with NG

§ All GBE costs financed through a third party/bank, including capex, opex and financing costs

- § 10 year levelized amortization period with 3-year ramp up and capitalized interest.
- § 100% debt financing – reduced interest rates as compared to the traditional WACC
- § Operating Companies would begin to incur charges (allocated share) on the date they begin to take service under the new systems (In-Service Date)
- § Capex and associated Opex amortized over a 10/year period commencing with OpCo use
- § Financing costs incurred in ramp up phase capitalized and amortized over same period, thereafter paid as incurred
- § Specific project financing under revolving facility enables efficient real time financing

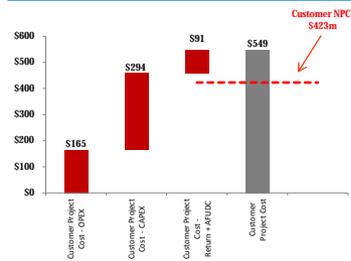
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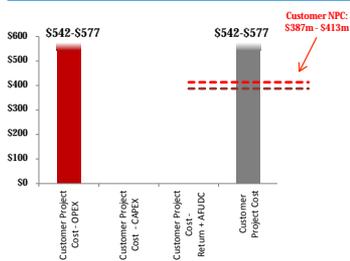


Total and Net Present Value of Project

Traditional Rate Recovery (\$m):



TPO (\$m): (In service dates - 10yr amortization)



§ Looking at the NPC analysis;

§ Customer NPC more favorable under the TPO (c.\$10-36m) as a result of total costs being levelized when compared to the Traditional which has greater upfront payments

§ Financing costs are still to be negotiated, however we believe savings will be towards the upper end of the range

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OpCo Level – Project Costs

Traditional Rate Recovery (\$m):



§ Under traditional rate recovery, the project cost to customers is front loaded resulting in total costs to customers on NPC basis of \$423m

TPO* (\$m): (in service dates – 10yr amortization)



§ Under the TPO the project cost to customers is levelized over the in-service dates resulting in total costs on NPC basis of c.\$387-413m, reducing costs to customers by c.\$10-36m

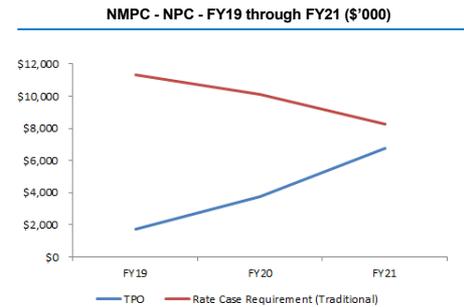
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NMPC Net Present Cost Analysis – TPO¹ vs. Rate Case

Unless otherwise stated numbers are in \$'000

	FY19	FY20	FY21
TPO	\$1,726	\$3,780	\$6,788
Rate Case Requirement (Traditional)	\$11,302	\$10,118	\$8,245



1. TPO lower interest rate range has been used for this analysis

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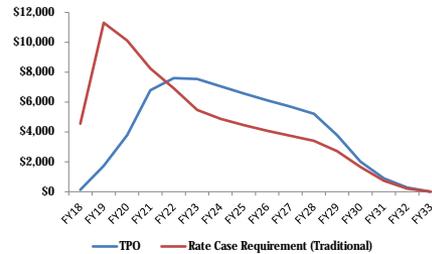
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NMPC Net Present Cost Analysis – TPO¹ vs. Rate Case Over Life of Project

<small>Unless otherwise stated numbers are in \$'000</small>	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	Total
TPO	\$125	\$1,726	\$3,780	\$6,788	\$7,599	\$7,542	\$7,653	\$6,572	\$6,119	\$5,693	\$5,211	\$3,784	\$2,005	\$891	\$271	\$10	\$65,170
Rate Case Requirement (Traditional)	\$4,549	\$11,302	\$10,118	\$8,245	\$6,916	\$5,470	\$4,874	\$4,450	\$4,078	\$3,736	\$3,405	\$2,712	\$1,650	\$733	\$204	\$0	\$72,442

NMPC - NPC – Over Life of Project (\$'000)



1. TPO lower interest rate range has been used for this analysis

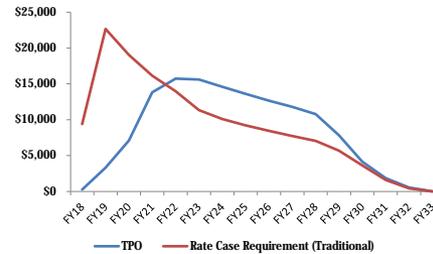
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KEDNY Net Present Cost Analysis – TPO¹ vs. Rate Case Over Life of Project

<small>Unless otherwise stated numbers are in \$'000</small>	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	Total
TPO	\$260	\$3,309	\$7,116	\$13,812	\$15,726	\$15,610	\$14,508	\$13,603	\$12,667	\$11,786	\$10,700	\$7,834	\$4,151	\$1,845	\$562	\$21	\$133,689
Rate Case Requirement (Traditional)	\$9,393	\$22,667	\$19,035	\$16,147	\$13,971	\$11,335	\$10,091	\$9,212	\$8,442	\$7,734	\$7,050	\$5,690	\$3,617	\$1,607	\$422	\$0	\$146,412

KEDNY - NPC – Over Life of Project (\$'000)



1. TPO lower interest rate range has been used for this analysis

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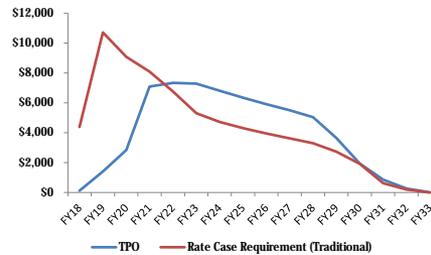
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KEDLI Net Present Cost Analysis – TPO¹ vs. Rate Case Over Life of Project

<small>Data otherwise stated numbers are in \$'000</small>	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	Total
TPO	\$121	\$1,399	\$2,836	\$7,081	\$7,336	\$7,282	\$6,810	\$6,346	\$5,909	\$5,408	\$5,033	\$3,655	\$1,936	\$861	\$262	\$10	\$62,375
Rate Case Requirement (Traditional)	\$4,382	\$10,711	\$9,075	\$8,081	\$6,759	\$5,303	\$4,716	\$4,309	\$3,949	\$3,618	\$3,299	\$2,731	\$1,918	\$620	\$197	\$0	\$60,667

KEDLI - NPC – Over Life of Project (\$'000)



1. TPO lower interest rate range has been used for this analysis

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Going Forward

§ NG anticipates using this financing model for similar IT projects

- § Large system investments
- § Used by multiple jurisdictions
- § Deployed on a staggered schedule

§ Still performing diligence on the feasibility of the financing option; did not include a proposal in the NMPC rate filing.

§ Anticipate analysis will be completed during the NMPC rate proceeding;

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Agenda 
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Opening Remarks	2 min	JJ
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Value Framework Objectives

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Context & Objectives

- National Grid's Gas Business needs to achieve greater levels of performance with strengthened focus on process performance and outcomes
- The Value Framework is required to establish a baseline to measure GBE's impact on the step-change in performance and track economic results
- The Value Framework provides a vehicle to align GBE vendors' incentives to business outcomes for National Grid

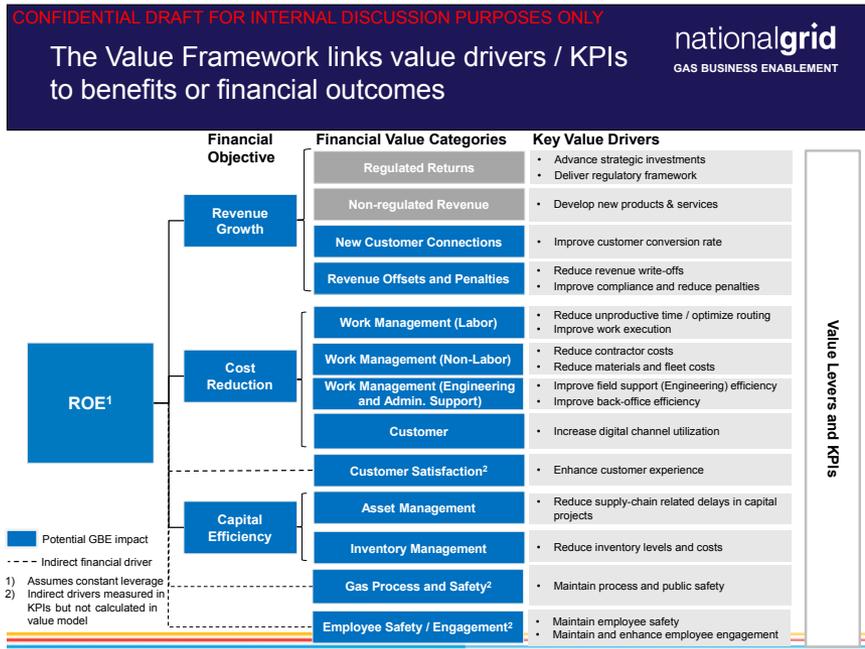
Completed Activities

- Defined [Value Framework](#) for gas business
- Establish [baseline performance](#) across key business performance metrics
- Define [performance targets](#) for each jurisdiction

The Value Framework establishes a roadmap to deliver GBE's business case. Proposed KPIs track improvement against the baseline on a quarterly basis, and measure performance improvements in the business



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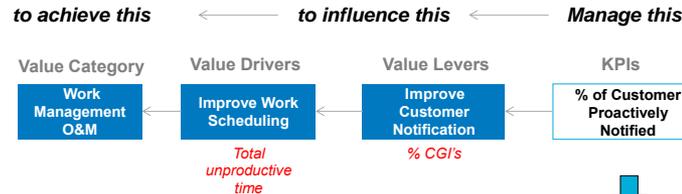
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KPIs measure the improvement levers necessary to realize value in the business

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Value Framework Example: Work Management O&M

Impact



Definition of KPI

Maps to Value:

- Quantifiable relationship to a value category (i.e., if x then y)
- Value model will estimate econometric relationship for each KPI

Ties to Value Driver

- Effectively measures specific value lever actions

Leading KPI:

- Change in the KPI is known to precede and 'cause' an improvement in a value category

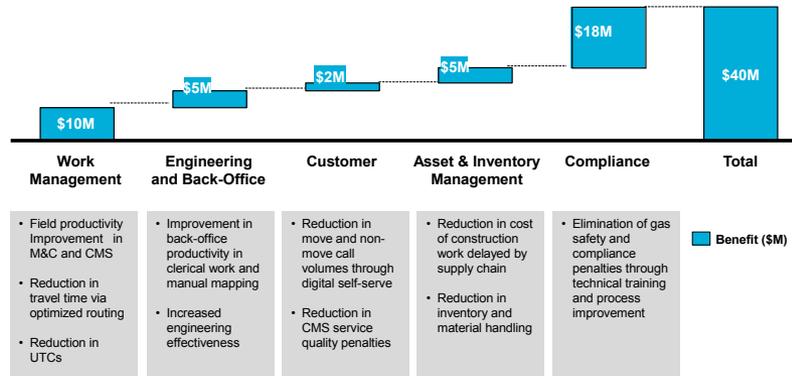
Leading Lagging

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GBE benefits are \$40M achieved by delivering planned capabilities

GBE Business Case



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Eight operational KPIs across five areas track the improvements driven by GBE delivered capabilities



	Business Case Area and Benefit Description	Executive KPIs
Benefit	Work Management <ul style="list-style-type: none"> Field productivity improvement in M&C and CMS through new technology platforms and performance management Reduction in UTCs and verification jobs with better customer / field data integration 	1. Avg. Unproductive Time / Day 2. Avg. no. of Completed Jobs per Worker (Crew) / Day
	Engineering & Back Office <ul style="list-style-type: none"> Improvement in back-office productivity in clerical work and manual mapping 	3. Avg. no. of WOs Processed per Back-office FTE
	Customer <ul style="list-style-type: none"> Reduction in call volumes through digital self-serve Reduction in CMS service quality penalties 	4. Total Call Volume 5. Customer Effort (Field) rating
	Asset & Inventory Management <ul style="list-style-type: none"> Reduction in cost of construction work delayed by supply chain Redirection and optimization of project-related O&M spend 	6. No. of Construction Projects Delayed due to Supply Chain 7. Inventory Turnover
	Gas Safety & Compliance <ul style="list-style-type: none"> Elimination of gas safety and compliance penalties through technical training Reduction in the number of summonses for code violations 	8. Total Compliance Penalties and Violations

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Targets were defined to not only achieve but exceed the value of GBE as outlined in the business case



Baseline

- Current Operational Performance – FY2017

Threshold

- Anticipated operational performance improvements in the near term post implementation of the GBE capabilities

Ambition

- Aspirational operational performance improvement with a increased risk of delivery over the longer term post implementation of the GBE capabilities. These improvements may require additional interventions beyond the GBE capabilities to support delivery

Stretch

- Long term aspirational operational performance improvement with a high risk of delivery. These will require significant incremental effort beyond the GBE capabilities to deliver.

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Eight operational KPIs across five areas track the improvements driven by GBE delivered capabilities



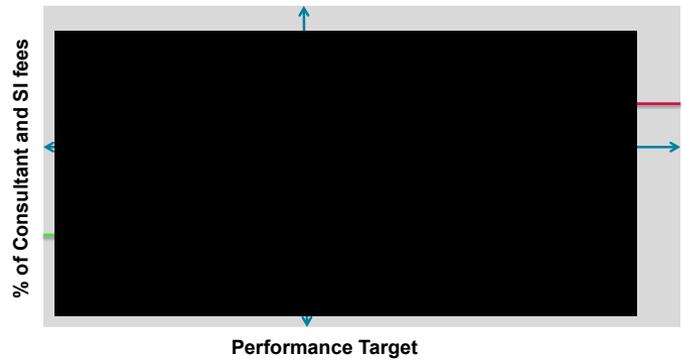
Business Case Area	Executive KPIs	Current	Threshold	Ambition	Stretch
Work Management	1. Avg. Unproductive Time / Day	200 min	194 min	188 min	133 min
	2. Avg. no. of Completed Jobs per Worker (Crew) per Day ft of main replaced /day /crew	3.9 0.84/55.21ft	3.9 0.87/56.86ft	4 0.94/61.86ft	4.8 0.99/65.15ft
Engineering & Back Office	3. Avg. no. of WOs Processed per Back-office FTE	722	902	962	1,444
Customer	4. Total Call Volume	2.9M	2.7M	2.5M	1.1M
	5. Customer Effort (Field) rating	65.6%	70%	80%	90%
Asset & Inventory Management	6. No. of Construction Projects Delayed due to Supply Chain	68	60	23	14
	7. Inventory Turnover	1.3	1.3	1.44	1.50
Gas Safety & Compliance	8. Total Compliance Penalties and Violations	\$24.6M	\$18M	\$2.1M	\$0

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Our Partners are held accountable to deliver higher degrees of business outcome for National Grid customers



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The Value Framework will be used not only with our partners but to align and leaders and drive performance at all levels



- Align performance of our consulting partners with business outcomes for National Grid
- Support and facilitate the end-to-end process implementation by aligning on process metrics
- Drive step change in performance by aligning APP for our operational leaders to value framework
- Further operationalize Value Framework by creating lower level metrics and aligning to hubs to drive performance

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Meeting Close

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- AOB
- New Action Item summary
- Leadership pulse check and closing remarks

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Appendix

1. Value Framework additional information

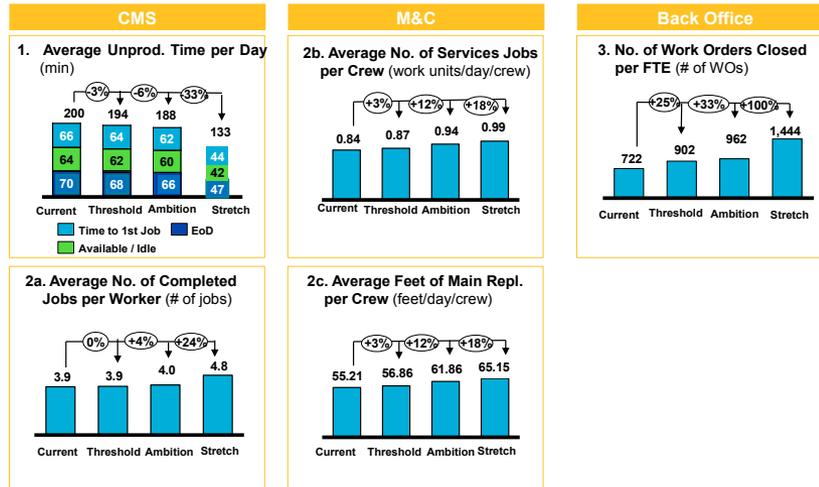


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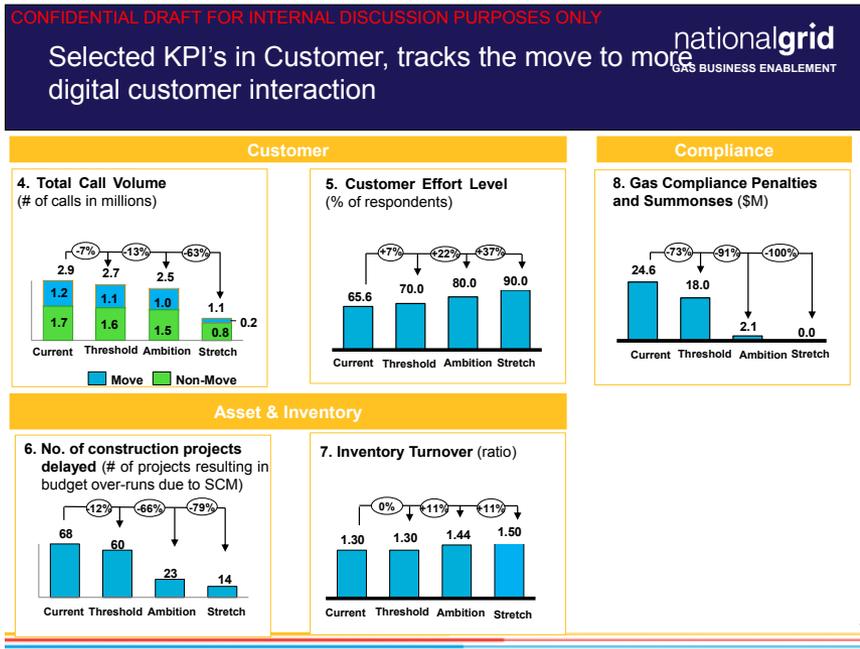
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Operational KPI's target improvements across CMS, M&C as well as Back Office

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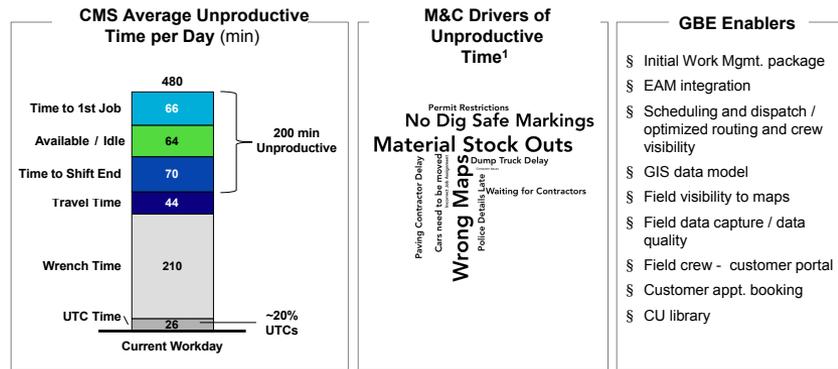
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GBE increases productivity while addressing pain points

Only 10 minute improvement in productivity can result in benefits

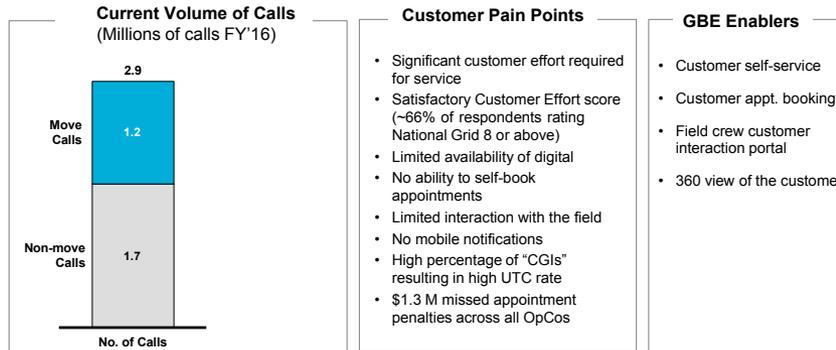
1) Based on conversations with National Grid experts and survey with multiple M&C crews / supervisors

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With GBE solution customers can benefit from improved digital interaction

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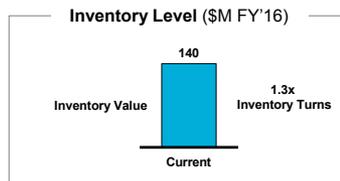
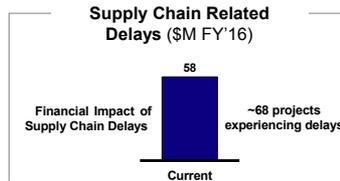
 13% reduction in overall call volume through the digital channel results in 400K fewer calls and increased customer satisfaction

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GBE solution can reduce project delays due to supply chain and allows for inventory optimization



- Supply Chain Pain Points**
- § Lack of integrated supply & demand planning
 - § Lack of material visibility
 - § Contingency over ordering
 - § Excess short lead time inventory with low turnover
 - § High returns from field workers
 - § Material related delays
 - § Frequent material stock outs

- GBE Enablers**
- Integrated supply & demand planning
 - Enhance procurement processes
 - Integrate project demand with material planning
 - Develop demand plan for large programs
 - Projects & prog. management platform
 - Inventory Optimization
 - Reduction in stock-outs
 - Reduction in material excess & obsolescence
 - Warehouse opt.

Potential to prevent job delays and reduce inventory levels 10%+ ...
 62% increase in capital project budget indicates greater opportunity from SCM

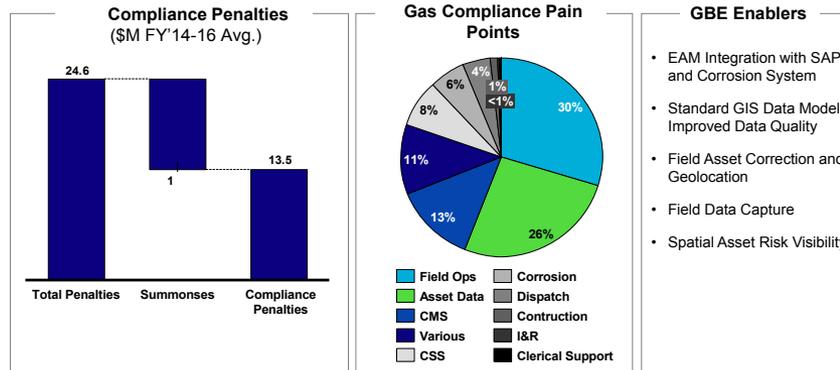
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GBE capabilities directly address compliance penalties

nationalgrid
 GAS BUSINESS ENABLEMENT



 Field Ops and Data are major drivers of compliance penalties in New York, making up more than 50% of all NY compliance penalties

Based on FY16 NY Compliance Penalties

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nationalgrid
GAS BUSINESS ENABLEMENT

Comprehensive set of KPIs includes executive and workgroup KPIs

Work Management	Work Management - Support	Customer	Asset and Inventory Management	Gas Safety and Compliance
<p>Executive</p> <ul style="list-style-type: none"> Field Opex Spend (Financial KPI) Avg. Unproductive Time per Day (CMS) Avg. No. of Completed Jobs per Worker (CMS) <p>Leading</p> <ul style="list-style-type: none"> % of jobs scheduled with an algorithm % of jobs providing cust. notification / CGI rate # of times available time > 45 min. % of jobs bundled at the premises % of jobs delayed with reason code % of jobs with errors and rework Supervisor time in the field Unit cost of internal / external crews % of contractors visible on NG systems <p>Lagging</p> <ul style="list-style-type: none"> CMS time metrics (currently measured) 	<p>Executive</p> <ul style="list-style-type: none"> Work Management Support Costs Avg. No. of WOs Processed per Back-Office FTE <p>Leading</p> <ul style="list-style-type: none"> % of jobs with standard package/tools No. of designs by designer % of L4 estimates vs. actual costs within 10% Avg. # of change orders per WO Number of record errors % of WO with standard job templates % of T&E sheets / invoices processed automatically % of WOs with exceptions <p>Lagging</p> <ul style="list-style-type: none"> Estimating accuracy penalties Mismark damages 	<p>Executive</p> <ul style="list-style-type: none"> Financial KPI – Customer O&M Costs Total Call Volume Customer Experience (Effort) Rating <p>Leading</p> <ul style="list-style-type: none"> % of move requests completed digitally % of non-move requests completed digitally Date requested vs. date of service (when available) % of customer service date met (with reason code when unmet) <p>Lagging</p> <ul style="list-style-type: none"> % channel breakdown and costs Customer appointment penalties 	<p>Executive</p> <ul style="list-style-type: none"> Financial KPI Annual Cost vs. Plan (risk-equivalent) No. of Construction Projects Delayed Inventory Turnover <p>Leading</p> <ul style="list-style-type: none"> % of project spend tied to integrated planning % of project spend optimized / prioritized through asset analytics % of inventory optimized (classified /segmented) <p>Lagging</p> <ul style="list-style-type: none"> % miles complete vs. plan Inventory Value Actual vs. forecast inventory Material handling costs 	<p>Executive</p> <ul style="list-style-type: none"> Total Compliance Penalties and Violations <p>Leading</p> <ul style="list-style-type: none"> # of overdue action items Actual Non-Compliant/Total Inspections vs. Target Non-Compliant/Total Inspections <p>Lagging</p> <ul style="list-style-type: none"> # of unplanned interruptions from reliability considerations % incidents when process was RC % incidents when training was RC Emergency Response Time % of incidents in which records data quality were RC % incidents when third party is RC OSHA recordables

Shows process metrics ⁴⁷

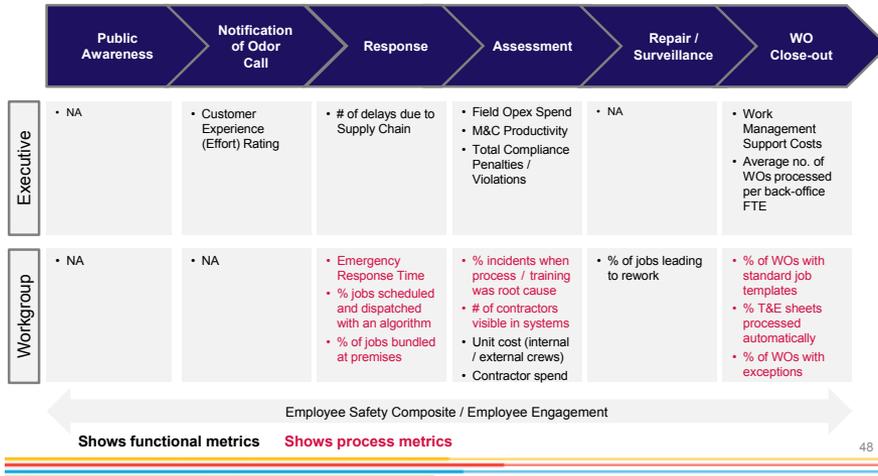
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Value framework includes KPIs at multiple levels across functions and processes

nationalgrid
 GAS BUSINESS ENABLEMENT

Aware to Repair Example



REDACTED



Gas Business Enablement



Steering Group
August 22, 2017

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Agenda

<u>Topic</u>	<u>Time</u>	<u>Presenter</u>
Opening Remarks		
• Meeting Objectives	5 min	JJ
• Action Items and escalations		
Terms of Reference	10 min	JJ
Program Progress Update		
• Mobilization	30 min	JJ/KC
• Outlook		
Introduction to Value Assurance Partner	15 min	JJ
Commercial Activities (NG Only)	5 min	JJ
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Meeting Close & Feedback	5 min	JJ

REDACTED



Meeting Objectives

1. Provide an update on mobilization, re-baseline expectations for next phase
2. Update on the current roadmap and changes since the Strategic Assessment
3. Introduce the Value Assurance partner
4. Provide update on the rate cases, forecast for FY18 and sanctioning for FY19 (NG only)

REDACTED



Action items and Escalations

Action Items
<ul style="list-style-type: none">• None

Escalations
<ul style="list-style-type: none">∅ Change Requests<ul style="list-style-type: none">• None∅ Risks<ul style="list-style-type: none">• None∅ Issues<ul style="list-style-type: none">• None

- An overview of escalation criteria can be found in the appendix
- Action item and escalation logs will be found in the appendix

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Steering Group - Terms of Reference

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¾	Ensures that the GBE Program remains focused on value delivery
¾	Provides strategic advice, guidance and direction to support the success of the program
¾	Ensures the program has the necessary resources to be successful & manages any enterprise prioritization conflicts
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	¾ Dean Seavers – US CEO
	¾ Peggy Smith – US CFO
	¾ John Bruckner- EVP, Net. Ops, Safety, and Cap. Del.
	¾ Anuraag Bhargava- SVP, US CIO
	¾ Keith Hutchison- SVP, HR and Chief Diversity Officer
	¾ Vivienne Bracken - Global CPO
	¾ Dan Davies- Group Director, Business Excellence
	¾ Mike Calviou – SVP, Regulatory Affairs
	Advisory Steering Group Members (Non-Voting)
¾ Ross Turrini – SVP, Gas Process and Engineering	
¾ Tim Bishton - Head of Group Audit	
¾ Steve Kerr – PA Consulting, Value Assurance Partner	
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¾ KC Healy – Program PMO	¾ David Carder – Kotter
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Since July 17th we've accomplished a lot in a short period of time....



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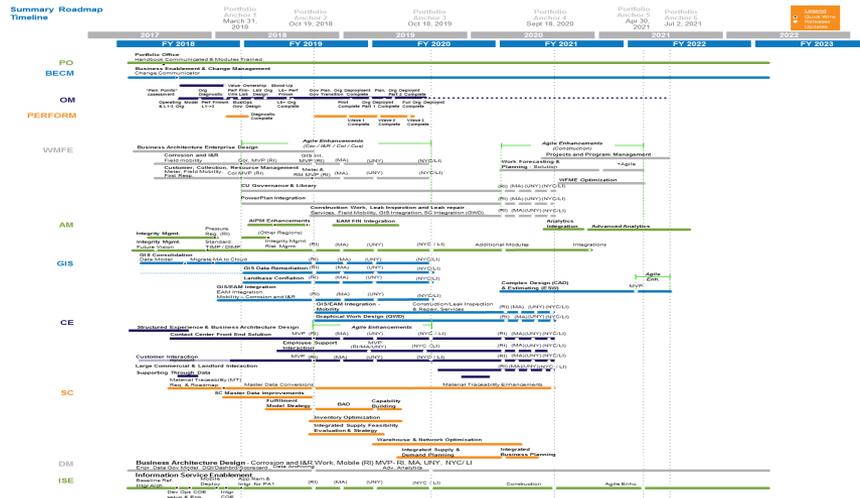
...that got the GBE team quickly working together.



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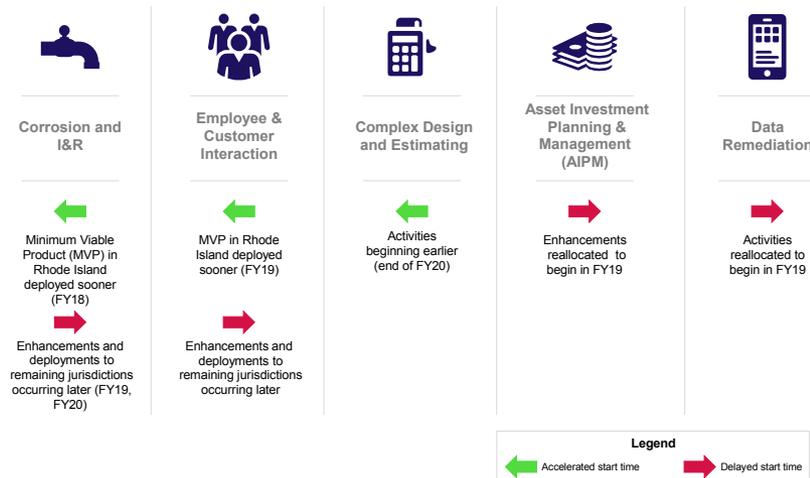
The GBE Roadmap defines the path forward...



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...that has evolved since it was first conceived...



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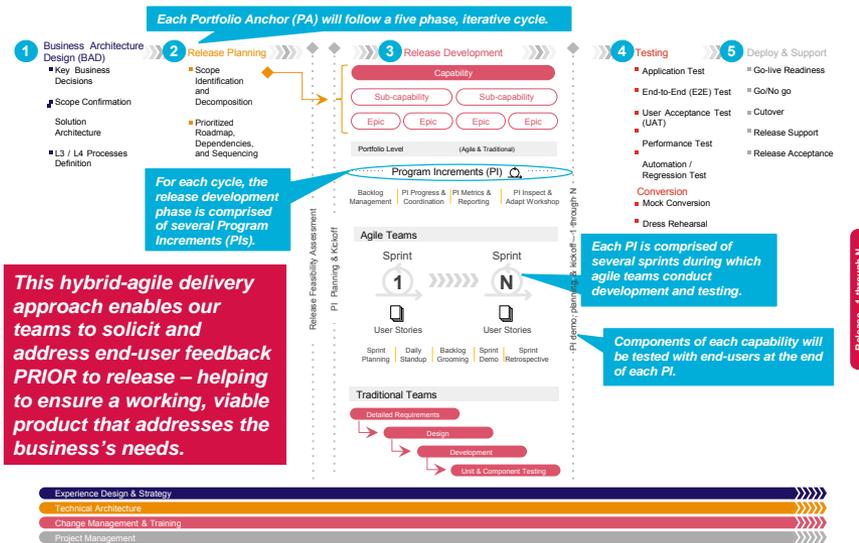
...and will deliver the capabilities to enable our future.

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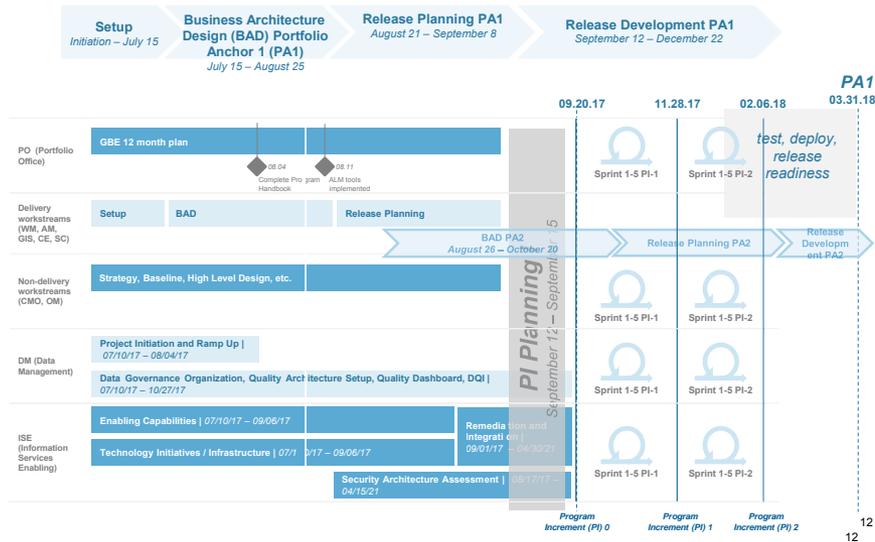
We will use a hybrid-agile approach to deliver these capabilities...



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...and are currently focused on preparing for a successful PI 1...



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...as well as completing key Workstream activities....

Over the next several weeks Workstreams will be focused on defining key program activities and establishing program support mechanisms.

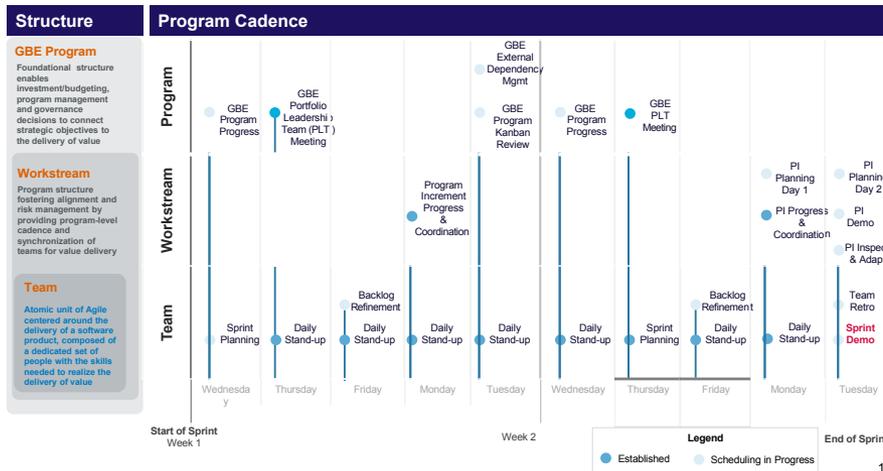


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...that we are managing through the GBE Program structure.

We have established a program structure and cadence that enables collaboration, integration and fast decision-making.



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PI 1 Planning Session has well defined objectives...

The purpose of the PI Planning Session is to prepare GBE Teams for the first PI, as well as build a cohesive team across GBE Workstreams and companies.

- **Why** – understand the purpose of the GBE program, the vision for the future customer and employee experience, and the business measures of success
- **How** – share and refine the program roadmap, governance model, working cadence and Agile approach
- **What** – develop and refine the work to be executed in Program Increment 1 (5 sprints) by each agile team, with a focus on interdependencies, risks and business value delivered. Each team will define the user stories and epics to be developed across the first Program Increment

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...that will be delivered using a proven methodology.

The Design Shop methodology is highly collaborative, creative, engaging and productive. Participants will immerse themselves in the vision, the program, the team and the planning activities for the first five sprints, while building critical relationships across the program.

Logistics:

Dates: September 12-15
Times: 8a-6p (end at 12p Friday)
Location: PwC Office, 101 Seaport Blvd
*Executive role will be most prominent
8a-12p on Tuesday September 12*



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**GAS BUSINESS
ENABLEMENT
VALUE ASSURANCE
PARTNER**

PA Consulting
Prepared for National Grid
Aug 22, 2017

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PA has a long history of delivering results

PA is a global company with offices around the world. We have over 2500 experts working across 8 sectors.

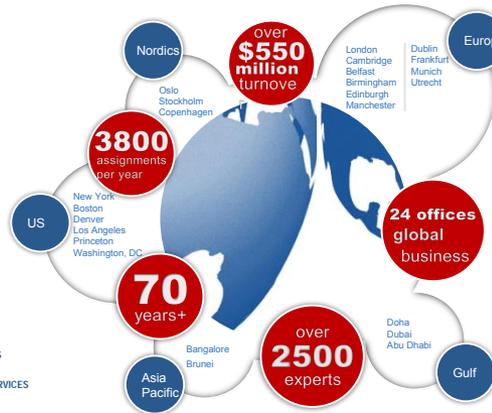
PA combines in-depth industry knowledge with market-leading capabilities in order to help tackle challenges and achieve our clients' goals.

We have the practical experience to quickly solve your business issues, and the confidence to challenge conventional thinking to develop a solution.

Our people are committed to working alongside your team to tackle challenges jointly, to deliver real, lasting impact. We leave your business with enhanced skills, tools and knowledge, better equipped to deliver the next set of initiatives.

Sectors:

- ENERGY AND UTILITIES
- GOVERNMENT
- DEFENSE AND SECURITY
- HEALTHCARE
- CONSUMER AND MANUFACTURING
- LIFE SCIENCES
- TRANSPORT, TRAVEL AND LOGISTICS
- FINANCIAL SERVICES



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Our assurance team



Andy McKenna, Member of PA's Management Group | Boston | Project Role: Partner in Charge

Andy is a Member of PA Consulting's Management Group and a leader in PA's Energy and Utilities team. Andy has over 25 years of experience managing complex organization-wide systemic change initiatives involving large teams and multiple work streams, delivering multi-millions of dollars in benefits to his clients. Andy's work has touched on business process reengineering, technology transformation, and organizational redesign in T&D operations, work management, customer operations, and supply chain. Andy is a certified lean six-sigma black belt and holds Bachelor degrees in Engineering and Asian Studies from Dartmouth College and an MBA in Strategy and Operations from the University of Michigan.

PG&E
Eversource
Southern California Gas
Alabama Power
IBM
WL Gore & Associates



Stephen Kerr, Director | Princeton | Project Role: Value Assurance Lead

Currently working on an infrastructure improvement initiative with New York Power Authority where we created their \$1B investment plan and set up the Strategic Operations group to manage the portfolio. Stephen specializes in improving performance of Utilities' IT systems, helping clients manage their portfolios, innovate, architect, deliver and extend solutions. He is a seasoned project leader, frequently called upon to organize large programs and turn around ailing ones. Stephen is a Chartered Engineer and is a leader within our Delivery Assurance service. Stephen runs PA's Reliability Analytics service which is AWS hosted and is Agile both in development and application; we just finished a release sprint for SCE this week.

NYP&A
Visiting Nurse Service NY
Puget Sound Energy
White & Case
ERCOT
Southern California Edison



Chris Jackson, Consultant Analyst | Boston | Project Role: Assurance Analyst

Chris is a consultant analyst in PA's Global Energy & Utilities Practice, focusing on financial analysis, regulatory analysis, and customer experience. He is currently working on a due diligence effort valuing a combined electric and gas distribution utility. Chris has experience in project and corporate finance, market sizing and forecasting, and risk analysis. Prior to joining PA, Chris worked for Bluefield Research, conducting market research and forecasting for the global water supply and wastewater treatment industries. Chris earned his MBA with high honors from the Boston University Questrom School of Business, and graduated cum laude from Colorado College with a B.A. in International Political Economics.

SCE
Osaka Gas
Maquarie Infrastructure and Real Assets
Goldman Sachs
Marubeni
Mitsui

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Assurance Partner should not only highlight problems, they should develop actionable recommendations and help implement them...



Collaboration is key to the successful delivery of BPaaS

Delivery Assurance Principles				
Risk-focused Target reviews on the areas of highest risk to asset transfer, managed services, system delivery and value realization.	Forward-looking Provide early warnings, anticipate challenges and look ahead to help you and your service provider achieve successful results, rather than seeking to apportion blame.	Outcome-led Surface findings that are important to achieving the desired business outcomes. A partner should be independent and therefore focus 100% on what is important for you.	Evidence-based Base findings on facts, not opinions, backing statements up with supporting evidence. A Partner will also validate these facts by engaging fully with all the key stakeholders.	We deliver change. A partner should go beyond just delivering a report. A partner will work with you during the review to initiate the change, e.g. better collaboration and communication.

Collaboration enhances the likelihood of successful program delivery

- Common Mistakes of Delivery Assurance Programs
- Taking an approach to “audit” from the bottom up, rather than access from the top down at the start of an assurance engagement
 - Constant rotation of specialists to perform assessments, instead of a deploying a core team with consistent engagement to promote trust and create efficiency
 - Invasive approaches that “create work” for the core team, rather than a “observe, diagnose, analyse, recommend and go-away approach” that maintains independence
 - “Us vs them” tone/ approach – “the Vendor’s testing approach has issues” instead of promoting collaboration, “we think we have testing risks that can be mitigated”

REDACTED



We used a structured approach to conduct assessments and compile findings

Key Questions	<ul style="list-style-type: none"> • How effective were the processes and teams during Program Initiation? What should change? • Is there overlap, and more importantly gaps, in the work as planned and spread across workstreams and teams? • Are Contracts and Statements of Work structured to maximize value from SI's and Partners? • From a Management and Governance perspective, how prepared is the GBE Program to move into Program Implementation?
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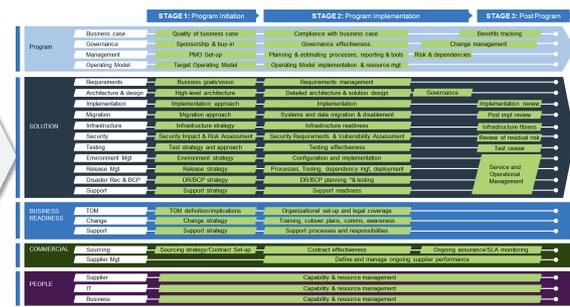
Assurance Activities	1. Mobilize		2. Investigate		3. Recommend
<ul style="list-style-type: none"> • Program Content Review <ul style="list-style-type: none"> • Roadmap • Schedules • Risk List • Stakeholder Interviews <ul style="list-style-type: none"> • GBE Leadership • GBE Teams (NG, SI) • End User Groups • Team Observations <ul style="list-style-type: none"> • Release Planning • Sprint demos • Program status • SI RFx Artifacts Review <ul style="list-style-type: none"> • Proposals • SOW's • Contracts/ToB 	Objective	<ul style="list-style-type: none"> • Gathering background material • Resolve logistical issues 	<ul style="list-style-type: none"> • Gathering the evidence needed to test the hypotheses. 	<ul style="list-style-type: none"> • Examine evidence to understand its meaning • Testing hypothesis against evidence 	<ul style="list-style-type: none"> • Refine recommendations • Deliver findings and recommendations.
	Activity	<ul style="list-style-type: none"> • Kick-off meeting • Agree focus and scope • Agree key contact(s) and stakeholders • Familiarization briefing • Request documents 	<ul style="list-style-type: none"> • Evidence review • Interviews, with questions based on experience of key risks to outcome delivery • Develop hypotheses 	<ul style="list-style-type: none"> • Test hypotheses • Root cause analysis • Develop recommendations • Socialize early findings • Conduct further interviews 	<ul style="list-style-type: none"> • Draft report • Internal QA • Finalize and communicate report
	Output	<ul style="list-style-type: none"> • Agreed scope and focus • Agreed review plan • Interviews arranged • Validation meetings arranged with key contact(s) 	<ul style="list-style-type: none"> • Hypotheses for early validation 	<ul style="list-style-type: none"> • Validation of facts/evidence • Identify key issues, root causes and early recommendations • Raise issues for immediate rectification 	<ul style="list-style-type: none"> • Final report with recommendations • Presentation to program director

REDACTED



We customize our approach to meet your needs

- Our Assurance Service can focus on any or all key Program components...
- Program:** How effective is the Program management and governance?
 - Solution:** How robust is the technical delivery including, vision, requirements, architecture, design, solution implementation and testing?
 - Business readiness:** How informed, engaged and ready is the business to accept the new solution?
 - Commercial:** How effective are the commercial terms with existing suppliers or as anticipated with suppliers being brought on board?



- ...and caters for Programs at any stage in their lifecycle:
- Program/project set-up.** Are the right organization, vision, processes, governance and controls in place? Are the objectives clear and achievable?
 - Program/project in flight.** To what extent is the Program delivering to its objectives & plan, what risks and challenges exist and what actions are necessary to help ensure a successful outcome.
 - Post-Program/project.** Learning lessons from the Program/project and ensuring that benefits are being tracked and managed well.

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Appendix

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Steering Group Governance and Escalations

¾ Governance

- Oversight and direction of GBE Program, alignment with objectives
- Review and consider input from Program Sponsor, PLC and PLT
- Assist Program Sponsor with decisions directly affecting vendor relationships
- Final decision making authority for decisions/disputes referred by Program Sponsor

¾ Escalation to Steering Group for decision:

- Changes to scheduling of any Portfolio Anchor
- Addition/removal of key outcomes or capabilities for any Portfolio Anchor
- Changes to costs which would exceed current FY budget
- Changes to Value Framework (e.g. metrics, structure, suspension, termination)
- Resolution of disputes relating to service delivery, agreements, Value Framework
- Periodic review of authority of GBE committees, composition of PLC, PLT

REDACTED



Gas Business Enablement



Steering Group
August 22, 2017

REDACTED



Agenda

<u>Topic</u>	<u>Time</u>	<u>Presenter</u>
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REDACTED



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REDACTED



Action items and Escalations

Action Items
<ul style="list-style-type: none">• None

Escalations
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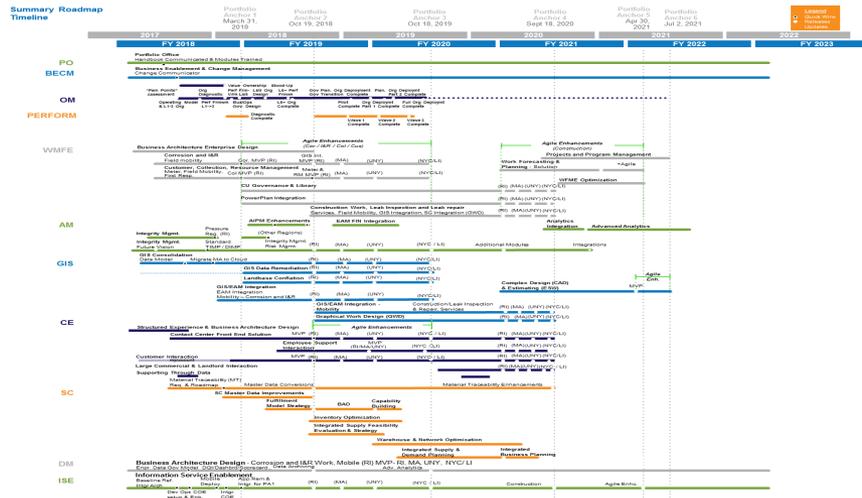
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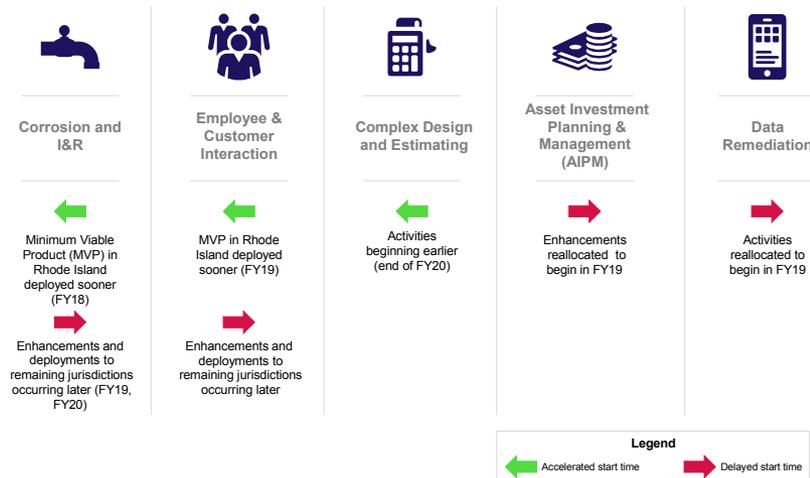
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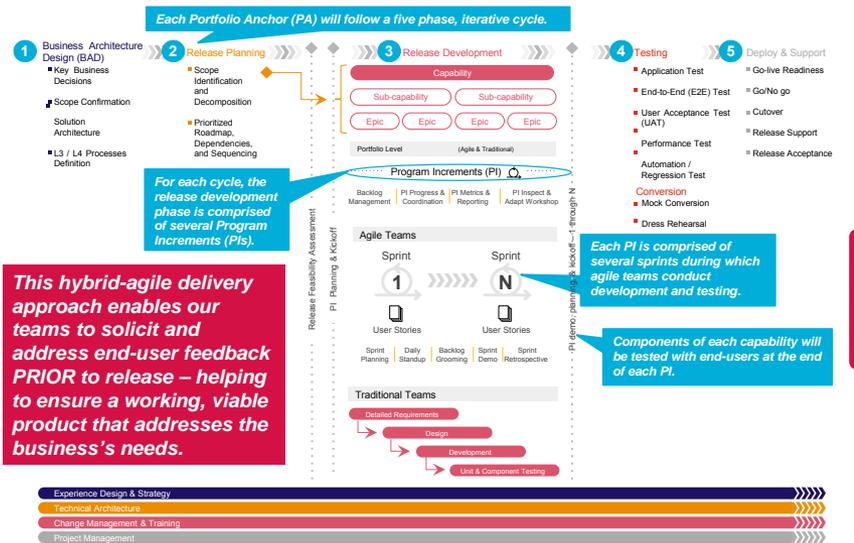
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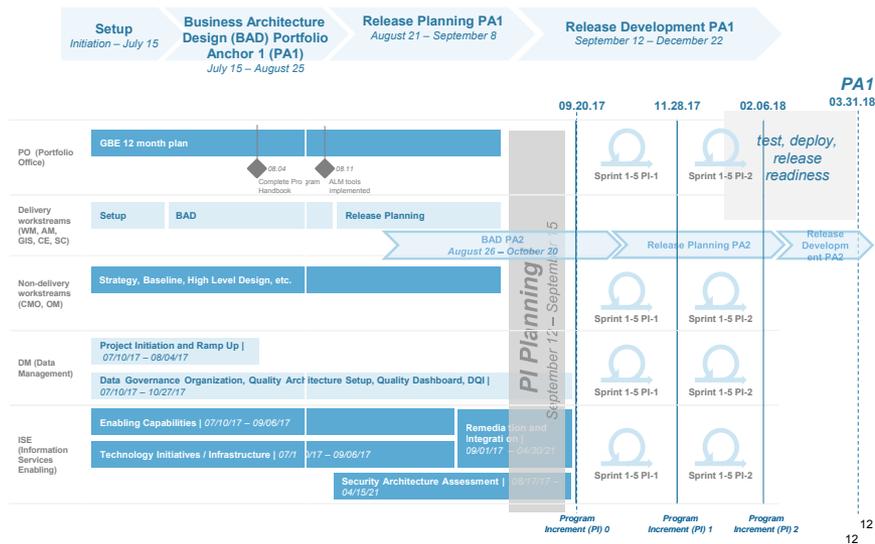
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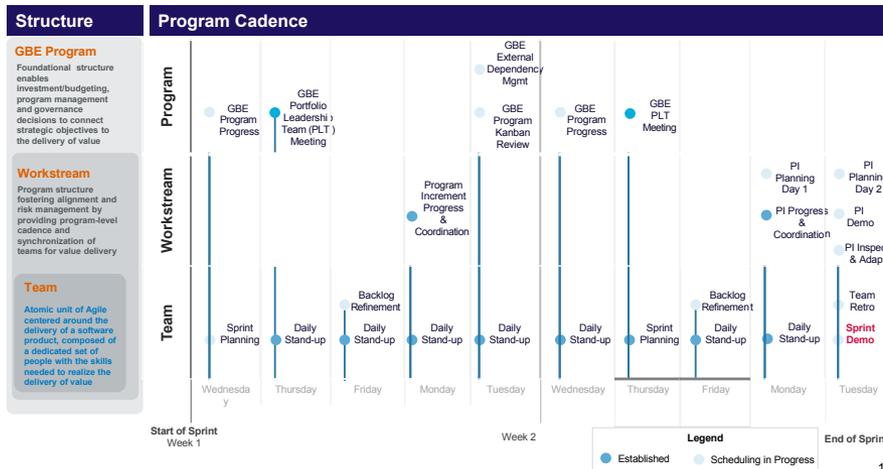


REDACTED



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REDACTED



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...that will be delivered using a proven methodology.

The Design Shop methodology is highly collaborative, creative, engaging and productive. Participants will immerse themselves in the vision, the program, the team and the planning activities for the first five sprints, while building critical relationships across the program.

Logistics:

Dates: September 12-15
Times: 8a-6p (end at 12p Friday)
Location: PwC Office, 101 Seaport Blvd
*Executive role will be most prominent
8a-12p on Tuesday September 12*



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**GAS BUSINESS
ENABLEMENT
VALUE ASSURANCE
PARTNER**

PA Consulting
Prepared for National Grid
Aug 22, 2017

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PA has a long history of delivering results

PA is a global company with offices around the world. We have over 2500 experts working across 8 sectors.

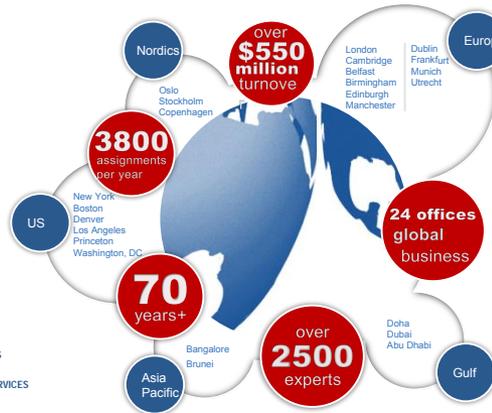
PA combines in-depth industry knowledge with market-leading capabilities in order to help tackle challenges and achieve our clients' goals.

We have the practical experience to quickly solve your business issues, and the confidence to challenge conventional thinking to develop a solution.

Our people are committed to working alongside your team to tackle challenges jointly, to deliver real, lasting impact. We leave your business with enhanced skills, tools and knowledge, better equipped to deliver the next set of initiatives.

Sectors:

- ENERGY AND UTILITIES
- GOVERNMENT
- DEFENSE AND SECURITY
- HEALTHCARE
- CONSUMER AND MANUFACTURING
- LIFE SCIENCES
- TRANSPORT, TRAVEL AND LOGISTICS
- FINANCIAL SERVICES



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Our assurance team



Andy McKenna, Member of PA's Management Group | Boston | Project Role: Partner in Charge

Andy is a Member of PA Consulting's Management Group and a leader in PA's Energy and Utilities team. Andy has over 25 years of experience managing complex organization-wide systemic change initiatives involving large teams and multiple work streams, delivering multi-millions of dollars in benefits to his clients. Andy's work has touched on business process reengineering, technology transformation, and organizational redesign in T&D operations, work management, customer operations, and supply chain. Andy is a certified lean six-sigma black belt and holds Bachelor degrees in Engineering and Asian Studies from Dartmouth College and an MBA in Strategy and Operations from the University of Michigan.

PG&E
Eversource
Southern California Gas
Alabama Power
IBM
WL Gore & Associates



Stephen Kerr, Director | Princeton | Project Role: Value Assurance Lead

Currently working on an infrastructure improvement initiative with New York Power Authority where we created their \$1B investment plan and set up the Strategic Operations group to manage the portfolio. Stephen specializes in improving performance of Utilities' IT systems, helping clients manage their portfolios, innovate, architect, deliver and extend solutions. He is a seasoned project leader, frequently called upon to organize large programs and turn around ailing ones. Stephen is a Chartered Engineer and is a leader within our Delivery Assurance service. Stephen runs PA's Reliability Analytics service which is AWS hosted and is Agile both in development and application; we just finished a release sprint for SCE this week.

NYP
Visiting Nurse Service NY
Puget Sound Energy
White & Case
ERCOT
Southern California Edison



Chris Jackson, Consultant Analyst | Boston | Project Role: Assurance Analyst

Chris is a consultant analyst in PA's Global Energy & Utilities Practice, focusing on financial analysis, regulatory analysis, and customer experience. He is currently working on a due diligence effort valuing a combined electric and gas distribution utility. Chris has experience in project and corporate finance, market sizing and forecasting, and risk analysis. Prior to joining PA, Chris worked for Bluefield Research, conducting market research and forecasting for the global water supply and wastewater treatment industries. Chris earned his MBA with high honors from the Boston University Questrom School of Business, and graduated cum laude from Colorado College with a B.A. in International Political Economics.

SCE
Osaka Gas
Maquarie Infrastructure and Real Assets
Goldman Sachs
Marubeni
Mitsui

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Assurance Partner should not only highlight problems, they should develop actionable recommendations and help implement them...



Collaboration is key to the successful delivery of BPaaS

Delivery Assurance Principles				
Risk-focused Target reviews on the areas of highest risk to asset transfer, managed services, system delivery and value realization.	Forward-looking Provide early warnings, anticipate challenges and look ahead to help you and your service provider achieve successful results, rather than seeking to apportion blame.	Outcome-led Surface findings that are important to achieving the desired business outcomes. A partner should be independent and therefore focus 100% on what is important for you.	Evidence-based Base findings on facts, not opinions, backing statements up with supporting evidence. A Partner will also validate these facts by engaging fully with all the key stakeholders.	We deliver change. A partner should go beyond just delivering a report. A partner will work with you during the review to initiate the change, e.g. better collaboration and communication.

Collaboration enhances the likelihood of successful program delivery

- Common Mistakes of Delivery Assurance Programs
- Taking an approach to "audit" from the bottom up, rather than access from the top down at the start of an assurance engagement
 - Constant rotation of specialists to perform assessments, instead of a deploying a core team with consistent engagement to promote trust and create efficiency
 - Invasive approaches that "create work" for the core team, rather than a "observe, diagnose, analyse, recommend and go-away approach" that maintains independence
 - "Us vs them" tone/ approach – "the Vendor's testing approach has issues" instead of promoting collaboration, "we think we have testing risks that can be mitigated"

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We used a structured approach to conduct assessments and compile findings

Key Questions	<ul style="list-style-type: none"> • How effective were the processes and teams during Program Initiation? What should change? • Is there overlap, and more importantly gaps, in the work as planned and spread across workstreams and teams? • Are Contracts and Statements of Work structured to maximize value from SI's and Partners? • From a Management and Governance perspective, how prepared is the GBE Program to move into Program Implementation?
----------------------	--

Assurance Activities	1. Mobilize		2. Investigate		3. Recommend
<ul style="list-style-type: none"> • Program Content Review <ul style="list-style-type: none"> • Roadmap • Schedules • Risk List • Stakeholder Interviews <ul style="list-style-type: none"> • GBE Leadership • GBE Teams (NG, SI) • End User Groups • Team Observations <ul style="list-style-type: none"> • Release Planning • Sprint demos • Program status • SI RFx Artifacts Review <ul style="list-style-type: none"> • Proposals • SOW's • Contracts/ToB 	Objective	<ul style="list-style-type: none"> • Gathering background material • Resolve logistical issues 	<ul style="list-style-type: none"> • Gathering the evidence needed to test the hypotheses. 	<ul style="list-style-type: none"> • Examine evidence to understand its meaning • Testing hypothesis against evidence 	<ul style="list-style-type: none"> • Refine recommendations • Deliver findings and recommendations.
	Activity	<ul style="list-style-type: none"> • Kick-off meeting • Agree focus and scope • Agree key contact(s) and stakeholders • Familiarization briefing • Request documents 	<ul style="list-style-type: none"> • Evidence review • Interviews, with questions based on experience of key risks to outcome delivery • Develop hypotheses 	<ul style="list-style-type: none"> • Test hypotheses • Root cause analysis • Develop recommendations • Socialize early findings • Conduct further interviews 	<ul style="list-style-type: none"> • Draft report • Internal QA • Finalize and communicate report
	Output	<ul style="list-style-type: none"> • Agreed scope and focus • Agreed review plan • Interviews arranged • Validation meetings arranged with key contact(s) 	<ul style="list-style-type: none"> • Hypotheses for early validation 	<ul style="list-style-type: none"> • Validation of facts/evidence • Identify key issues, root causes and early recommendations • Raise issues for immediate rectification 	<ul style="list-style-type: none"> • Final report with recommendations • Presentation to program director

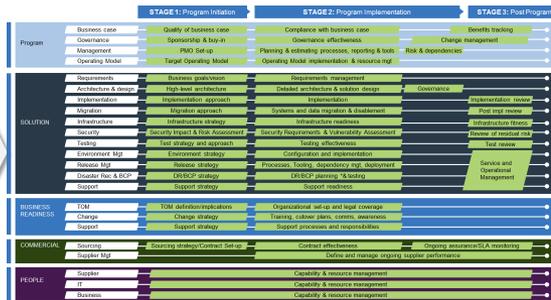
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We customize our approach to meet your needs

Our Assurance Service can focus on any or all key Program components...

- Program:** How effective is the Program management and governance?
- Solution:** How robust is the technical delivery including, vision, requirements, architecture, design, solution implementation and testing?
- Business readiness:** How informed, engaged and ready is the business to accept the new solution?
- Commercial:** How effective are the commercial terms with existing suppliers or as anticipated with suppliers being brought on board?



...and caters for Programs at any stage in their lifecycle:

- Program/project set-up.** Are the right organization, vision, processes, governance and controls in place? Are the objectives clear and achievable?
- Program/project in flight.** To what extent is the Program delivering to its objectives & plan, what risks and challenges exist and what actions are necessary to help ensure a successful outcome.
- Post-Program/project.** Learning lessons from the Program/project and ensuring that benefits are being tracked and managed well.

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Appendix

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Steering Group Governance and Escalations

¾ Governance

- Oversight and direction of GBE Program, alignment with objectives
- Review and consider input from Program Sponsor, PLC and PLT
- Assist Program Sponsor with decisions directly affecting vendor relationships
- Final decision making authority for decisions/disputes referred by Program Sponsor

¾ Escalation to Steering Group for decision:

- Changes to scheduling of any Portfolio Anchor
- Addition/removal of key outcomes or capabilities for any Portfolio Anchor
- Changes to costs which would exceed current FY budget
- Changes to Value Framework (e.g. metrics, structure, suspension, termination)
- Resolution of disputes relating to service delivery, agreements, Value Framework
- Periodic review of authority of GBE committees, composition of PLC, PLT

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Gas Business Enablement
DRAFT FOR INTERNAL DISCUSSION PURPOSES ONLY



Steering Group
September 7, 2017

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Agenda

<u>Topic</u>	<u>Time</u>	<u>Presenter</u>
Opening Remarks • Meeting Objectives	5 min	JJ
NIMO rate case update	10 min	PV/JJ
Draft Updated GBE Forecast Post Procurement	10 min	JJ
FY19 Sanctioning timeline	5 min	JJ
FY19 Options	5 min	JJ
SESC Paper	5 min	JJ
Meeting Close & Feedback	5 min	JJ

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Meeting Objectives

1. Provide an update on the NIMO rate case and proposed GBE settlement position
2. Provide an update on the program re-forecast post completing procurement
3. Update on options for FY19
4. Support approach for FY19 sanctioning

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2017 GBE Forecast vs 2016 Forecast

¾ Opex has reduced by 14% or \$23.3M, however overall GBE costs forecast to remain flat at \$478M (\$458M+ \$20M in FY16) post completing the procurement events:

2016 Forecast

Project Number	Project Title	Project Estimate Level (%)	Spend (\$M)	Prior Yrs	Current Planning Horizon						Total
					Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6 +	
					2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	
4572	Gas Business Enablement	+/- 13%	CapEx	0.000	56.504	104.639	73.693	47.613	10.332	0.815	293.596
			OpEx	20.142	27.972	64.102	41.339	21.317	9.087	0.729	184.688
			Removal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			Total	20.142	84.476	168.741	115.032	68.930	19.419	1.544	478.284
Total Project Sanction			CapEx	0.000	56.504	104.639	73.693	47.613	10.332	0.815	293.596
			OpEx	20.142	27.972	64.102	41.339	21.317	9.087	0.729	184.688
			Removal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			Total	20.142	84.476	168.741	115.032	68.930	19.419	1.544	478.284

2017 Forecast*

Project Number	Project Title	Project Estimate Level (%)	Spend (\$M)	Prior Yrs	Current Planning Horizon						Total
					Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6 +	
					2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	
4572	Gas Business Enablement	+/- 13%	CapEx	0.000	59.072	110.773	85.769	46.289	14.518	0.517	316.937
			OpEx	20.142	25.458	57.969	34.925	16.877	4.876	1.098	161.345
			Removal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			Total	20.142	84.530	168.743	120.693	63.166	19.393	1.614	478.282
Total Project Sanction			CapEx	0.000	59.072	110.773	85.769	46.289	14.518	0.517	316.937
			OpEx	20.142	25.458	57.969	34.925	16.877	4.876	1.098	161.345
			Removal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			Total	20.142	84.530	168.743	120.693	63.166	19.393	1.614	478.282

* Subject to final internal review

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FY19 Options

Option	Description	Conclusion
1. Stop the program	Bring program activities to a conclusion before the end of FY18	FY18 was a foundational year and while basic capabilities will have been released for RI, none of the business outcomes will be delivered, no other jurisdictions will receive any capabilities and the majority of spend to date would need to be written off – not recommended
2. De-scope the program	De-scope the solution back to the core enterprise asset and work management systems. This is estimated to reduce FY 19 spend by around \$40M to \$128M.	This option was originally anticipated if the program was going off track to focus on the minimum core solution focused on replacing work and asset solutions but not focused on customer or broader business improvements. The program has made a good start and the anticipated benefits still appear viable and achievable and there has been regulatory support from the NY PSC for the full program scope – not recommended
3. Maintain Value Prioritized plan	Maintain the focus on the current plan in terms of scope and roadmap. This will require an FY 19 sanction of \$168.743M (\$57.969 Opex and \$110.773M capex) with an incremental contingency of \$17M.	This is maintaining the original planned roadmap and benefits case as agreed with the Steering Group, SESC, Group Exec, and NY PSC as part of the NIMO rate case. The program, although still in early days remains on track and the anticipated benefits seem viable and achievable - recommended
4. Accelerate the program	Accelerate activities from FY 20, 21 and 22 to allow the program to complete its goals more quickly. The incremental costs have not been fully costed.	While the program has made a strong start, FY 19 sees a significant ramp in activities compared to FY18 and accelerating the program at this stage puts significant risk on the successful delivery of the program – not recommended

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Steering Group Request:

1. Note the revised phasing and capex/opex splits in the post procurement GBE forecast (reducing overall opex by \$23.3M)
2. Support the proposed option for FY19 – to remain on the original plan
3. Support the submission of the SESC paper for FY19 which requests a total of \$168.743M (\$57.969M Opex and \$110.773M Capex). There would be an anticipated contingency of top of this of \$17M.
4. Note there are still on-going discussions around KEDNY/LI recovery and a proposed check-in back with the SESC in March 18.

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Gas Business Enablement



Steering Group – National Grid Addendum
October 23, 2017

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NG Only Agenda

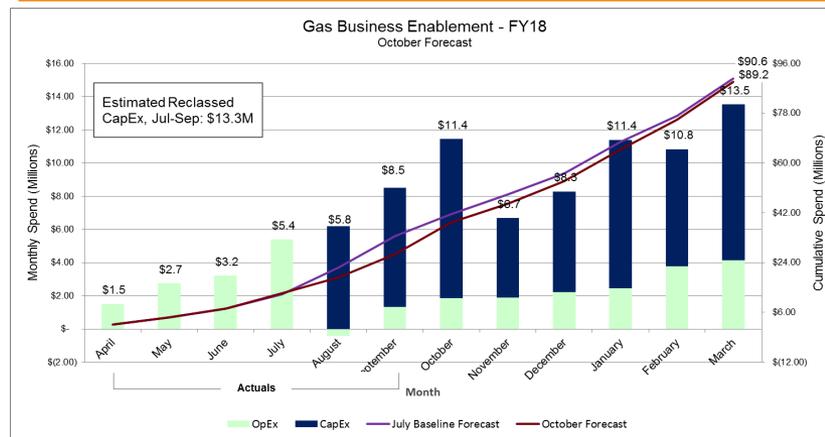
<u>Topic</u>	<u>Time</u>	<u>Presenter</u>
Budget, Commercial and People		
Budget (5 min)		JJ
Change Control (5 min)		JJ
Regulatory Update(5 min)	25 min	PV
Group Executive Paper(10 min)		JJ
Meeting Feedback & Close	5 min	JJ

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FY18 Budget & Forecast – OpEx/CapEx



Category	Budget	Oct. Forecast	Variance
OpEx	\$ 30.2	\$ 30.1	\$ 0.1
CapEx	\$ 54.3	\$ 59.1	\$ (4.8)
Total	\$ 84.5	\$ 89.2	\$ (4.7)

October forecast reflects a 1% reduction in controllable costs
 • FY18 Controllable OpEx Budget: \$27.8M
 • October Controllable OpEx Forecast: \$27.5M

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Anticipating our first change request

Change Request	Description	Initiated	Status
CxT will leverage GBE commercial agreements and other capabilities to advance development and delivery of functionality to address schedule misalignments between the GBE and CXT Programs	<p>GBE is dependent on CxT for the deployment of certain key areas of functionality, including:</p> <ul style="list-style-type: none"> • Access Management • Channel Preference <p>The GBE business case and roadmap were built upon an early understanding/assumption that this functionality would be available by April 1, 2018. As the CXT Program has evolved its own plans, it now appears that the above functionality will not be available by April 1, 2018. If this schedule gap is not closed, GBE will be required to re-plan Portfolio Anchor 2 (October 19, 2018) with impacts to release scope and timing, costs and potential Value Framework realization. PA2 capabilities include Contact Center Front End and Customer Interaction.</p>	October 12, 2017 By GBE Customer Engagement Team	<i>Impact Assessment Initiated</i>

Note: Formal analysis of options, analysis and impacts with recommendations and costs will be presented to the Steering Group for formal decision, as soon as possible upon the completion of the analysis

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Group Executive Paper

- GBE last went to Group Exec in May for FY18 sanction
- We committed to provide them with an update in advance of FY19
- Main items we will cover include mobilization, regulatory recovery and value framework (was covered at July QPR).
- Currently on the agenda for the November 21 meeting

Please see separate attachment which is the draft Group Exec paper.

Input requested from the Steering Group:

1. Do we have the right questions?
2. Any additional information we should add in?
3. Anything that is unnecessary we can take out
4. Any other feedback

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Gas Business Enablement



Steering Group
October 23, 2017

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Meeting Objectives

1. Update on Gas Business Enablement (GBE) Program progress
2. Provide forward look into upcoming roadmap activities
3. Review independent assessment from GBE's Value Assurance Partner (PA Consulting) on program mobilization
4. Receive guidance on direction for next Group Exec paper

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Agenda

Topic	Time	Presenter
Opening Remarks <ul style="list-style-type: none"> • Meeting Objectives • Action items and escalations 	5 min	JJ
Program Progress Update <ul style="list-style-type: none"> • Key Accomplishments • Escalations • Program Outlook 	25 min	JJ/KC
Value Assurance Partner Update	15 min	AM / SK
Leadership Engagement Highlights	10 min	RIF
Meeting Close and Feedback (NG+Partners)	5 min	JJ
Budget, Commercial Discussion (NG only)	30 min	JJ

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Action items and escalations

Action Items*
<ul style="list-style-type: none">• None from previous meetings

Escalations*
<ul style="list-style-type: none">• Change Requests<ul style="list-style-type: none">• GBE / CXT Delivery Risk Mitigation• Risks<ul style="list-style-type: none">• GBE IS Leadership• IS Capacity• Finance GBE Support Capacity• Issues<ul style="list-style-type: none">• None to escalate <p><i>Additional details are included on slides 10 and 11 .</i></p>

*Note: Action item and escalation logs are maintained in the Appendix.

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Agenda

Topic	Time	Presenter
Opening Remarks <ul style="list-style-type: none"> Meeting Objectives Action items and escalations 	5 min	JJ
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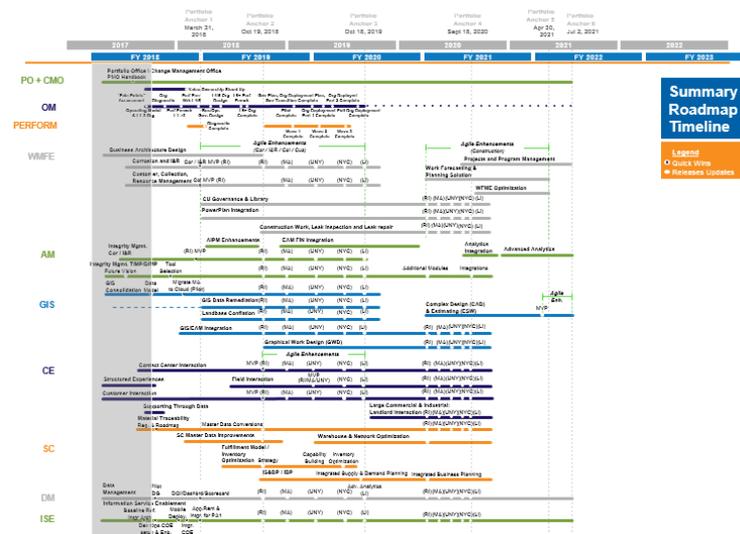
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Where are we on the roadmap:



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September saw our first PI (Program Increment) Planning session:



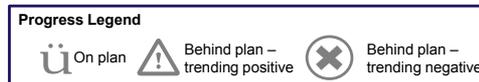
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We've accomplished what we set out to do through the first two sprints of PI 1...



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The top 3 'top down' risks we are managing...

Risk	Description	Contributing Factors	Mitigation Activities
Unstaffed GBE IS Team leadership role (VP)	There is a risk that without a senior IS leader, the GBE Program will experience: <ul style="list-style-type: none"> • Diminished access to IS networks and resources (and vice versa) to remove bottle necks or manage synergies • Diminished line-of-sight to major IS programs to identify dependencies and capture synergies • Over-utilization of GBE IS Directors 	<ul style="list-style-type: none"> • The deployment of new technologies and methodologies by the GBE Program is also changing the way the IS organization supports programs and deployed solutions • The GBE IS Director team has full time and key roles in enabling the Program to move forward in deploying its scope of work 	<ul style="list-style-type: none"> • Andy Schoener is standing in as the lead on top of his architecture role with CM supporting virtually • Recruiting of a new VP is in the interviewing stage (AB) • Monitoring Director utilization (KCH)
Insufficient IS team capacity to support GBE critical path activities	There is a risk that: <ul style="list-style-type: none"> • Lack of capacity to develop new/revised architectures, policies and guidelines to deploy new capabilities will delay the implementation of GBE solutions. • Overall program timelines will be delayed and costs will increase 	<ul style="list-style-type: none"> • GBE is deploying new technologies (e.g. cloud-based solutions, Software-as-a-Service, Infrastructure-as-a-Service etc) that require National Grid to develop new and revised architectures, policies and guidelines • The Program Agile approach accelerates the deployment of new technologies and solutions compared to traditional program delivery methodologies 	<ul style="list-style-type: none"> • Program SI (PWC) has engaged SME's experienced in these new technologies and is working with IS to provide support (AB) • Formalize roles, responsibilities and scope between PwC and IS functions to ensure capabilities are able to deployed at the pace GBE requires. (AB)
Insufficient Finance support of the GBE Program	There is a risk that: <ul style="list-style-type: none"> • Delays in definition of a Program accounting structure greatly increase manual support efforts and capex/opex reporting inaccuracies (internal and external) • Delays in the development of program level "tools" raise the level of manual effort and potential for error in managing Program financials 	<ul style="list-style-type: none"> • The scope, complexity and multi-jurisdictional nature of the GBE Program strongly suggests that traditional accounting structures and approaches will be overly complex and very difficult to manage accurately • The Agile method drives a fast paced program timeline with concurrent releases in multiple jurisdictions 	<ul style="list-style-type: none"> • Interviews progressing to staff a FT Fin Director on the GBE Team (DC) • Agreement reached with Accounting Leadership on Program accounting, planning and implementation underway (DC/KS)

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The top 4 'bottoms up' risks that we are managing...

Risk	Likelihood of Occurrence	Impact	Mitigation Plan
GBE / CxT Program Schedule Misalignment: There is a risk that the timeline for CxT's development of certain functionality is no longer supportive of GBE development timelines. This could cause GBE to delay deployment of elements of the Customer Enablement solution	High	High	<ul style="list-style-type: none"> Perform Impact Assessment study for detailed analysis of options to mitigate this risk Escalate as appropriate to Steering Group for support in resolving priorities & courses of action Maintain current pace of inter-program coordination
Agile Adoption: There is a risk that partial or ineffective deployment of our new Agile practices and tools could compromise our ability to deliver our scope of work in a timely manner, impacting our delivery commitments and budgets	Medium	High	<ul style="list-style-type: none"> Stand up an "Agile Adoption Working Group" to support Agile deployment, remove blockers and resolve issues Conduct periodic "retrospectives" to evaluate progress Review staffing model and utilization for agile methodology support
Data Governance: There is a risk that the GBE staffing model and timelines may not support the true level of effort to both deliver new functionality/ processes and support Program testing and deployment activities	High	High	<ul style="list-style-type: none"> Continue monitoring by GBE PLT and Workstream leadership Leverage Agile toolset and processes to monitor capacity / throughput Pre-define courses of action should negative trends emerge
Resource Availability: There is a risk that staffing of key GBE National Grid positions could fall behind plan. This could impact our ability to execute some high priority activities, impacting schedule, and potentially Program budget	Medium	Low	<ul style="list-style-type: none"> Proactively engage Program, Workstream and SI Partner leadership in planning and prioritization of requirements Prioritize recruiting activities Continue to retain supplemental recruiting support Develop contingency plans for activity support

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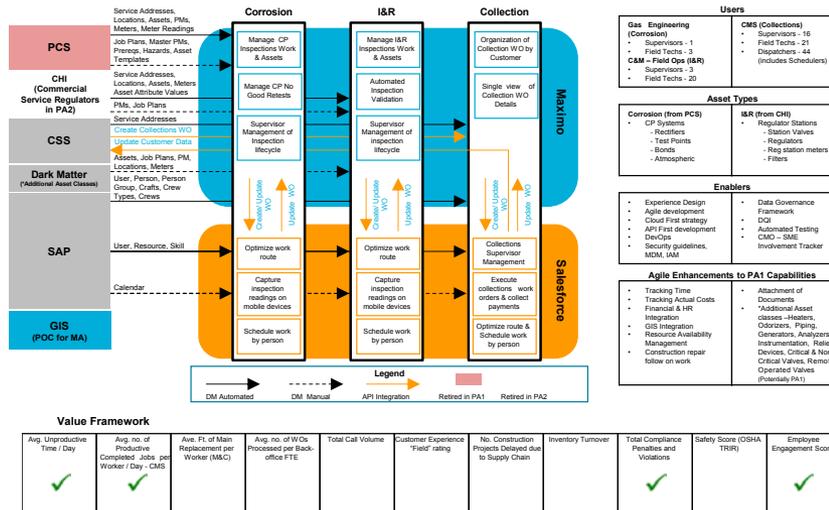
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Outlook - Clear Scope for Portfolio Anchor (PA) 1 (March 2018):



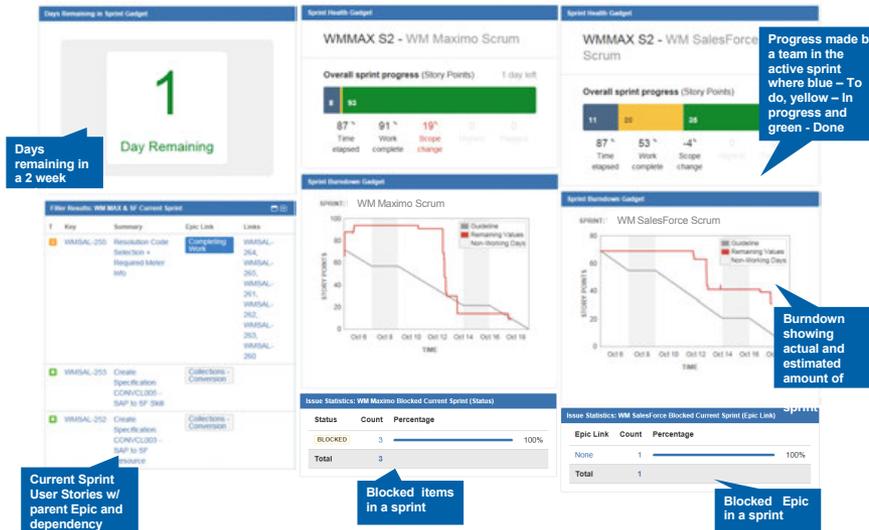
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We are building an agile, data-driven approach to measure team progress...



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...that in the future will underpin the Program level view we will share with you.

The Live Roadmap may (ultimately) act as a replacement for Project Plans. The roadmap for the portfolio is broken down by sub-capabilities and their child epics and stories. The roadmap shows relationships between hierarchical elements (capabilities, epics, stories) as well as statuses and level of effort details.

The Work in Process report shows the capability breakdown for a program increment across all workstreams and teams. A Capability may be selected and its child Sub-capabilities, Epics, and Stories will be highlighted to show relationships and progress. Items may be selected to reveal further detail in an in-line pane.

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Agenda

Topic	Time	Presenter
Opening Remarks <ul style="list-style-type: none"> Meeting Objectives Action items and escalations 	5 min	JJ
Program Progress Update <ul style="list-style-type: none"> Key Accomplishments Escalations Program Outlook 	25 min	JJ/KC
Value Assurance Partner Update	15 min	AM / SK
Leadership Engagement Highlights	10 min	RIF
Meeting Close and Feedback (NG+Partners)	5 min	JJ
Budget, Commercial Discussion (NG only)	30 min	JJ

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**NATIONAL GRID GAS
BUSINESS
ENABLEMENT VALUE
ASSURANCE**

Phase 1 - "Set Up for Success"
Assessment Report v04
Steering Group Summary
October 23, 2017
(original submission on September 27, 2017)

PA CONFIDENTIAL - Between PA and National Grid

DRAFT

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Contents

1. Background and Executive Summary

2. Detailed Assessment Findings

3. Recommendation Summary

A. Appendix A – “Deep Dive” Document Reviews

- Business Case
- Change Management Strategy
- Change Management Plan
- Communication Strategy
- Stakeholder Map

B. Appendix B – Program Maturity Assessment

Distribution of the report and report approval

A draft of this report was delivered to the Program Sponsor on September 27, 2017 with the final draft delivered to the Steering Group during or after the week of October 2, 2017. Although feedback from the Program Sponsor was considered, PA's recommendations reflect its independent analysis and is ultimately working in the service of the Steering Group.

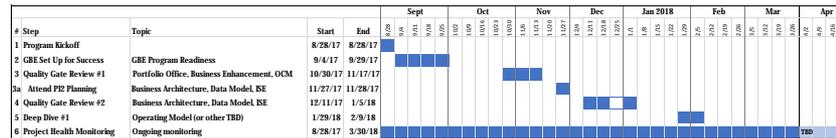
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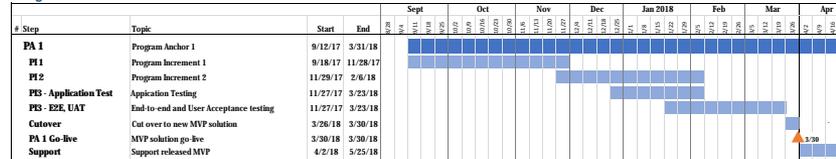
PA Consulting has kicked off its Value Assessment Partner role with this first “Set up for Success” assessment

Value Assurance Mission	<ul style="list-style-type: none"> Provide risk prioritized and focused assurance services across the relevant elements of the portfolio of Gas Business Enablement programs, projects and initiatives, focused on assuring the successful delivery of the program and its anticipated business benefits Effectively serve as an “insurance policy”, acting as an external set of eyes to observe and monitor program progress and value delivery, identify potential risk areas, and provide recommendations on issue avoidance and remediation
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Value Assurance Timeline



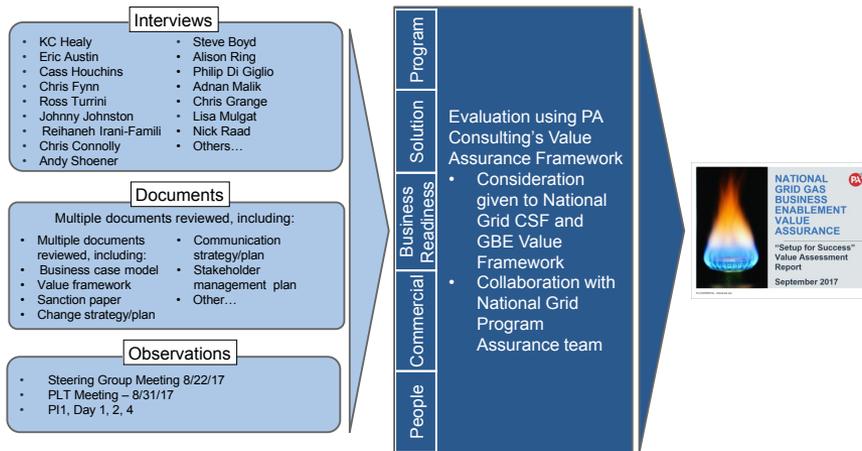
Program Timeline



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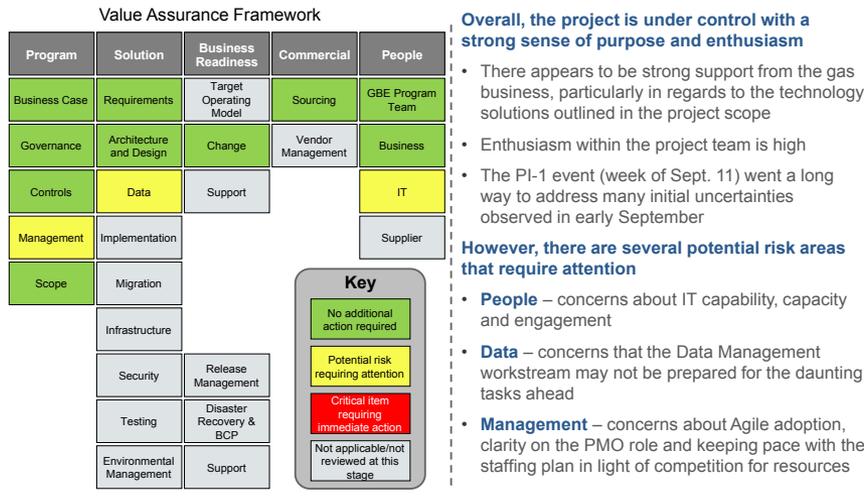
PA's approach for this assessment



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GBE is well positioned to move to PA-1, though further work is needed to ensure effective execution



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Recommendations Summary Top Priority

Area	Issues	Recommendations
People: IT	<ul style="list-style-type: none"> There are concerns about IT capability, capacity and engagement to effectively support the GBE program Gaps are already impacting the program in terms of delays (particularly in acquiring software / tools), and will continue to impact decision-making, confidence, and ultimately the program schedule if not addressed 	<ul style="list-style-type: none"> Immediately address gaps in IT capability, capacity and engagement. IT needs to become more engaged, more accessible and responsive to GBE needs Immediately address any software procurement issues that are currently creating a schedule risk
Solution: Data	<ul style="list-style-type: none"> We share several GBE team members' concern that the Data Management workstream may be unprepared for the daunting task of data remediation, including agreed-upon data quality standards and many data decisions that will be needed. The approach and concepts are sound and need to be put into practice. Data management challenges (data quality, integration, remediation and migration) present one of the most common causes of program challenges and benefit "misses" 	<ul style="list-style-type: none"> Dedicate an Agile coach to the Data Management team and make sure they have the right capacity to support all the teams and planned roadmap Verify that the data management team is well integrated with the development teams and positioned to anticipate data needs, rather than only respond reactively to data requests Use architecture spikes to flush out potential problems with data as early as possible
Program: Management	<ul style="list-style-type: none"> Adoption of Agile, with its fundamentally different way of thinking, and steep learning curve, may present significant management challenges Lack of clarity around the role of the PMO in an Agile world will create confusion and inefficiency, possibly leading to bottlenecks, sub-optimal decision-making and program delays Concern has been raised about the ability to bring resources on fast enough to meet program demands – the program is running slightly behind the staffing plan at the moment and resource competition will increase with other global programs 	<ul style="list-style-type: none"> Closely monitor agile adoption progress. Any finding of slow adoption or roadblock should be escalated to the Program Sponsor, and remediation plans should be put in place. Clarify and communicate the role of the PMO to the project teams. Clearly define expectations that the PMO has of the project teams, and the that project teams have of the PMO. Provide clarity (decision type, ownership, escalation) on decision authority. Establish metrics to measure and monitor performance and progress Review staffing plan, determine an "escalation threshold" and take remedial action if the threshold is reached. Coordinate staffing plans with the other global programs



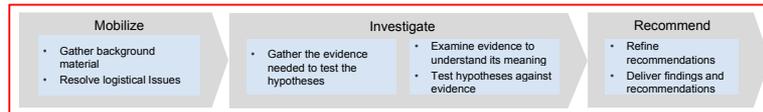
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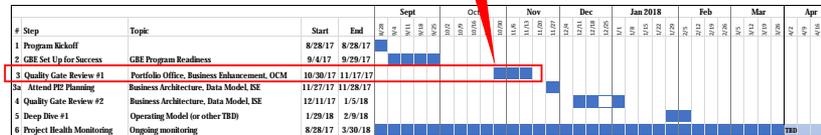
Next Steps

Conduct Value Assurance “Quality Gate Review #1”

- Timing: Oct. 30 – Nov. 17
- Focus: Portfolio Office, Business Enhancement, Change Management
- Quality Gate Review #1 will follow our 3-step approach similar to the “Set Up for Success” review



Value Assurance Timeline



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GBE team taking findings, turning recommendations into actions and tracking...

	Report Finding Area	Ref: Agreed Actions	Owner	Target Date
Phase 1: Set Up For Success		1 Work with Andi K, Anuraag B & HR to fill IS VP role on program as soon as possible (Note external resourcing event underway)	JJ & CM	12/1/17
		2 Speak with Andy Shoener to get direct and candid feedback on readiness of IT and what additional support is needed	JJ	Completed
	People: IT	3 Speak with Chris Murphy/Anuraag B to get their support in required areas	JJ	Completed
		4 Provide NGLI with an update on where we are on all our software procurement and any current risk areas that need focus	IM	10/30/17
		5 Conduct a lessons learnt review of the kick-off software procurement challenges and ensure appropriate lessons have been learnt	KC	11/15/17
		6 Discuss with Chris C the concerns raised about agile coach support for Data Management to address with NR & PWC	JJ	Completed
		7 Speak with Nick Raad about integration of the data management team with the other modules, and get his feedback on what is working, and where deficiencies exist	CC	11/1/17
		8 Review Data Management resourcing and ensure that staffing levels are adequate to serve the whole program	CC	11/1/17
		9 Nick Raad to discuss architecture spikes with Stephen Kerr to better understand how they can help flush out potential problems; build plan as necessary post that conversation	NR	11/1/17
		10 Instruct Agile coaches to identify, describe, document and report to PLY and coach as necessary any persistent Agile adoption issues (tool usage, team operation, decision making, other); consolidate this information and reinforce coaching on any areas of non-compliance	KC	11/1/17
		11 Consider conducting an 'Agile Audit', in addition to the normal retrospectives, near the end of PI-1 to further measure and ensure compliance across multiple dimensions of Agile adoption	JJ	12/1/17
	Program: Management	12 Discuss findings with Stephen Kerr on the 'lack of clarity around the role of the PMO in an agile world' and agree on how this can be clearly and simply documented. Communicate the key responsibilities and expectations of the PMO with module leads, product owners and product managers.	KC	11/17/17
		13 Check on status (availability, access, use, single source of truth, ownership, user responsibilities) of all program management tools to ensure all are in place and are actively being used.	PA Con	11/17/17
		14 Check program staffing plan to see if program is on track to on-board resources as required. Establish and escalation threshold for all key resources. I.e. if resource gap remains 2 weeks (or some other defined threshold) after plan called for resource, escalate to PLT and/or Steering Group).	KC	12/1/17

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Agenda

Topic	Time	Presenter
Opening Remarks • Meeting Objectives • Action items and escalations	5 min	JJ
Program Progress Update • Key Accomplishments • Escalations • Program Outlook	25 min	JJ/KC
Value Assurance Partner Update	15 min	AM / SK
Leadership Engagement Highlights	10 min	RIF
Meeting Close and Feedback (NG+Partners)	5 min	JJ
Budget, Commercial Discussion (NG only)	30 min	JJ

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GBE Business Readiness & Design Activities Update

	 Change Management	 Change Leadership	 Operating Model Design
Activities completed to date	<ul style="list-style-type: none"> Stakeholder Analysis completed Change impacts identified for PA 1 Identified approach for forecasting Business Resource demand Defined Engagement strategy Developed change toolkit High level POAP to highlight GBE touchpoints with business Developed change plans for PA I showing planned engagement activities Developed and embedded a cadence around business interactions to align to effective stakeholder management Established approach and regular cadence with Labor Strategy Created "Know Your Customer" cards 	<ul style="list-style-type: none"> TBO Senior Leadership Alignment Session completed Leadership Interviews conducted Kicked off Preparing Our Leaders training Urgency Team launched October 18, 2017 	<ul style="list-style-type: none"> Rapidly assessed the current ways of working (i.e. governance, process/tech/org arch, and performance mgmt.) Launched GBE Survey to collect department/jurisdiction-specific details on gaps
Next Steps	<ul style="list-style-type: none"> Develop employee Journey Maps Build GBE understanding of Labor Strategy Ongoing alignment sessions Define future state vision Finalize Business Readiness Approach 	<ul style="list-style-type: none"> Build Volunteer Network Conduct TBO Director Alignment Session 	<ul style="list-style-type: none"> Present survey/diagnostic results to agree on priorities and design principles Conduct 'value mapping' to show how enabled capabilities will impact GBE Executive KPIs

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The “Urgency” Team was kicked off last week...

ENGAGE people across National Grid
RECRUIT active volunteers
ENABLE grassroots communication

SUB-TEAMS

- Customer Transparency
- Local Action Team
- Design Workshop
- Cross Training
- HUB Utilization
- Roadshow
- Communication / Comm-Unity
- Internal Coordination / Synergist

DA David Angelone · 3 hours ago from iPhone
The “Urgency Team”, made up of people from different departments and functions, from the field to the office and from every level of the company spent the last 2 days laying the groundwork for OUR future. Join us - your voice can be part of the change. Stay tuned #makeithappen #volunteertoday #takeaction

LIKE · REPLY · SHARE

#thebigopportunity #changestartshere #permissiontoact #exceedingcustomerexpectations

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How Are We Preparing Our Leaders?

“One word, “excellent.”

This course helped me realize I'm a leader.

The training was different... and I love different.

<p>Foundation</p> <p>a foundation-level course focused on preparing participants to successfully lead their teams through change and ambiguity</p>	<p>Design</p> <p>designed for all gas business supervisors, managers, and directors</p>	<p>Delivery</p> <p>delivered in all jurisdictions in 10 to 16 student classes for the next 2 to 3 years. 4 Classes have been completed with 9 more scheduled in 2017</p>
<p>Optimizing the outcome</p> <p>being able to identify and utilize the principles for leading change</p>	<p>Generating Advocacy</p> <p>being able to create buy-in for an idea or initiative</p>	<p>Understanding the opportunity</p> <p>understanding how to utilize leadership opportunities to successfully implement change activities.</p>

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Agenda

Topic	Time	Presenter
Opening Remarks <ul style="list-style-type: none"> Meeting Objectives Action items and escalations 	5 min	JJ
Program Progress Update <ul style="list-style-type: none"> Key Accomplishments Escalations Program Outlook 	25 min	JJ/KC
Value Assurance Partner Update	15 min	AM / SK
Leadership Engagement Highlights	10 min	RIF
Meeting Close and Feedback (NG+Partners)	5 min	JJ
Budget, Commercial Discussion (NG only)	30 min	JJ

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Meeting Close

- ¾ Action item summary
- ¾ Meeting feedback

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Appendix Table of Contents

- [¾ Appendix A - Commonly used acronyms & definitions](#)
- [¾ Appendix B - Steering Group Overview](#)
- [¾ Appendix C - Steering Group Action Log](#)
- [¾ Appendix D - National Grid Resources – Hiring Update](#)
- [¾ Appendix E - Hybrid-agile Approach Overview](#)
- [¾ Appendix G - Agile Scope Hierarchy](#)
- [¾ Appendix H - Workstream level MVP reports - PI Progress](#)

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Appendix A: Commonly used acronyms & definitions

Acronym	Definition	Acronym	Definition
AIPM	Asset Investment Planning & Management	I&R	Instrumentation & Regulation
API	Application Programming Interface	IS&DP	Integrated Supply & Demand Planning
BAD	Business Architecture Design	IAM	Identify Access Management
BPR	Business Process Readiness	IBP	Integrated Business Planning
CICD	Continuous Integration Continuous Deployment	MDM	Master Data Management
CMO	Change Management Office	MVP	Minimum Viable Product
CMS	Customer Management System	OSHA	Occupational Safety and Health Administration
COE	Center of Excellence	PA	Portfolio Anchor
DG	Data Governance	PI	Program Increment
DM	Data Management	PIP	Program Increment Planning
DQI	Data Quality Indicator	PMO	Program Management Office
E2E	End-to-end	RAWICE	Reports, Application, Workflow, Interface, Conversion, Extension
EAM	Enterprise Asset Management	SME	Subject Matter Expert
GBE	Gas Business Enablement	UAT	User Acceptance Testing
GIS	Geographic Information System	WO	Work Order

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Appendix B: Steering Group Overview

Key Responsibilities	
¼	Ensures that the GBE Program remains focused on value delivery
¼	Provides strategic advice, guidance and direction to support the success of the program
¼	Ensures the program has the necessary resources to be successful & manages any enterprise prioritization conflicts
¼	Makes decisions on escalated risks, issues, change requests and contractual changes as necessary
¼	Holds the GBE Program accountable for timely and effective delivery of the program scope of work and benefit case

TEAM MEMBERS	Standing Steering Group Members (Voting)	Advisory Steering Group Members (Non-Voting)
	¼ Dean Seavers – US CEO ¼ Peggy Smith – US CFO ¼ John Bruckner- EVP, Net. Ops, Safety, and Cap. Del. ¼ Anuraag Bhargava- SVP, US CIO ¼ Keith Hutchison- SVP, HR and Chief Diversity Officer ¼ Vivienne Bracken - Global CPO ¼ Dan Davies- Group Director, Business Excellence ¼ Mike Calviou – SVP, Regulatory Affairs	¼ Ross Turini – SVP, Gas Process and Engineering ¼ Tim Bishton - Head of Group Audit ¼ Steve Kerr – PA Consulting, Value Assurance Partner

GBE Program Members	
¼ Johnny Johnston – Program Sponsor	¼ Amol Sabnis – Accenture
¼ KC Healy – Program PMO	¼ David Carder – Kotter
¼ Chris Fynn – PwC	¼ Reihaneh Irani-Famili, Chris Connolly, Chris Murphy (as needed)

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Appendix C: Steering Group Action Log

Date Discussed	Action	Owner(s)	Target
10/23/17	No open action items to discuss.	N/A	N/A

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Appendix D: National Grid Resources – Hiring Update

Role/Position	Hiring Process/Status	Target Start Date	Role/Position	Hiring Process/Status	Target Start Date
Program Manager, Compliance	Hired	11/15/2017	Analyst, Training Specialist	Interviewing	12/1/2017
SaaS Manager/Lead	Not Posted	3/1/2018	Director, Strategy Planning	Not Posted	1/1/2018
Agile Tools & Process Lead (Program Tooling)	Not Posted	11/15/2017			
	Interviewing	11/15/2017			
	Not Posted	2/1/2018			
	Interviewing	2/1/2018			
	Posted	12/1/2017			
	Not Posted	2/1/2018			
	Offer Pending	11/15/2017			
	Not Posted	12/1/2018			
	Interviewing	11/15/2017			
	Hired	10/9/2017			
	Interviewing	2/1/2018			
	Interviewing	3/1/2018			

Hired

At Risk

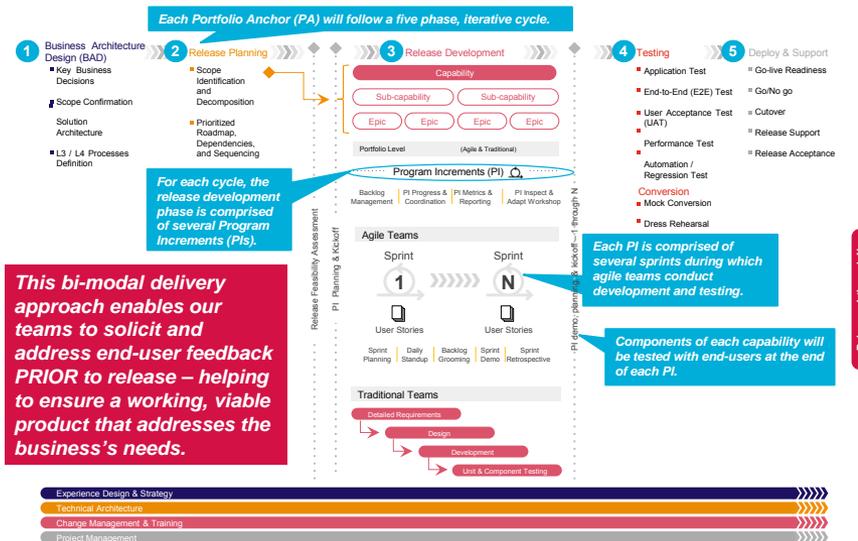
Target to be date missed

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Appendix E: Hybrid-agile Approach Overview



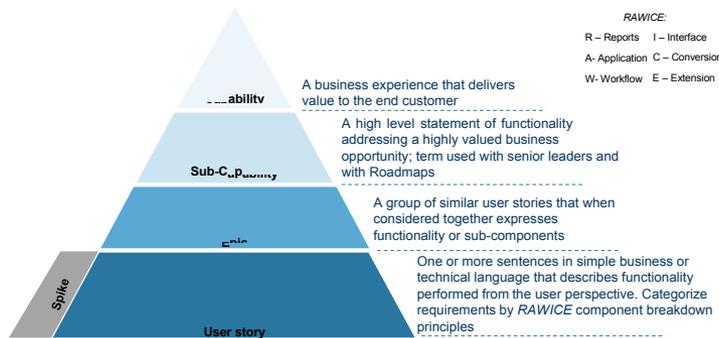
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Appendix G: Agile Scope Hierarchy

To create alignment and assist in scope decomposition, the GBE Program will use the following Capability Breakdown naming conventions to support the integrated Program and Delivery views in our agile tools

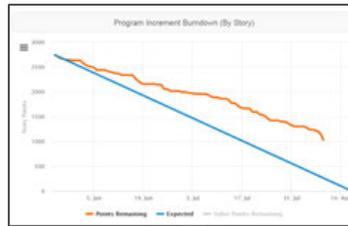


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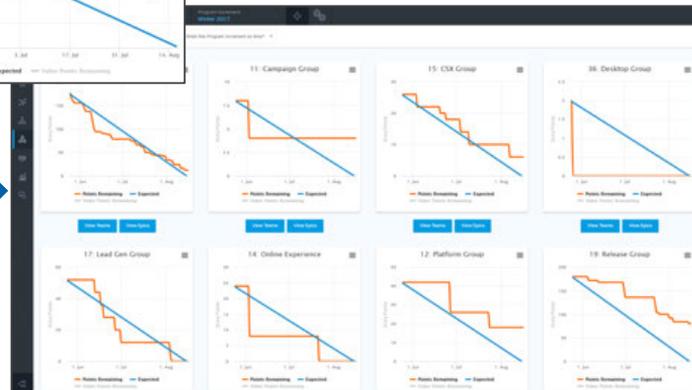
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Appendix H: Workstream level MVP reports - PI Progress



Program Increment Progress reports show the aggregate burndown of a workstream over the course of a given Program Increment. This can be further drilled down to show the burndowns of each individual team that makes up the workstream.



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Gas Business Enablement



Steering Group
Deck 2 – National Grid ONLY
November 28, 2017

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NG Only Agenda

<u>Topic</u>	<u>Time</u>	<u>Presenter</u>
Budget, Commercial and People		
Regulatory Update		PV
Budget	15 min	JJ
Prior Quarter SI Collaboration Scores		JJ
Change Control		JJ
Meeting Feedback & Close	5 min	JJ

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Regulatory Update

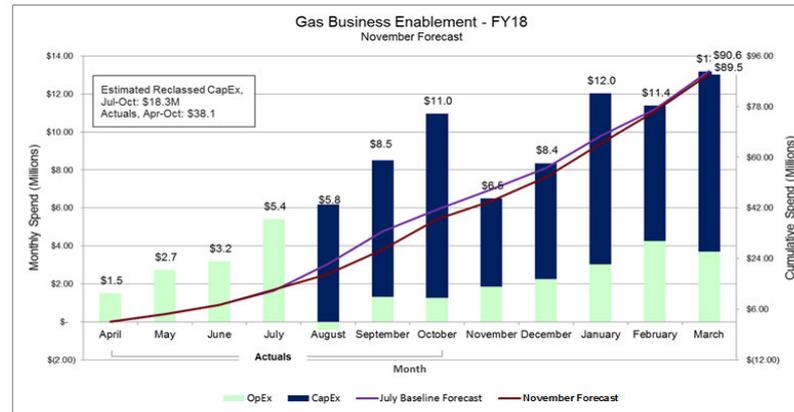
¾ Verbal update

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FY18 Budget & Forecast – OpEx/CapEx



Category	Budget	Nov. Forecast	Variance
OpEx	\$ 30.2	\$ 30.1	\$ 0.1
CapEx	\$ 54.3	\$ 59.4	\$ (5.1)
Total	\$ 84.5	\$ 89.5	\$ (5.0)

- FY18 Controllable OpEx Budget: \$27.8M
- November Controllable OpEx Forecast: \$27.5M

4

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SI Collaboration Scoring - 1st Contract Quarter

		Score provided by:				
Consulting Partner Reviewed ↓		ACN	PWC	KOT	NG	Av
July	Accenture LLP					
	PricewaterhouseCoopers Advisory Services LLC					
	Kotter International, Inc.					
	National Grid USA Service Company, Inc.					
		Score provided by:				
Consulting Partner Reviewed ↓		ACN	PWC	KOT	NG	Av
August	Accenture LLP					
	PricewaterhouseCoopers Advisory Services LLC					
	Kotter International, Inc.					
	National Grid USA Service Company, Inc.					
		Score provided by:				
Consulting Partner Reviewed ↓		ACN	PWC	KOT	NG	Av
September	Accenture LLP					
	PricewaterhouseCoopers Advisory Services LLC					
	Kotter International, Inc.					
	National Grid USA Service Company, Inc.					

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Change Control Requests

Change ID	Vendor	Workstreams Impacted	Date Submitted	Requested By	Short Description of Change	Impact Type (Anchor Milestone, Budget, Schedule, Scope)	Budget Impact (USD)	External Programs Impacted	Change Recommendation	Contractual Artifacts Impacted	Eff Date of Change	Status
GBE.AC.N.CO-001	Accenture LLP	WM SDM	8/31/17	Houchins, Cass	Administrative change – correct milestone dates to align more closely with GBE schedule. No change to scope / budget / staffing	Milestone only	None	None	Approved	SOW, Module Plan	Immediately	Approved-Closed
GBE.AC.N.CO-002	Accenture LLP	Customer Engagement	10/13/17	Connolly, Christopher (NG)	Address schedule alignment between GBE and CXT	TRD	TRD	TRD	Hold pending analysis of strategic options	TRD	TRD	On-hold, pending further analysis

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Gas Business Enablement



Steering Group
Deck 1 – All Attendees Deck
November 28, 2017

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Meeting Objectives & Agenda



Meeting Objectives

- Update on program progress, risks and issues
- Discuss proposed approach for future meetings
- Deep dive on business readiness, security and initial solution discoveries



Meeting Agenda

Meeting Agenda	Speaker	Duration
Opening Remarks <ul style="list-style-type: none"> • Meeting Objectives & Agenda • Action Items & Escalations 	<ul style="list-style-type: none"> • JJ • JJ 	5 min
State of the Program <ul style="list-style-type: none"> • Program Progress • Escalated Risks • Quality Assurance Program Update 	<ul style="list-style-type: none"> • JJ/KC • JJ/KC • AM 	25 min
Key Gas Business Enablement (GBE) Delivery Elements Spotlights <ul style="list-style-type: none"> • Key GBE Delivery Elements Overview • Business Readiness Update • IT Security Focus Areas & Implications to GBE • Discoveries 	<ul style="list-style-type: none"> • JJ • RIF • CM & AS • CC 	40 min
Meeting Close + Feedback	<ul style="list-style-type: none"> • JJ 	5 min
National Grid (NG) Breakout	<ul style="list-style-type: none"> • JJ 	15 min

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Action Items



Action items

GBE Capabilities & NG Process Model Alignment

Provide an overview of GBE capabilities and NG process model alignment to Dan Davies (Chris Connolly)

Status: closed 11/14/17

Integrated US Change Plan

Define the approach for developing a US integrated change plan (Dan Davies)

Status: In progress, due 1/31/18

Note: Refer to Appendices A and B for additional details related to action items and escalations (i.e., risks, issues).

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State of the Program

- Program Progress
- Escalations
- Quality Assurance Program Update

nationalgrid | gas business enablement

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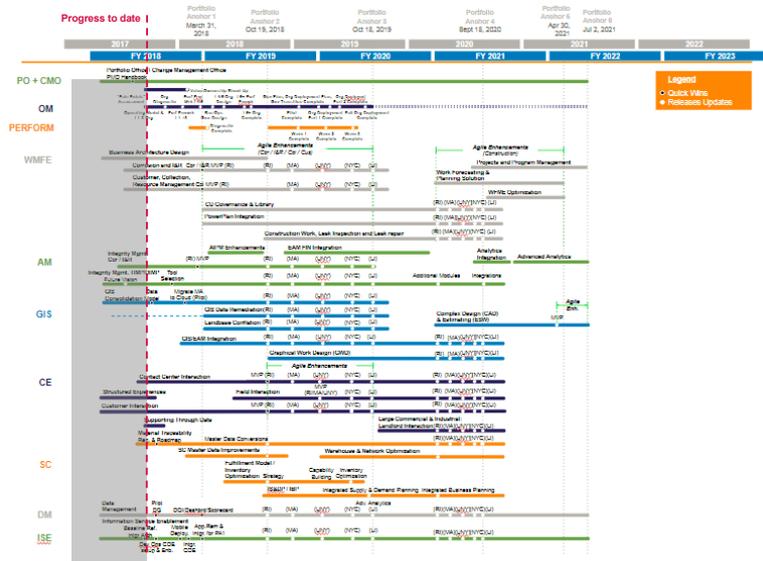
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Program Progress

GBE Roadmap



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Program Progress Interim Reporting



 Program Increment 1/ Portfolio Anchor 1	Portfolio Anchor 2	Enabling Modules	 Commercials
Trending slightly behind plan on development activities due to agile adoption challenges	Teams commenced PA2 release planning work and are tracking according to plan	Enablement workstreams are established and tracking according to plan	NG Resource Hiring is trending slightly behind plan. Budget and Commercials are tracking according to plan

Metrics			
<ul style="list-style-type: none"> 1,015 P11 story points of 1,336 planned story points completed to date 1,038 PA1 story points of 2,370 story points completed to date 1,305 P11 Actual Velocity vs. 1,992 P11 Planned Velocity 	<ul style="list-style-type: none"> 11 Business Architecture Design (BAD) workshops completed 184 PA2 epics defined 	<ul style="list-style-type: none"> 0 blockers for PA1 delivery 	<ul style="list-style-type: none"> 8 NG resources hired/onboarded since October 23 11 target hires - on track 12 target hires behind schedule or at risk

- Other Areas of Interest**
- In early November, representatives from the program management office met with the program steering committee.
 - Mike Westcott participated in a Talent roundtable discussion with GBE team members
 - On December 9, the entire GBE team will co-locate at our 404 Wyman Street location in Waltham

Progress Legend

	On plan
	Behind plan – trending positive
	Behind plan – trending negative

6

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Risks & Issues

Steering Group Support Needed



Risk	Description	Contributing Factors	Mitigation Activities
Unstaffed GBE IS Team leadership role (Vice President)	<p>There is a risk that without a senior IS leader, the GBE Program will experience:</p> <ul style="list-style-type: none"> Diminished access to IS networks and resources (and vice versa) to remove bottlenecks or manage synergies Diminished line-of-sight to major IS programs to identify dependencies and capture synergies Over-utilization of GBE IS Directors 	<ul style="list-style-type: none"> The deployment of new technologies and methodologies by the GBE Program is also changing the way the IS organization supports programs and deployed solutions The GBE IS Director team has full time and key roles in enabling the Program to move forward in deploying its scope of work 	<ul style="list-style-type: none"> Andy Schoener is standing in as the lead on top of his architecture role with CM supporting virtually Status: Ongoing Recruiting of a new Vice President is in the interviewing stage (AB) Status: In progress Monitoring Director utilization (KCH) Status: Ongoing
Insufficient IS team capacity to support GBE critical path activities	<p>There is a risk that:</p> <ul style="list-style-type: none"> Lack of capacity to develop new/revise architectures, policies and guidelines to deploy new capabilities will delay the implementation of GBE solutions. Overall program timelines will be delayed and costs will increase 	<ul style="list-style-type: none"> GBE is deploying new technologies (e.g. cloud-based solutions, Software-as-a-Service, Infrastructure-as-a-Service, etc.) that require National Grid to develop new and revised architectures, policies and guidelines The Program Agile approach accelerates the deployment of new technologies and solutions compared to traditional program delivery methodologies 	<ul style="list-style-type: none"> Program SI (PWC) has engaged SME's experienced in these new technologies and is working with IS to provide support (AB) Status: In progress Formalize roles, responsibilities and scope between PwC and IS functions to ensure capabilities are able to be deployed at the pace GBE requires (AB) Status: In progress
Insufficient Finance support of the GBE Program	<p>There is a risk that:</p> <ul style="list-style-type: none"> Delays in definition of a Program accounting structure greatly increase manual support efforts and capex/opex reporting inaccuracies (internal and external) Delays in the development of program level "tools" raise the level of manual effort and potential for error in managing Program financials 	<ul style="list-style-type: none"> The scope, complexity and multi-jurisdictional nature of the GBE Program strongly suggests that traditional accounting structures and approaches will be overly complex and very difficult to manage accurately The Agile method drives a fast paced program timeline with concurrent releases in multiple jurisdictions 	<ul style="list-style-type: none"> Full time Finance Director hired and started 11/13 (DC) Status: Complete Program accounting set-up is in progress and the team aims to complete by the end of the month (DC) Status: In progress

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Risks & Issues

Steering Group Support Needed



Risk	Description	Contributing Factors	Mitigation Activities
Required Salesforce capabilities not delivered in time to meet GBE roadmap	<p>Through detailed design, additional capabilities are being identified that are required in Salesforce that are not currently available. If they are not delivered in time:</p> <ul style="list-style-type: none"> We will need to identify if there is an alternate approach or work around Alter our roadmap to align to capability delivery In the worst case, decide that Salesforce is too immature a product for field service and change the solution 	<ul style="list-style-type: none"> Salesforce's Field Service Lightning is a relatively new product, NG would be the first utility to role out Through the strategic assessment a number of gaps were identified with the Salesforce platform and the majority of these have been closed in releases since this was shared. NG selected Salesforce for its strategic customer capabilities Getting to the next level of detail of requirements building has potentially identified new capability gaps we need to address with Salesforce and Accenture 	<ul style="list-style-type: none"> Meet with the Field Service Lightning owner at Dreamforce <i>Status: Complete</i> Schedule a follow up meeting with Salesforce to walk through the gaps in detail to confirm if gaps and if so when they will be delivered <i>Status: In progress</i> Schedule an executive meeting with Salesforce and Anuraag Bhargava <i>Status: In progress</i> Tie requirements into commercial discussions with next contract <i>Status: Targeting February</i>

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Risks & Issues

Program Watch List



Risk	Description	Mitigation Activities	Status
GBE / CXT Program Schedule Misalignment	There is a risk that the timeline for CXT's development of certain functionality is no longer supportive of GBE development timelines. This could cause GBE to delay deployment of elements of the Customer Enablement solution	<ul style="list-style-type: none"> Perform Impact Assessment study for detailed analysis of options to mitigate this risk, <i>Status: In Progress</i> Escalate as appropriate to Steering Group for support in resolving priorities & courses of action, <i>Status: Monitoring</i> Maintain current pace of inter-program coordination, <i>Status: Monitoring</i> 	Open
Agile Adoption	There is a risk that partial or ineffective deployment of our new Agile practices and tools could compromise our ability to deliver our scope of work in a timely manner, impacting our delivery commitments and budgets	<ul style="list-style-type: none"> Stand up an "Agile Adoption Working Group" to support Agile deployment, remove blockers and resolve issues, <i>Status: Complete</i> Conduct periodic "retrospectives" to evaluate progress, <i>Status: Complete – incorporated into methodology</i> Review staffing model and utilization for agile methodology support, <i>Status: On-going</i> 	Monitoring
Data Governance	There is a risk that the GBE staffing model and timelines may not support the true level of effort to both deliver new functionality/processes and support Program testing and deployment activities	<ul style="list-style-type: none"> Continue monitoring by GBE PLT and Workstream leadership, <i>Status: Monitoring</i> Leverage Agile toolset and processes to monitor capacity / throughput, <i>Status: In progress</i> Pre-define courses of action should negative trends emerge, <i>Status: Open</i> 	Open
Resource Availability	There is a risk that staffing of key GBE National Grid positions could fall behind plan. This could impact our ability to execute some high priority activities, impacting schedule, and potentially Program budget	<ul style="list-style-type: none"> Proactively engage Program, Workstream and SI Partner leadership in planning and prioritization of requirements, <i>Status: In Progress</i> Prioritize recruiting activities, <i>Status: In Progress</i> Continue to retain supplemental recruiting support, <i>Status: Complete</i> Develop contingency plans for activity support, <i>Status: Open</i> 	Open

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Value Assurance Review #1

Assessment Summary for Steering Group from PA Consulting



GBE has transitioned effectively from planning to implementation, however improvements can be made to ensure successful ongoing delivery

Value Assurance Framework

Program	Solution	Business Readiness	Commercial	People
Business Case	Requirements	Target Operating Model	Sourcing	GBE Program Team
Governance	Architecture and Design	Change	Vendor Management	Business
Controls	Data	Support		IT
Management	Implementation			Supplier
Scope	Migration			
	Infrastructure			
	Security	Release Management		
	Testing	Disaster Recovery & BCP		
Environmental Management		Support		

Key

- No or minor additional action required
- Risk requiring attention
- Critical item requiring immediate action
- Not applicable/not reviewed during this review

GBE has made an effective transition to implementation

- This Value Assurance review confirms that GBE is high performing and is making good progress toward the PA1 goal
- Enthusiasm and dedication continue to be high and there is solid evidence of a high quality outcome for PA1

However, there are risk areas that require attention

- Controls** – While there is acceptable visibility into progress and quality performance at this stage of the program, fully established Agile methods will allow for an even higher degree of visibility and control. Without that improved visibility, program controls will become increasingly difficult to monitor and manage as the program progresses.
- Management** – GBE leadership is still establishing operating norms, but should spend more time looking ahead, anticipating, and removing blockers before they impact program success
- Management** – GBE has done well absorbing resource gaps during P11, but looking further ahead, key resource gaps in training and testing will become critical in January 2018
- Solution** – The solution is on a solid foundation and making good progress. Execution performance is well managed and in line with expectation, but lack of instrumentation means there is a risk that GBE could be 2 weeks behind the PA1 delivery schedule. GBE has suffered from prior technical debt and should continue to flush out any other impactful technical debts in the NG environment.

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Key GBE Delivery Elements Spotlights

- Key GBE Delivery Elements Overview
- Business Readiness Update
- IT Security Focus Areas & Implications for GBE
- Discoveries

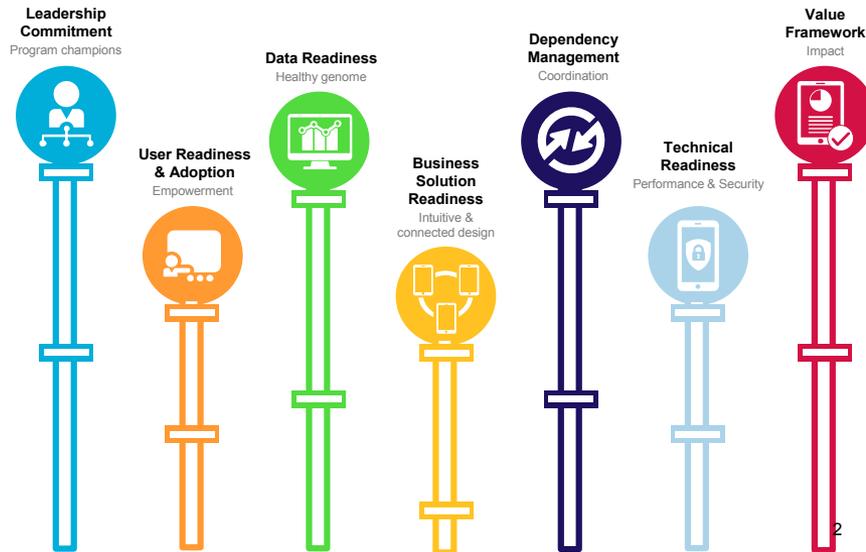
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Key GBE Delivery Elements Overview

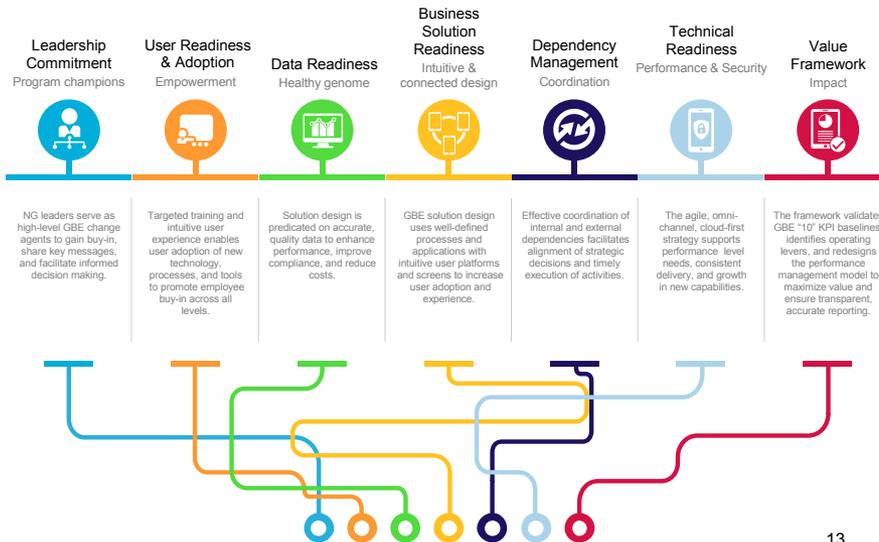


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Key GBE Delivery Elements

Descriptions & Impact



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Change Management & Leadership

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Change Management

- Setup and enabled the Change Management Office (i.e., tool kits, ways of working, staffed team)
- Incorporated change activities into agile cadence (epics and user stories)
- Translated stakeholder analysis and change impacts into tailored engagement journeys
- Continued our yard "in touch" visits to stay aligned and connected to our stakeholders
- Commenced detailed understanding of labor implications on both design and engagement approach to navigate a smooth implementation
- Connected with Urgency Teams to further shape our tailored engagement journeys
- Forecasting business involvement in the program

Activities completed to date

Next Steps

- Stand up the Bring Energy to Life Application to use technology to engage more actively with our stakeholders
- Define the future state of the organization by role and team to understand associated change activities to close the gap and drive value.
- Define and mobilize approaches for business readiness and training
- Define and introduce a measurement framework to continually adjust approach in an agile manner



Change Leadership

- Completed the Big Opportunity Senior Leadership Alignment Session
- Conducted leadership interviews
- Completed 13 Preparing Our Leaders sessions - touching roughly 200 leaders across the Gas Business
- Launched Urgency Team on October 18, 2017 and mobilized 8 subgroups initiated by the business (i.e., training, community, hubs)

- Conduct the Big Opportunity Statement Director Alignment Session
- Continue to build momentum around the Urgency Teams
- Build Volunteer Network



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Urgency Team Kickoff



ENGAGE people across National Grid
RECRUIT active volunteers
ENABLE grassroots communication

SUB-TEAMS

- Customer Transparency
- Local Action Team
- Design Workshop
- Cross Training
- HUB Utilization
- Roadshow
- Communication / Comm-Unity
- Internal Coordination / Synergist

David Angelone - 3 hours ago from iPhone
The "Urgency Team", made up of people from different departments and functions, from the field to the office and from every level of the company spent the last 2 days laying the groundwork for OUR future. Join us - your voice can be part of the change. Stay tuned #makeithappen #volunteertoday #takeaction

LIKE REPLY SHARE



#thebigopportunity #changestartshere
#permissiontoact #exceedingcustomerexpectations

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Leadership Preparations

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“...One word, “excellent.”

Foundation
a foundation-level course
focused on preparing
participants to successfully lead
their teams through change and
ambiguity



**Optimizing
the outcome**

being able to identify and utilize
the principles for leading change

“This course helped me
realize I’m a leader.”

Design
designed for all gas business
supervisors, managers, and
directors



**Generating
Advocacy**

being able to create buy-in for an
idea or initiative

“The training was different...
and I love different.”

Delivery
delivered in all jurisdictions in 10
to 16 student classes for the next
2 to 3 years. 4 Classes have
been completed with 9 more
scheduled in 2017



**Understanding the
opportunity**

understanding how to utilize
leadership opportunities to
successfully implement change
activities.



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IT Security Focus Areas & Implications for GBE

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A recently completed GBE Deliverable highlighted opportunities for IS and GBE to collaborate in preparing NG to be successful in a Cloud-enabled world

	FOCUS AREAS IMPACTING GBE	KEY RECOMMENDATIONS FOR GBE
 Cloud Governance & Security Strategy	<ul style="list-style-type: none"> • NG is moving towards 'cloud first' and needs to build a comprehensive cloud security strategy 	<ul style="list-style-type: none"> • Define GBE security roles/responsibilities and governance/engagement model • Define GBE cloud security policies and patterns • Develop GBE compliance requirements
 Azure Network Architecture Design & Operations	<ul style="list-style-type: none"> • Network security controls exist but must be strengthened to mitigate the impact of a data breach • Resilience and scalability of the cloud network architecture should be strengthened 	<ul style="list-style-type: none"> • Re-architect Azure network • Configure logging across GBE, integrate with monitoring and alerting tools
 Identity & Access Management Program	<ul style="list-style-type: none"> • IAM strategy needs to be made more comprehensive • The current decentralized access model impacts the user experience and adds operational complexity 	<ul style="list-style-type: none"> • Define IAM requirements • Define user roles and map to entitlements • Develop IAM solution design (with SSO) • Begin rollout for priority apps/systems
 Data Classification, Policies & Protection	<ul style="list-style-type: none"> • Guidance around data classification and protection should be strengthened • "Cloud" suggests that data protection controls must be clarified and consistently applied 	<ul style="list-style-type: none"> • Tailor data classification & protection policies for GBE use cases • Implement data protection controls (e.g., encryption, key management)
 Secure by Design	<ul style="list-style-type: none"> • Security architecture support will require dedicated resources • Integrated security requirements/use cases will be required for DevOps and Testing 	<ul style="list-style-type: none"> • Embed Security Architect(s) within GBE to develop solutions that are secure by design • Build security into the development and testing process

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Discoveries: Maximo



From paper files and multiple sources...
to an Inspector Clipboard

Quick Access to Current Inspections

Inspection ID	Description	Target Start	Finish No Later Than	Location	Lead	Status	Review Code
105628	Atmosphere Exposed Pipe Inspection	11/19/17 12:00 AM		RI_Pipe_2		INSCH	
105782	Atmosphere Exposed Pipe Inspection	11/19/17 12:00 AM		RI_Pipe_2		INSCH	
105784	Atmosphere Exposed Pipe Inspection	11/19/17 12:00 AM		RI_Pipe_2		INSCH	
105786	Atmosphere Exposed Pipe Inspection	11/19/17 12:00 AM		RI_Pipe_2		INSCH	
105801	Atmosphere Exposed Pipe Inspection	11/19/17 12:00 AM		RI_Pipe_2		INSCH	

Inspection ID	Description	Target Start	Finish No Later Than	Location	Lead	Status	Review Code
105403	New Station Inspection			RI16703		PLDCOMP	
105785	Atmosphere Exposed Pipe Inspection	11/19/17 12:00 AM		RI_Pipe_2		PLDCOMP	
105787	Atmosphere Exposed Pipe Inspection	11/19/17 12:00 AM		RI_Pipe_2		PLDCOMP	

Inspection ID	Description	Target Start	Finish No Later Than	Location	Lead	Status	Review Code
105784	Atmosphere Exposed Pipe Inspection			RI_Pipe_2		WARNING	SPVCDAMP
105772	Atmosphere Exposed Pipe Inspection			RI_Pipe_2		WARNING	SPVCDAMP
105787	Atmosphere Exposed Pipe Inspection			RI_Pipe_2		WARNING	SPVCDAMP

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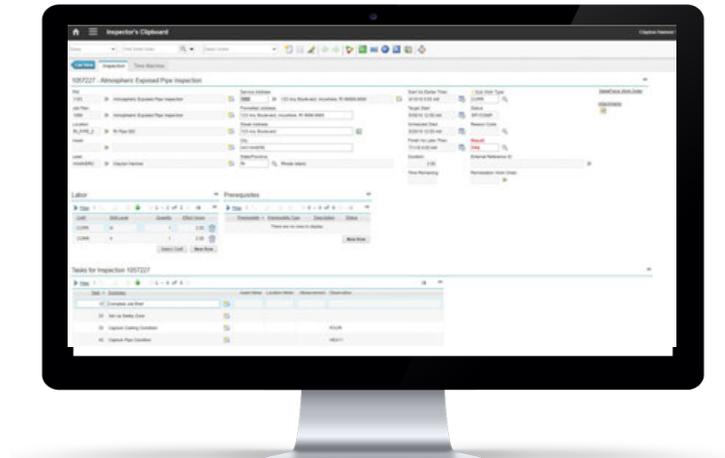
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Discoveries: Maximo

All inspections details. **Only** inspection details...
...in a consolidated screen



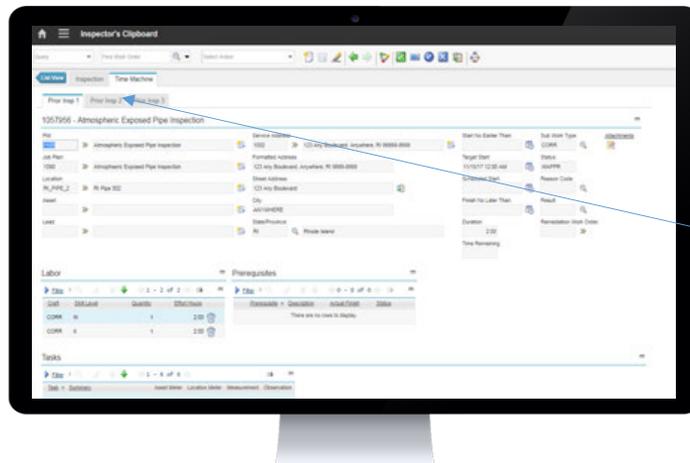
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Discoveries: Maximo



Information and access
with user friendly design



Convenient access to prior inspections in an intuitive, chronological tabular display

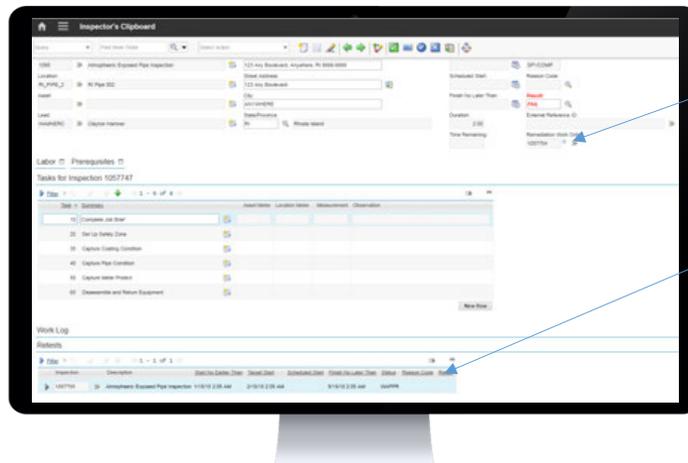
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Automated record generation and a **complete inspection story**



Consistent Remediation and Retest Compliance via automated record generation.

Convenient, **complete** inspection story with direct association to remediation and retest records.

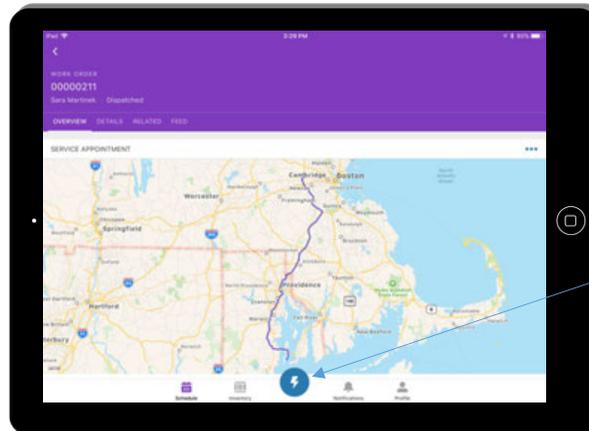
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Discoveries: Salesforce



See the work order, the WO number, and its status...
...on a Map



The lightning bolt represents actions the tech may need to take and/or a way to view a grouping of information.

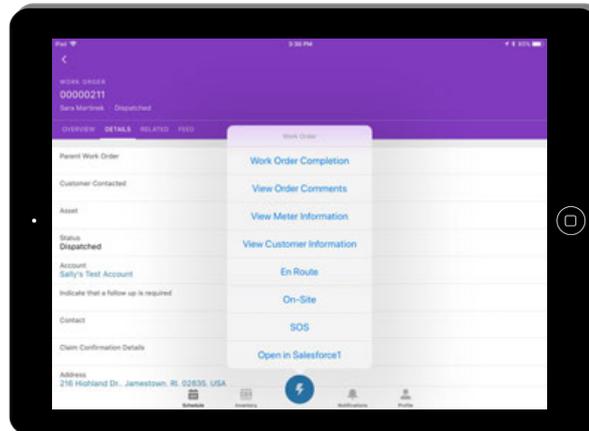
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View information, update status, or complete
a work order...**Quickly**

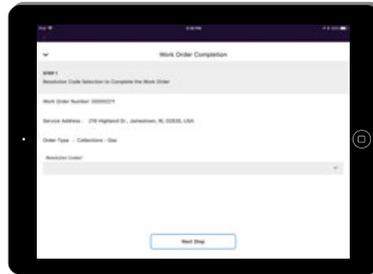


Completing the work order launches into a flow that guides the tech to out required information with messaging to help fill out the complete work order.

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Discoveries: Salesforce

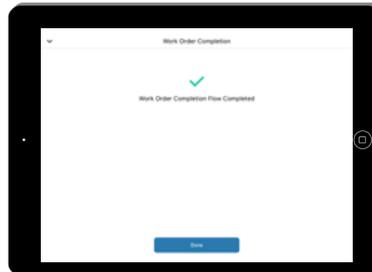


The tech will see work order, service address and other type. The tech will then select the resolution code.

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Discoveries: Salesforce



The field tech enters the required information, which is indicated with an *.

Once entered the work order is now complete.

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Appendix A - Action Log



#	Action	Owner(s)	Assigned	Due	Comment	Status
1	Provide Dan Davies with an overview of how GBE Capabilities align with NG Process Model	Chris Connolly	October 23, 2017	December 2017	Chris and Dan Davies discussed on Tuesday, November 14.	Closed
2	Define the approach for developing a US integrated change to identify and manage cross program dependencies. Plan will be presented to US Executive Team	Dan Davies	October 23, 2017	January 2018	Change planning framework developed and socialized with Dean, Peggy, JP and Andrew Bonfield. Remaining activity includes assigning an owner that will work with the US business to execute and populate the integrated change plan.	Open

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Appendix B - Risk Log



#	Risk	Description	Mitigation Activities	Owner	Status
1	Unstaffed GBE IS Team leadership role (VP)	<p>There is a risk that without a senior IS leader, the GBE Program will experience:</p> <ul style="list-style-type: none"> Diminished access to IS networks and resources (and vice versa) to remove bottlenecks or manage synergies Diminished line-of-sight to major IS programs to identify dependencies and capture synergies Over-utilization of GBE IS Directors 	<ul style="list-style-type: none"> Andy Schoener is standing in as the lead on top of his architecture role with CM supporting virtually Status: Ongoing Recruiting of a new Vice President is in the interviewing stage (AB) Status: In progress Monitoring Director utilization (KCH) Status: Ongoing 	Anuraag Bhargava	<p>Escalated: October 23, 2017</p> <p>Update provided: November 28, 2017</p>
2	Insufficient IS team capacity to support GBE critical path activities	<p>There is a risk that:</p> <ul style="list-style-type: none"> Lack of capacity to develop new/revised architectures, policies and guidelines to deploy new capabilities will delay the implementation of GBE solutions. Overall program timelines will be delayed and costs will increase 	<ul style="list-style-type: none"> Program SI (PWC) has engaged SME's experienced in these new technologies and is working with IS to provide support (AB) Status: In progress Formalize roles, responsibilities and scope between PwC and IS functions to ensure capabilities are able to be deployed at the pace GBE requires (AB) Status: In progress 	Anuraag Bhargava	<p>Escalated: October 23, 2017</p> <p>Update provided: November 28, 2017</p>
3	Insufficient Finance support of the GBE Program	<p>There is a risk that:</p> <ul style="list-style-type: none"> Delays in definition of a Program accounting structure greatly increase manual support efforts and capex/opex reporting inaccuracies (internal and external) Delays in the development of program level "tools" raise the level of manual effort and potential for error in managing Program financials 	<ul style="list-style-type: none"> Full time Finance Director hired and started 11/13 (DC) Status: Complete Program accounting set-up is in progress and the team aims to complete by the end of the month (DC) Status: In progress 	Dave Campbell	<p>Escalated: October 23, 2017</p> <p>Update provided: November 28, 2017</p>

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Appendix C - PwC Quality Assurance Review Update



Mobilization

Initial mobilization of the program has been effective; but, opportunities exist to enhance program infrastructure and address NG resource gaps to enable scaling for PA2 demands

Actions

- Ensure program are ready for intense FY19 load (i.e. PA2 and PA3) - cloud infrastructure (Azure) and cloud cybersecurity
- Address key NG resource gaps to meet PA2 and PA3 requirements



Progress & Reporting

Teams are progressing towards PA1 release; but, opportunities exist to enhance performance reporting and align with broader value realization

- Integrated tool suite now in place - provide effective exception reporting on progress and critical risks/ issues for PLT action
- PwC adding experienced PO resource and more partner guidance regarding large-scale agile programs



Agile Adoption & Delivery

Teams have embedded new Agile Delivery approach and are collaborating; but, opportunities exist to enhance agile deployment approaches (coaching capacity, alignment across SI partners, etc.)

- Create additional Agile coach capacity
- Orient Coaches to be more directive in use of tools and standardized Agile approach and structure
- Move to higher efficiency work stream throughput by PA2



x-Workstream Coordination

x-Workstream ceremonies have been established; but, opportunities exist to align x-Workstream activities with the value framework and increase focus on key x-Workstream dependencies (e.g., Data Management)

- Strengthen solution architect role for PA2, PA3 and PA4
- Proactive, specific actions to push OMD and BPR interaction
- Conduct x-Workstream workshops to extend planning horizon and visibility to PA2 and PA3 requirements

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Gas Business Enablement



Steering Group
Deck 1 – All Attendees Deck
December 19, 2017

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Meeting Objectives & Agenda



Meeting Objectives

- Update Steering Group (SG) on Program progress and key activities, including escalated risks
- Endorse GBE's approach for deployment governance
- Discuss GBE Testing timeline and approach through the lens of the Key GBE Delivery Elements
- Provide visibility into future SG meeting topics



Meeting Agenda	Speaker	Duration
Opening Remarks <ul style="list-style-type: none"> • Meeting Objectives & Agenda • Action Items 	<ul style="list-style-type: none"> • JJ • JJ 	5 min
State of the Program <ul style="list-style-type: none"> • Program Progress • Escalated Risks 	<ul style="list-style-type: none"> • KC • JJ/KC 	10 min
Key Gas Business Enablement (GBE) Delivery Elements Spotlights <ul style="list-style-type: none"> • Deployment Governance • Testing in an Agile Environment 	<ul style="list-style-type: none"> • MS • EA 	20 min
Meeting Close + Feedback	<ul style="list-style-type: none"> • JJ 	5 min
National Grid (NG) Breakout	<ul style="list-style-type: none"> • JJ 	20 min

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Action Items



Open Action Items

No. 2

Integrated US Change Plan

Define the approach for developing a US integrated change plan (Dan Davies)

Status: *In progress, due 1/31/18*

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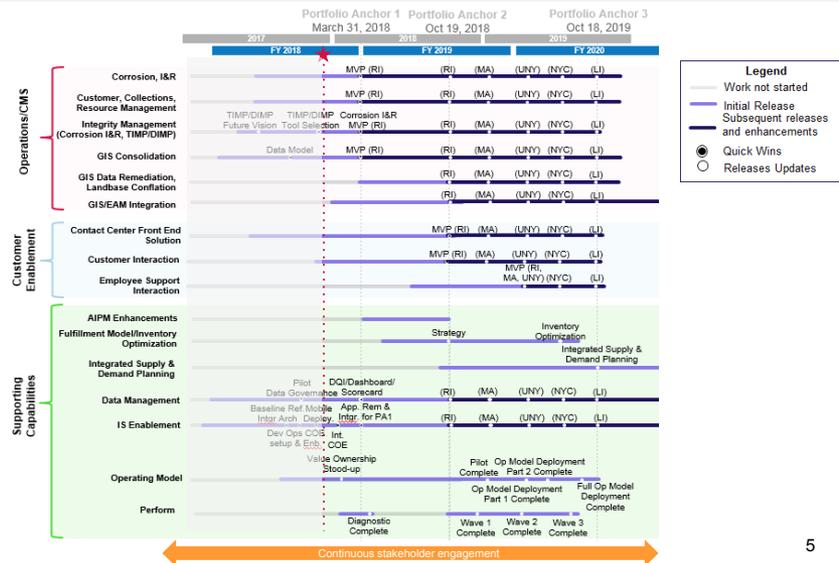
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Program Progress

GBE Roadmap: A targeted view through PA3



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Program Progress Interim Reporting - Overview



Toolset Advancement

The Program has advanced its toolset - achieving integration of Jira and AgileCraft and standardizing data quality requirements across teams. Teams are now focused on linking and integrating the data between the two tools.



Performance Management

Once the data is fully integrated, this agile toolset will provide real-time visibility into program, workstream and team level performance.



Reporting Lens

The Program's hybrid-agile approach comprises agile development teams and Kanban teams for enabling activities - resulting in two distinct views for reporting.

Development Activities

Progress against plan for PA1 development activities is demonstrated using a **Burnup Chart** (work completed, work remaining and the anticipated timeline for completion).

- The burnup charts on the following slide highlight the following:
- Salesforce and Maximo teams are tracking according to plan
 - GIS Platform team is working through several "blockers" that could put PA2 capabilities at risk
 - PA2 work has started and is on track to complete readiness for PA2 development in mid-January

Enabling Activities

Enabling teams are utilizing **Kanban** to manage delivery activities. Performance against plan is measured by demonstrating progress toward capabilities critical to a successful PA1 deployment.

- Kanban reports show the following:
- Portfolio Office: Tracking to plan
 - Change Management Office: Tracking to plan
 - Operating Model Design: Tracking to plan
 - Change Leadership: Tracking to Plan
 - IS Enablement: Tracking according to plan
 - No major blockers to PA1 delivery

Other Interest Areas:

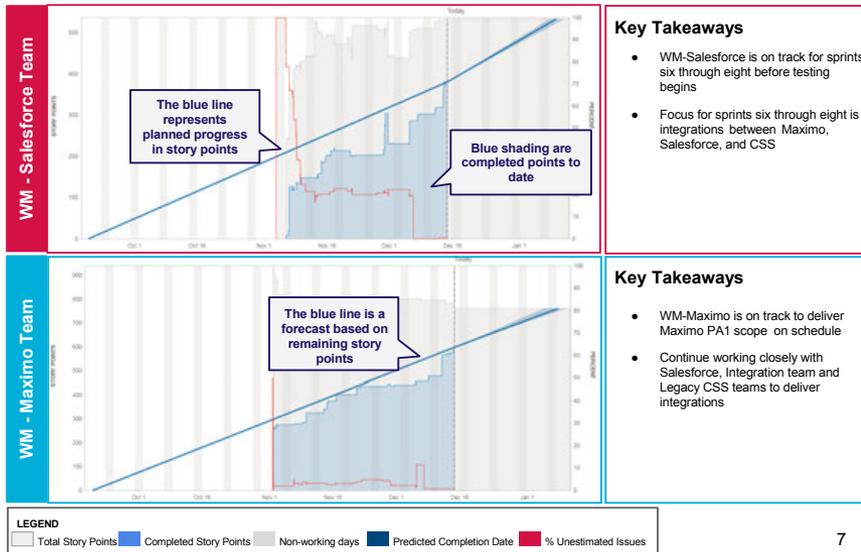
- Visit from Global CEO (December 7)
- Completed Program Increment 2 Planning Session
- 100% of GBE Program resources now at 404 Wyman location
- Completed roadshows to four yards in Rhode Island reaching 100+ CMS and I&R employees to date

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Program Progress

Interim Reporting - PA1 Release Development Activities - "Burn Up"

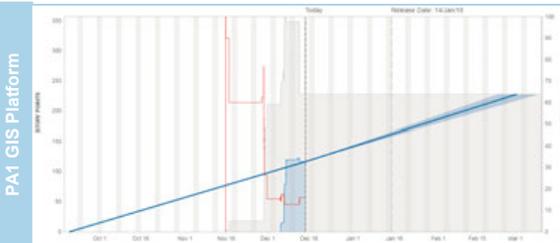


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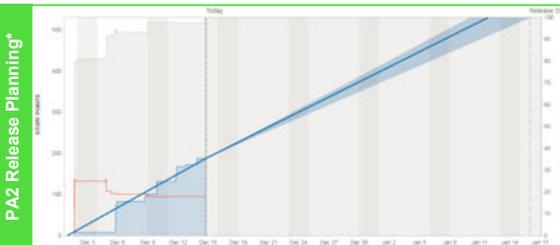
Program Progress

Interim Reporting - Other Development Activities – “Burn Up”



Key Takeaways

- No PA1 Production release
- Web-based portion of the PoC is moving along according to plan
- Thick client (i.e., desktop editing) portion of PoC is significantly delayed due to NG legacy related blockers putting PA2 capabilities at risk
- Working through institutional blockers is adding significant value to Program and NG by evolving culture into one that embraces a cloud-first strategy



Key Takeaways

- PA2 work has started and scope is being decomposed
- On track to complete readiness to start PA2 development on January 15, 2018

LEGEND

	Total Story Points		Completed Story Points		Non-working days		Predicted Completion Date		% Unestimated Issues
--	--------------------	--	------------------------	--	------------------	--	---------------------------	--	----------------------

*Includes BPR teams only

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Risks & Issues		nationalgrid gas business Steering Group Support Needed enablement	
Risk	Description	Contributing Factors	Mitigation Activities
Unstaffed GBE IS Team leadership role (Vice President)	<p>There is a risk that without a senior IS leader, the GBE Program will experience:</p> <ul style="list-style-type: none"> Diminished access to IS networks and resources (and vice versa) to remove bottlenecks or manage synergies Diminished line-of-sight to major IS programs to identify dependencies and capture synergies Over-utilization of GBE IS Directors 	<ul style="list-style-type: none"> The deployment of new technologies and methodologies by the GBE Program is also changing the way the IS organization supports programs and deployed solutions The GBE IS Director team has full time and key roles in enabling the Program to move forward in deploying its scope of work 	<ul style="list-style-type: none"> Andy Schoener is standing in as the lead on top of his architecture role with CM supporting virtually <i>Status: Monitoring</i> Recruiting of a new Vice President is in the interviewing stage (AB) <i>Status: In progress</i> Monitoring Director utilization (KCH) <i>Status: Monitoring</i>
Insufficient IS team capacity to support GBE critical path activities	<p>There is a risk that:</p> <ul style="list-style-type: none"> Lack of capacity to develop new/revised architectures, policies and guidelines to deploy new capabilities will delay the implementation of GBE solutions. Overall program timelines will be delayed and costs will increase 	<ul style="list-style-type: none"> GBE is deploying new technologies (e.g. cloud-based solutions, Software-as-a-Service, Infrastructure-as-a-Service, etc.) that require National Grid to develop new and revised architectures, policies and guidelines The Program Agile approach accelerates the deployment of new technologies and solutions compared to traditional program delivery methodologies 	<ul style="list-style-type: none"> Program SI (PWC) has engaged SME's experienced in these new technologies and is working with IS to provide support (AB) <i>Status: In progress</i> Formalize roles, responsibilities and scope between PwC and IS functions to ensure capabilities are able to deployed at the pace GBE requires (AB) <i>Status: DR&S resource embedded and another role posted, Jan planning exercise in progress</i>
Insufficient Finance support of the GBE Program	<p>There is a risk that:</p> <ul style="list-style-type: none"> Delays in definition of a Program accounting structure greatly increase manual support efforts and capex/opex reporting inaccuracies (internal and external) Delays in the development of program level "tools" raise the level of manual effort and potential for error in managing Program financials 	<ul style="list-style-type: none"> The scope, complexity and multi-jurisdictional nature of the GBE Program strongly suggests that traditional accounting structures and approaches will be overly complex and very difficult to manage accurately The Agile method drives a fast paced program timeline with concurrent releases in multiple jurisdictions 	<ul style="list-style-type: none"> Full time Finance Director hired and started 11/13 (DC) <i>Status: Complete</i> Program accounting set-up is in progress and the team aims to complete in January (DC) <i>Status: In progress</i>

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Risks & Issues

Steering Group Support Needed



Risk	Description	Contributing Factors	Mitigation Activities
Required Salesforce capabilities not delivered in time to meet GBE roadmap	<p>Through detailed design, additional capabilities are being identified that are required in Salesforce that are not currently available. If they are not delivered in time:</p> <ul style="list-style-type: none"> We will need to identify if there is an alternate approach or work around Alter our roadmap to align to capability delivery In the worst case, decide that Salesforce is too immature a product for field service and change the solution 	<ul style="list-style-type: none"> Salesforce's Field Service Lightning is a relatively new product, NG would be the first utility to roll out Through the strategic assessment a number of gaps were identified with the Salesforce platform and the majority of these have been closed in releases since this was shared. NG selected Salesforce for its strategic customer capabilities Getting to the next level of detail of requirements building has potentially identified new capability gaps we need to address with Salesforce and Accenture 	<ul style="list-style-type: none"> Meet with the Field Service Lightning owner at Dreamforce <i>Status: Complete</i> Schedule a follow up meeting with Salesforce to walk through the gaps in detail to confirm if gaps and if so when they will be delivered <i>Status: In progress</i> Schedule an executive meeting with Salesforce and Anuraag Bhargava <i>Status: In progress</i> Tie requirements into commercial discussions with next contract <i>Status: Targeting February</i>

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Risks & Issues

Program Watch List



Risk	Description	Mitigation Activities	Status
GBE / CxT Program Schedule Misalignment	There is a risk that the timeline for CxT's development of certain functionality is no longer supportive of GBE development timelines. This could cause GBE to delay deployment of elements of the Customer Enablement solution	<ul style="list-style-type: none"> Perform Impact Assessment study for detailed analysis of options to mitigate this risk, <i>Status: In Progress</i> Escalate as appropriate to Steering Group for support in resolving priorities & courses of action, <i>Status: Monitoring</i> Maintain current pace of inter-program coordination, <i>Status: Monitoring</i> 	In Progress
Agile Adoption	There is a risk that partial or ineffective deployment of our new Agile practices and tools could compromise our ability to deliver our scope of work in a timely manner, impacting our delivery commitments and budgets	<ul style="list-style-type: none"> Stand up an "Agile Adoption Working Group" to support Agile deployment, remove blockers and resolve issues, <i>Status: Complete</i> Conduct periodic "retrospectives" to evaluate progress, <i>Status: Complete – incorporated into methodology</i> Review staffing model and utilization for agile methodology support, <i>Status: Ongoing</i> 	In Progress
GBE Staffing Model	There is a risk that the GBE staffing model and timelines may not support the true level of effort to both deliver new functionality/processes and support Program testing and deployment activities	<ul style="list-style-type: none"> Continue monitoring by GBE PLT and Workstream leadership, <i>Status: Deployed resource management process</i> Leverage Agile toolset and processes to monitor capacity / throughput, <i>Status: In progress</i> Pre-define courses of action should negative trends emerge, <i>Status: Deployed resource management process</i> 	In Progress
Resource Availability	There is a risk that staffing of key GBE National Grid positions could fall behind plan. This could impact our ability to execute some high priority activities, impacting schedule, and potentially Program budget	<ul style="list-style-type: none"> Proactively engage Program, Workstream and SI Partner leadership in planning and prioritization of requirements, <i>Status: In Progress</i> Prioritize recruiting activities, <i>Status: In Progress</i> Continue to retain supplemental recruiting support, <i>Status: Complete</i> Develop contingency plans for activity support, <i>Status: Incorporating into resource management process</i> 	Open

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Key GBE Delivery Elements Spotlights

- Deployment Governance
- Testing in an Agile Environment

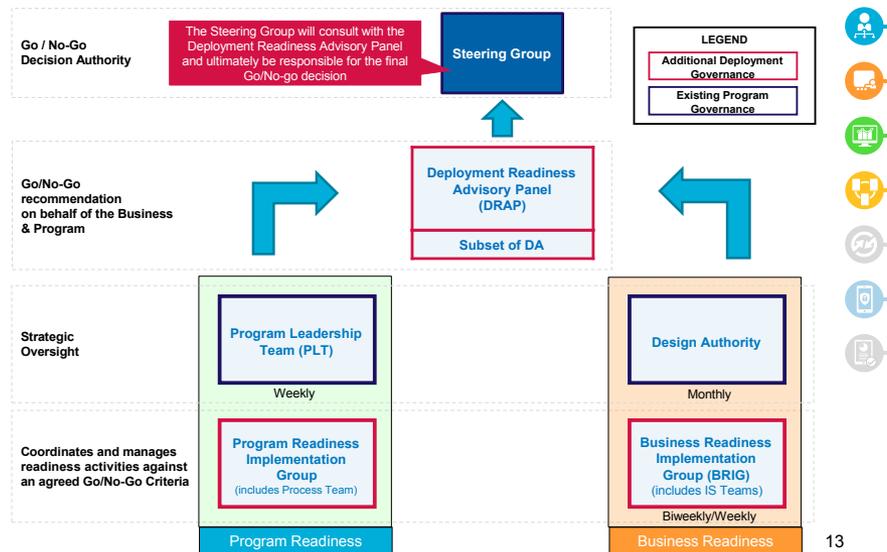
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Proposed Deployment Governance Model



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Governance Roles & Responsibilities				nationalgrid gas business enablement	
Governance Group	Responsibilities	Inputs	Outputs		
Steering Group	<ul style="list-style-type: none"> Consults with Advisory Panel and then makes final Go No Go decision Engages with Program and Business Leadership to understand readiness leading up to Go No Go decision 	<ul style="list-style-type: none"> Advisory Panel Recommendation 	<ul style="list-style-type: none"> Go No Go Decision 		
Deployment Readiness Advisory Panel	<ul style="list-style-type: none"> Comprised of a subset of the DA, whose business area is highly impacted by the PA Provide Go No Go recommendation to Steering Group Engages with Program and Business periodically to understand readiness ahead of giving Go No Go recommendation 	<ul style="list-style-type: none"> BRIG Status Reports Design Authority Feedback Program Readiness Assessments 	<ul style="list-style-type: none"> Go No Go Recommendation 		
Design Authority	<ul style="list-style-type: none"> Provide direction to the BRIG, including feedback on deployment approach and support on escalated issues Detailed management of Business Readiness deferred to BRIG 	<ul style="list-style-type: none"> Proposed readiness criteria and status 	<ul style="list-style-type: none"> Oversight Assurance 		
Portfolio Leadership Team	<ul style="list-style-type: none"> Provide direction to the program, including feedback on deployment approach and support on escalated issues 	<ul style="list-style-type: none"> Deployment plan Readiness criteria and status 	<ul style="list-style-type: none"> Oversight Assurance 		
Business Readiness Implementation Group	<ul style="list-style-type: none"> Coordinate and manages business readiness activities against an agreed Go No Go Criteria Objective to actively progress "readiness" Represented by DA members or delegated authority as deemed appropriate 	<ul style="list-style-type: none"> Business feedback against Go No Go criteria Program updates and direction setting 	<ul style="list-style-type: none"> Go No Go Status by high/medium impacted teams 		

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Asks & Next Steps


Asks & Next Steps

No. 1
Endorse Governance Structure
Obtain Steering Group endorsement and support of proposed governance structure for deployment plan

No. 2
Develop deployment plan
Develop a detailed, time-phased plan for deployment to be discussed at our next Steering Group meeting in January.



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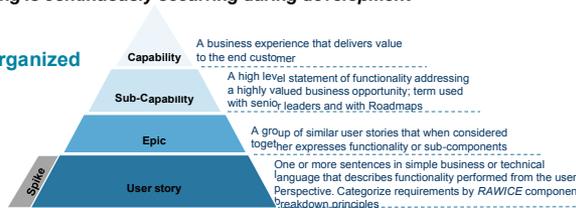
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Testing in an Agile Development Approach



In Agile Development, testing is continuously occurring during development

How requirements are organized



..and, How it gets tested

Test Stage	Component tested	Delivery Phase	Environment	Test data	Testing tools	Test Execution Accountability	
						Manual and manual regression testing	Automated regression and performance testing
User Acceptance Testing (UAT)	Capability	Must be delivered within PA	UAT	Mock converted data	JIRA, Selenium	End User	Program Testing team
End to end testing	Capability	One or more releases (Must be delivered within PA)	QA	Mock converted data	HP	Workstream	
	Sub-capability	Single release/multi-PI	QA	Mock converted data	HP Performance Center		
Epic testing	Completed Epics and user stories	Single PI/ multi-sprint	QA	Synthetic/ fabricated data	JIRA, Selenium	Workstream	
User story testing	User story	Single sprint	QA	Synthetic/ fabricated data	JIRA, Selenium		

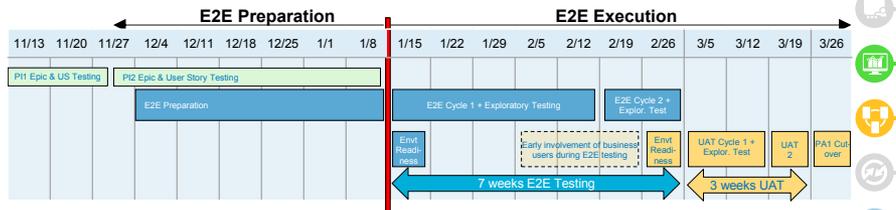
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High Level Testing Timeline



Two cycles of testing for E2E and UAT have been defined for PA1 MVP



Roles and Responsibilities

	E2E Preparation	E2E Execution
GBE Workstreams	<ul style="list-style-type: none"> Develop test cases and identify data needed for testing Prioritize and review test cases (PO/SM) Develop and test PA1 user stories and epics, and mark them complete with PO approval 	<ul style="list-style-type: none"> Manually execute test cases during end to end testing cycles and conduct exploratory testing Record results of test case execution and create defects, as needed
Business SMEs	<ul style="list-style-type: none"> Develop and review test cases, as needed to provide inputs on variations that might not have been covered in scenarios or inputs towards priority of scenarios 	<ul style="list-style-type: none"> Manually execute test cases during user acceptance testing (UAT) cycles and conduct exploratory testing Record results of test case execution and identify defects, as appropriate

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Testing Definition of Done



To ensure thorough testing has occurred, the definition of done has been defined for each cycle during end to end and user acceptance testing

	Definition of Start	Definition of Done
End to End	<ul style="list-style-type: none"> ✓ User Story and Epic testing complete and approved by Product Owner ✓ Mock 1 complete, data loaded into QA environment ✓ E2E test cases written and approved ✓ E2E execution schedule approved ✓ Environment readiness and shake out completed 	<ul style="list-style-type: none"> ✓ 100% of end to end test scenarios executed ✓ All high and medium priority defects are resolved, unless approved by PM's and PLT ✓ Any open defects have a documented workaround
UAT	<ul style="list-style-type: none"> ✓ End to end testing completed, code deployed to UAT environment ✓ Mock 3 complete, data loaded into UAT environment ✓ Business user training completed ✓ Environment readiness and shakeout completed 	<ul style="list-style-type: none"> ✓ 100% of end to end test scenarios executed ✓ All defects have been fixed, unless approved by PMs or PLT ✓ Exploratory testing conducted



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Program Progress

Interim Reporting - Enabling Activities



The summary below demonstrates planned activities of our enabling teams to support delivery of PA1 activities. The Program is working toward producing these views in an automated fashion as the agile toolset continues to evolve.

Workstream	Capability	Planned Completion					Key Takeaways
		Sprint 6 11/29 – 12/12	Sprint 7 12/13 – 12/26	Sprint 8 12/27 – 1/9	Sprint 9 1/10 – 1/23	Sprint 10 1/24 – 2/6	
Portfolio Office	Value Driven Program Management						<ul style="list-style-type: none"> Deployment approach and planning underway Agilecraft and Jira integrated – working with teams to link data across the two tools
	Agile Capability Enablement			▲			
	Risk and Controls Considerations						
Change Management Office	Employment Engagement					▲	<ul style="list-style-type: none"> Currently testing Bring Energy to Life application Completed Training Strategy to guide design, development and delivery of end user training No major blockers for PA1 delivery
	Engagement					▲	
	Sustainment					▲	
Operating Model Design	Organization Targeted Diagnostic		▲				<ul style="list-style-type: none"> Completed analysis of the Ways of Working survey (full diagnostic to be completed by end of January) Nearing completion of Value Framework's stand-up documentation PERFORM team working with NG supervisors to understand performance management in yards and needs for PA2 and PA3
	Stand-up Value Framework				▲		
	Perform Diagnostic		▲				
	Operating Model Design					▲	
	Metric Hierarchy for L1-L3					▲	
Change Leadership	Metric Hierarchy for L4-L5					▲	
	Leading Complex Change						<ul style="list-style-type: none"> Completed three additional Preparing Our Leaders training sessions (total for year is 11) Recruited almost 40 volunteers to help build urgency; working with CMO to identify more. Cultural assessment underway - leveraging data provided by OMD from Ways of Working survey
	Aligning Senior Leadership						
	Building a Sense of Urgency						
Develop New Ways of Working							
IS Enablement	Testing (Test Strategy & E2E Testing)					▲	<ul style="list-style-type: none"> Tracking according to plan No major blockers for PA1 delivery
	API Integration (API Common Framework, SAP and Applications Integrations)			▲		▲	
	DevOps (DevOps steady state and roll-out for iPaas and Mulesoft)					▲	

Other Interest Areas:

- Visit from Global CEO (December 7)
- Completed Program Increment Planning Session
- 100% of GBE Program resources now at 404 Wyman location
- Completed roadshows to four yards in Rhode Island reaching 100+ CMS and I&R employees to date

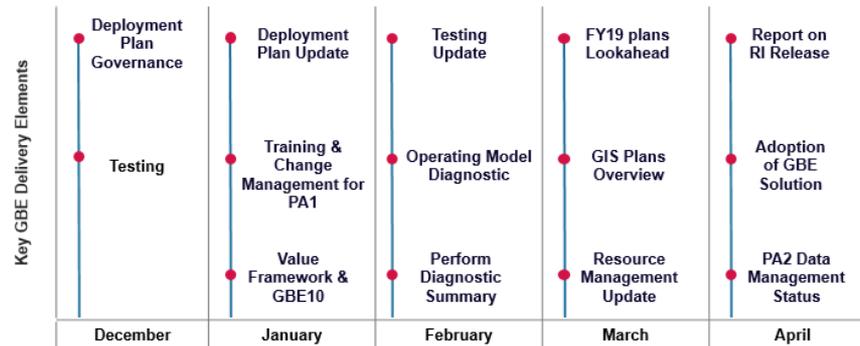
Notes:

- ▲ Indicates activities completed
- * ISE does not define its work effort by capabilities; as a result, plans have been reflected by key workstreams for PA1 delivery.

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Appendix B - SG Proposed Spotlight Backlog

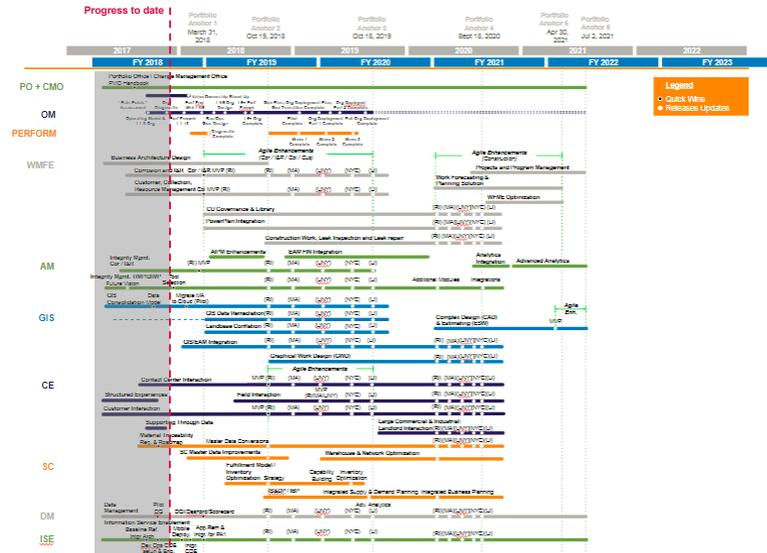


Note: Proposed topics are subject to change based on the needs of the GBE Program and input from the Steering Group.

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Appendix C - GBE Roadmap



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Appendix D - Deployment Lessons Learned



Our teams plan to leverage key lessons learned from previous large IT enabled business transformation projects at National Grid, which will be incorporated into our success criteria for overall readiness.



EHRI Production

Detailed activity descriptions, as well as timely and accurate communications deployed through alternative channels are critical to ensuring stakeholders are engaged throughout the process.



USFP BI Release 2 & 3

A detailed cutover staffing plan with the ability to support a 24/7 schedule (with critical load periods) reduces resource strain and allows for better planning and support.

A further refined RACI will provide clarity around governance and approvals - ensuring accountability and responsibility are clearly understood.

A more detailed cutover plan and checklist is needed to accurately reflect readiness

Better control of the stage gate process along with a strong mitigation process for stage gate findings is critical.

A robust organizational chart is needed to help identify key decision makers and ensure timely decisions.

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Gas Business Enablement



Steering Group
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December 19, 2017

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NG Only Agenda

<u>Topic</u>	<u>Time</u>	<u>Presenter</u>
Budget Highlights <ul style="list-style-type: none">December ForecastFY 19 Changes	5 min	JJ
Group Executive Paper – Overview	10 min	JJ
Meeting Feedback & Close	5 min	JJ

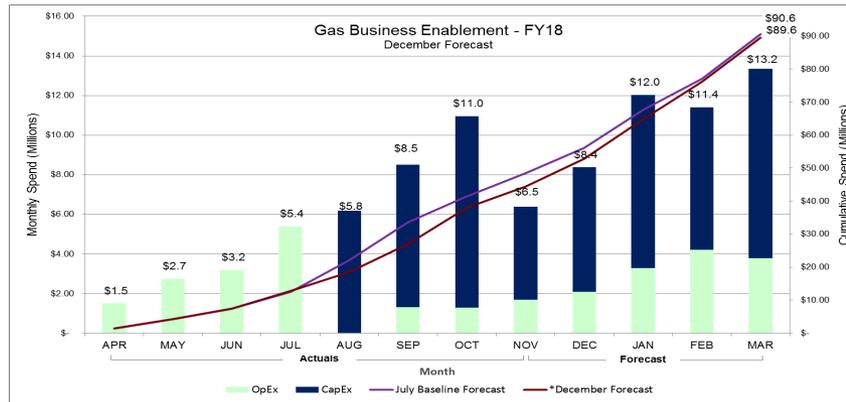
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December FY18 Forecast: Total Expenditures



	Month			YTD			FY18		
	Nov. Forecast	Actuals	Variance	Nov. Forecast	Actuals	Variance	Budget	*Dec. Forecast	Variance
OpEx	\$ 1.8	\$ 1.7	\$ 0.1	\$ 16.9	\$ 16.7	\$ 0.1	\$ 30.2	\$ 30.1	\$ 0.1
CapEx	\$ 4.6	\$ 4.7	\$ (0.0)	\$ 27.7	\$ 27.7	\$ (0.0)	\$ 54.3	\$ 59.5	\$ (5.3)
Total	\$ 6.5	\$ 6.4	\$ 0.1	\$ 44.6	\$ 44.5	\$ 0.1	\$ 84.5	\$ 89.6	\$ (5.1)

*FY18 total expenditures forecast is being held steady until time correction entries have been completed

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Group Executive Paper – Jan 10th (due Jan 3rd) 2018

¾ Aim: Update Exec on progress and gain support for FY19 plan

¾ Questions:

1. What progress has been made since sanction in February 17?
2. What is the Value Framework and how is it planned to be used?
3. What progress has been made on regulatory recovery?
4. What have been the early findings from the independent assurance partner?
5. What options have been considered for FY19?
6. How does the recommended option compare to the original proposed plan?
7. What are the current key risks for the program and how are they being mitigated?

¾ Any high level feedback/concerns on direction?

¾ Please provide any detailed feedback no later than Dec 27th

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Change Control Requests

Change ID	Vendor	Workstreams Impacted	Date Submitted	Requested By	Short Description of Change	Impact Type (Anchor Milestone, Budget, Schedule, Scope)	Budget Impact (USD)	External Programs Impacted	Change Recommendation	Contractual Artifacts Impacted	Eff Date of Change	Status
GBE.AC.N.CO-001	Accenture LLP	WM SDM	8/31/17	Houchins, Cass	Administrative change – correct milestone dates to align more closely with GBE schedule. No change to scope / budget / staffing	Milestone only	None	None	Approved	SOW, Module Plan	Immediately	Approved-Closed
GBE.AC.N.CO-002	Accenture LLP	Customer Engagement	10/13/17	Connolly, Christopher (NG)	Address schedule alignment between GBE and CXT	TRD	TRD	TRD	Hold pending analysis of strategic options	TRD	TRD	On-hold, pending further analysis

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Speaker: JJ



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