

# Finance and Resources Committee 17<sup>th</sup> June 2010

## Online renewals project lessons learnt report

### **Executive summary and recommendations**

### Introduction

The attached paper is the lessons learnt report completed by the project team following the successful completion of the online renewal project.

### Decision

The Committee is requested to note the document. No decision is required.

### **Background information**

The purpose of a lessons learned report is to bring together any lessons learned during the project that can be applied to other projects. At the close of the project it is completed and prepared for dissemination. The lessons learnt process embodies the continual improvement culture at HPC where everyone is empowered to point out improvements at all levels.

At HPC, most major projects have at least a 2 hour lessons learnt session where each project member takes a "critical eye" to how the project was conducted, with special focus on what can be done to improve the delivery of future projects.

All project team members take this process seriously and actively attempt to come up with developmental or critical feedback so that HPC can improve the way it delivers projects. It is important to read this report in this light.

Also, all projects are different and what works for one project, project lead, senior supplier or project sponsor, may not be easily transferable or necessary to another.

Finally, the process also ensures that any positive comments and feedback are captured, so that these approaches and behaviours can be nurtured and continued.

#### **Resource implications** Outlined in attached paper.

**Financial implications** Outlined in attached paper.

Appendices None Date of paper 17<sup>th</sup> June 2010

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Date	Ver.	Dept/Cmte	<b>Doc Type</b>	Title	Status	Int. Aud.
2010-06-08	а	OPS	PPR	Online renewals lessons learnt	Draft	Public
					DD: None	RD: None

RD: None

Lessons Learned F	Report			
Stage	Tasks	Category (Negative, Positive)	Description	Recommendation
Project Initiation	Creation of business case			For larger scale projects that business cases of this nature
		Р	Business case was detailed, considered and thorough and was to F&R	should be created and, if appropriate, presented to the appropriate committee
	High level objectives	2	Highlighting of high level objectives and constant referral back, was useful in concentrating the project team on the key aims	
		P	of the project. This assisted in controlling scope.	High level objectives (where appropriate) should be set.
	Scope management	Р	Scope was constantly monitored and challenged	Constant reference to scope within brief should be made
	Project team formation	Р	External subject matter experts were employed to mitigate risks around key areas	be made and appropriate parties employed
	Project team formation			Formalised and documented meetings should be held with the
		N	Formal sponsor updates were not undertaken	project sponsor on a regular basis
	Project team formation	Р	There was a correct level of senior management participation within the project team	Ensure that the correct personnel are on the project
	EMT buy in	Р	There was a good level of buy in from EMT including the CEO	Ensure that there is a good level of communication with EMT and the CEO about the nature of the project
	Organisation wide buy in	Р	There was a good level of buy in from the organisation generally	Ensure that communications e.g. through all staff, intranet updates, team briefings etc are undertaken
	Project leadership	Р	Ownership from the project lead was strong which enabled the project to be delivered effectively	Project must be a priority for the project lead and an understanding of the role must be held before project initiation
	Project team attendance at meetings	Ν	Lack of attendance by some departments (including Finance) due to operational pressures	<ol> <li>Resource analysis during project prioritisation / department work planning should be done according to the number of projects that have will require involvement 2) Project planning should include a resource analysis around pinch points within the organisation / departments affected</li> </ol>
	Roles and responsibilities definition	N	A lack of job descriptions for team members would have been useful to define roles	If possible job descriptions should be written (if PM resources allow)
	Creation of project plan	N	Product and work breakdown structures weren't undertaken which led to tasks not being included	Product and work breakdown structures should always be undertaken
	Creation of project plan	N	Realistic task durations were not able to be included due to the project end date being set before the project had been assessed or planned	Project end dates should not be set before the project has been assessed or initiated
	Creation of project plan	N	Contract population was not included in the project plan	A recognition of contract negotiation with external (existing & new) suppliers of one month should be included in all plans
		IN	recontract negotiation was not included in the project plan	where applicable.

Implementation			No contingency was built into the plan to allow for basic functionality testing of the application prior to load testing. I.e. the load testing environment preparation always backed straight into load testing deployment. Given that there was no absolute guarantees (although it should have been safe to assume) that the application would work on the load testing environment rather than the UAT environment, the load testing environment should have been prepared well in advance of load testing commencing. In the particular case of this project, that would not have been possible since DSL did not have enough resources during UAT to do this preparation work.	That no assumptions are made that a system will work in a new and non-tested environment. This does not mean that we cannot assume that Net Regulate will not work in the production environment after a version change since the production environment is well understood and well tested. However on new environments / architecture basic functionality testing should be performed on the new environment at least 20 working days prior to the environment being needed. That a tighter understanding of resourcing within the supplier organisation is understanding of resourcing within the supplier organisation such as DSL that plans are drawn up together. Additionally that resource absences are fully communicated to HPC.
	Documenting of decisions with external	1		Formal recording of decisions made in meetings with external
	suppliere	N	Only one external supplier meeting was formally minuted	suppliers, where key decision are agreed
			The professionalism of the usability experts greatly contributed.	שטאטוייז אווטיב הבי טבטאטוי מוב מעובבע.
		1	to the successful design of the system. Credible suppliere	That projects creating multiple html upor based served
		5	to the successful design of the system. Credible suppliers	mai projects creating multiple ntml user-based pages should
	Usability expertise	٢	gave the product credibility	employ usability experts
		1	A review of the design of the system was difficult to undertake	
			because a paper-based prototype was created rather than a	Budget for a full prototype should be included in a project of
	Usability prototyping	Ν	full prototype	this nature, this would also create a training system
	Usability testing	P	Testing that HPC staff observed was useful to fully understand the issues faced by users. Gave credibility to the suppliers findings.	That usability testing is carried out on projects creating multiple html user-based pages should be usability tested and if two rounds can be budgeted for this should be undertaken
		1	Using the usability experts to create the html meant that DSL	
	Parallel running of tasks	Р	were able to concentrate on the build of the application	
		1	Having a pack of screen shots was extremely useful during	
	Screen shots	Р	testing to validate results	
		1		On projects which require third parties and where the
		1	Having a three party tander presses for the upphility and	appointed risks are relevant three particle and where the
	Currelian and a second second	<b>_</b>	having a trive party tender process for the usability and	associated news are relevant three party tender processes
	Supplier engagement	٢	Inosting ensured the engagement of high-level suppliers	snouid always de undertaken.
		1	time lines further are accepted OB ware sizes in (	Outstanding ODs should be an autous with the facility of the CO
		1	timelines further, non-essential CHs were signed off and	Outstanding OHS should be an entry criteria for UAT and CHS
		l	implemented during UAT which further exacerbated this	should be appropriately prioritised according to the time frame
	Change control during UAT	N	problem	allowed for UAT
		1	Only a high level comms strategy was drawn up a detailed	
		1	communications plan to accompany implementation was	A full analysis of communications requirements should be
	Communications plan	Ν	missing	written assessing both internal and external stakeholders
			The delays in go-live meant that communications were not	~
		1	sufficient. This may have been covered by a more detailed	
		1	communications analysis / plan which should have been	Around go-live 'general' project meetings should still be held
		1	discussed during 'general' project meetings which were	to ensure that go-live is covered not just from a technology
	Communications plan	N	neglected towards the end of the project	nerspective
	Boll out communications		The communications around roll out have been confused	Position statements should be written for all projects
		1	The communications around for out have been collided	

	1		
			Clear definition of Comms roles on technology projects should be undertaken, plus departmental head involvement should
Communications department role	N	Communications department role was not clearly stipulated	be mandatory
-		Consideration of information available to registrants on	Impact of technology changes on existing services should be
Existing services communication	N	website was undertaken too late	undertaken at the time of requirements gathering
Training	Р	Training manual was comprehensive	
		<b>~</b> ·	Given the complexity of the changes made that more than one
Training	N	Training schedule allowed for one iteration	iteration of training should be allowed for
		Operational planning for systems launch was not considered	Consideration around operational roll out should be done
Operational planning around system launch	N	early enough	during requirements gathering
		Telephone queuing was considered at an early point during	
Telephone queuing system	Р	the project	
		Admin guide produced was not fit for purpose which caused	If possible support document should be demonstrated by
Handover to support	N	difficulties in UAT	providing suppliers
			A clear list of handover items should be created between
Definition of handover to support	N	Handover to support was not clearly defined	supplier and HPC
		Reading Room documentation outlining the transfer of the	If possible support document should be demonstrated by
Transfer to Rackspace of website	N	website from Star to Rackspace was flawed	providing suppliers
		It was useful to have a Reading Room employee attend on	If possible plan for support to be onsite for implementations of
Support around website transfer	Р	site	this nature (configuration tasks, complex tasks)
		Running parallel environments was extremely beneficial for	
		testing in this project as it ensured that testing could be done	Consideration as to whether this is appropriate in future
Parallel environments	Р	on the actual live server	projects of an infrastructure change nature should be made
			Consideration around delaying content freeze on website
		Delays in go-live meant that content freeze went on for longer	should be made in projects of this nature to ensure enough
Transfer of data from website versions	N	than planned	time is allocated for website issues
		Segmentation project negatively impacted online renewals i.e.	When projects are delayed impact from ongoing work should
Conflicts caused by different projects	N	reduced website testing times	be assessed.
		DNS transfer to go-live with the website went very smoothly	Propagation should be planned for at least two days prior to
DNO II	-	which meant that users could always see the correct content	the website transferring and dual running should be
DINS propagation	Р	On the website	undertaken when transferring websites
		renovale application whole structure peeded to be	
Mahaita agurag gantral	N	renewals application - whole structure needed to be	Cumpliars should be shallonged when over complicating tasks
Disk management	IN	overwritten rather than just uploading a single page	Suppliers should be challenged when over-complicating tasks
Risk management	D	Leased line provision was highlighted early on as a high risk	Ensure that communications tasks within technology projects
	P	Leased line provision although highlighted as a risk was not	מיב הוערוווערונכט מג מ הוגת טטפ נט נחפור המנטרפ
		sufficiently prioritised however this was due to contract	
		negotiation issues ancountered on the project at the same	That telecommunications tasks are given the highest priority
	N	timo	nacciocommunications tasks are given the highest phoney
Supplier management	1.4	Engagement with third parties during the early stages of the	possible to anow for forig read times
Supplier management		project was very beneficial however role specification was not	Bole specification for third party suppliers should be clearly
	P	clearly defined e.g. cost estimation	defined
Supplier management		Cost estimation was not included as a specific task for the	
Supplier management		suppliers which led to significant disparity between expected	If the project has a long definition process, cost estimation
	N	and quoted costs	milestones should be included in the project planning
Supplier selection	1.4		Ensure that where possible the subject matter expert involved
		Insistence on detailed technical specification during selection	in technology design should be included in supplier selection
	Р	was extremely beneficial	where possible
	17		

Suppler management         Delays were incurred during systems design due to related on one subject matter requires availability of subject is understood so that one subject matter requires availability.         Ensure that availability of subject is understood so that our expectations are immaged and planning can be controlled as much a possible           Suppler selection         P         employed         Ensure that availability of subject matter requires approaches to the project urans are imployed         Ensure that availability of subject matter requires approaches to the project urans were protracted and eventually unsuccessful. Acid to parallel un negotations with a real subject on the project urans were protracted and eventually unsuccessful. Acid to parallel un negotations with a real subject on subject matter were protracted and eventually unsuccessful. A call to parallel prosess the understand and yields to ensure that matter and the understand and yields to ensure that the protein track being understand and the understand and the understand and yields the understand and which for exceeded expectations and estimations. The protein and the subject and the and estimations. The protein and the subject and the and estimations. The protein and the subject and the application should be understand played back.           Technology implementation (f) applicitable)         Functional requirements gathering         N         Logging and playskoch					
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Functional requirements gathering       P       proved a useful benchmark       should be considered for projects of this nature         Functional requirements gathering       External business analyst was used to gather non-functional requirements. Good quality of requirements was produced       External business analysts for non functional requirements would be beneficial for projects of this size and would mitigate         Non functional requirements gathering       P       and this was to some extent reliant on subject matter expertise       irisk         Non functional requirements gathering       P       in the course of this project       Projects of this size and nature should always have non-functional requirements defined         Non functional requirements gathering       P       Non functional requirements were gathered relatively quickly				Requirements from similar organisations were gathered which	Benchmarking against other systems is very useful and
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Non functional requirements gathering       P       External business analyst was used to gather non-functional requirements was produced       External business analysts for non functional requirements would be beneficial for projects of this size and would mitigate         Non functional requirements gathering       P       and this was to some extent reliant on subject matter expertise       risk         Non functional requirements gathering       P       Non functional requirements were given sufficient importance       Projects of this size and nature should always have non-functional requirements were gathered relatively quickly         Non functional requirements gathering       P       Non functional requirements were gathered relatively quickly       Projects of this size and nature should always have non-functional requirements were gathered relatively quickly					
Non functional requirements gathering       P       requirements. Good quality of requirements was produced and this was to some extent reliant on subject matter expertise       would be beneficial for projects of this size and would mitigate         Non functional requirements gathering       P       Non functional requirements were given sufficient importance in the course of this project       Projects of this size and nature should always have non-functional requirements defined         Non functional requirements gathering       P       Non functional requirements were gathered relatively quickly       Projects of this size and nature should always have non-functional requirements defined				External business analyst was used to gather non-functional	External business analysts for non functional requirements
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Non functional requirements gathering         P         Non functional requirements were given sufficient importance         Projects of this size and nature should always have non-functional requirements defined           Non functional requirements gathering         P         Non functional requirements were gathered relatively guickly         Projects of this size and nature should always have non-functional requirements defined		Non functional requirements gathering	Р	and this was to some extent reliant on subject matter expertise	risk
Non functional requirements gathering     P     In the course of this project     Functional requirements defined       Non functional requirements gathering     P     Non functional requirements were gathered relatively guickly     Functional requirements defined		i ten reneatina requiremento gaziening		Non functional requirements were given sufficient importance	Projects of this size and nature should always have non-
Non functional requirements gathering P Non functional requirements were gathered relatively guickly		Non functional requirements gathering	P	in the course of this project	functional requirements defined
Non functional requirements gathering P Non functional requirements were gathered relatively guickly		i ten tenedonar roquiromonio gaziening			
		Non functional requirements gathering	Р	Non functional requirements were gathered relatively quickly	

		Co-ownership of systems design specification documentation	
		meant that all parties involved had buy-in and ownership of the	
		eventual product design. This led to collective delivery of the	Ensure that co-ownership of technology design is
Systems design	Р	product	implemented where possible
		Subject matter expert was employed to design technology	
Systems design	Р	infrastructure	
		Technical collaboration between third party suppliers was good	Ensure that joint meetings are held between suppliers,
Systems design	Р	which led to a stable and efficient technology environment	collaborative working expected and joint ownership is required
		Oracle design given was incorrect on two occasions. This led	Ensure that sufficient non-functional testing is undertaken to
Systems design	N	to unnecessary costs and time delays	validate technical solution
Systems deployment		Problems with firewall / load balancers were only discovered	
		after UAT since the application was not deployed to the new	That infrastructure changes are prioritised correctly i.e. that
		infrastructure directly after build. This was due to a lack of	they are likely to cause significant issues to the project,
	N	resources within DSL	therefore should be given a high priority
UAT deployment		UAT was entered into even though CRs were still outstanding.	
		Given the nature of the project and the amount of	
		development it required, the number of bugs anticipated was	
		too low which meant that both UAT and the bug fixes could not	That in a project of this nature that UAT is pushed back until
	N	be supported	all CRs are closed out
Load testing		Co-ordination of load testing was managed well - experts were	That in a project of this nature that load testing is conducted in
<b>C</b>		of the correct level and all assembled in a single room which	a single environment at HPC agreed premises and that this
	Р	facilitated issue solving	should be adequately budgeted
Load testing		Identification of expertise / experience was quickly identified	
3		and appropriate alternate suppliers were quickly and efficiently	To ensure that action is taken guickly once delivery is not
	Р	deployed	developing as anticipated
Deployment		Delays were incurred during go-live due to issues with re-do	
		logs. This could have been much more quickly resolved if	
	N	onsite support had been provided by DSL	Insist upon onsite support
Deployment			Ensure that payment and acceptance of product are not given
	N	Admin and DR guides were delivered extremely late	until all work packages are delivered
Go live		Go-no go meetings were utilised with the appropriate staff	Ensure that go-no go meetings are standard within a
	Р	members involved	technology release of this size
Go live		Testing on production was conducted before a full go live was	A period of production testing should always be incorporated
	Р	undertaken	into a technology release
Go live			•·
		Testing was conducted on a production registrant which	
	Р	should always be done on projects with a self service model	
Go live			
			A formal meeting with project team members should be held
		There was no stop point at the end of each day after go-live to	to enable them to step back from the issues to determine
	N	ensure that issues were being appropriately handled	appropriate solutions to issues on projects of this size
		<u> </u>	A minimum of eight weeks should always be allowed on all
			technology changes and a assessment of the time required
			for a particular project should be undertaken. (Taking into
		Testing period allowed was not sufficient, this was partially due	account Net Regulate's specific requirements around clocking
User Acceptance Testing period	N	to the pressures of time put on the project	forward)
1		Test environment processing was a lot slower than production	Performance issues should be investigated and remedied if
User Acceptance Testing environment	N	causing delays in testing	possible
User Acceptance Testing scripts	Р	Scripts sufficiently covered the functionality of the system	

				The possibility of resourcing the project with sufficient testing
			Scripts were not sufficiently owned by / scripted by the	nersonnel to write the scrints should be assessed at the
	Liser Acceptance Testing scripts	N	business	beginning of the project
			The skills sets of the UAT testers was appropriate to the	
			project as they were able to show the initiative to undertake	
	Liser Accentance testers	Р	thorough testing	That appropriate personnel are assigned to testing
		1	Salesforce was used to manage the UAT period, this was a	
			step in the right direction away from spreadsheets but did not	That investigation into an alternate management product
	User Acceptance management	Р	fully meet requirements	should be done
		-		If possible testers should be located in a specific are away
	User Acceptance location	N	Testers were required to remain in the BAU environment	from BAU
			Scripts were not written at the time of requirements definition	
			which meant that script writing was pressured and therefore	Resourcing should be considered to allow for scripts to be
	User Acceptance Testing scripts	N	less likely to be accurately	written at the time of requirements gathering
Budget management	Cost estimation			Ensure that contract negotiations are adequately estimated
0 0		N	Contract negotiation costs were not explicitly included	and explicitly included
	Budget management - including overspend			Close management allowed project board to push back on
		Р	No budget overspend was incurred	unnecessary expenditure
	Monitoring of spend		The use of a committed spend report was extremely useful in	
	5 1	Р	managing the budget and forecasting exceptions	Committed spend reports should be used on all major projects
Quality management	Quality review(s)			Formalised rather informal monitoring should be undertaken.
, ,	, , ,		No formalised sign off of work packages were undertaken,	Sign off according to pre established acceptance criteria
			which could have led to risk within the project. Despite the	should be done but must be weighed up against the impact on
		N	informality however, a quality product was produced	the project timeline
Time management	Plan execution		Exceptions to timings were reported and managed	Common sense approach to reporting should always be
-		Р	appropriately	undertaken unless formal tolerances are established
Issues management	Issues management			Issues management is correctly prioritised within the project
			Issues were managed well, logged, tracked and resolved in an	by the PM in order that project management role can be given
		Р	appropriate timeframe	adequate importance
Issues management	Issues management			Ensure that discussions between the project board and
				project manager to ensure that the appropriate level of issue
			Good working relationship between the project board and	escalation is established. This will allow the PM autonomy
			project management enabled issues to be resolved efficiently.	within the project to resolve issues and the PB to have
			This was due to the correct level of escalation of issues	enough information to make the correct decisions when
		Р	without formal tolerances being set	issues are escalated
Project team	Project team management		Communication between the project team and the project	The project manager should ensure that regular
management		Р	manager fostered a good working relationship	communications between the team are maintained
Stakeholder			Committee expectations were managed correctly which	
management	Stakeholder identification	Р	allowed them to understand the priority of quality over time	
Handover and				
closure	Handover of deliverables to production /		Regular project management / IT / DSL meetings have	Ensure that project meetings are continued following go-live to
	business as usual	Р	enabled the project to close down well	enable effective project closure and to close out issues