Visualisation of Real Time System Dynamics using Enhanced Monitoring
(VISOR)

[Public Version]

Project Progress Report
Jan 2014 – June 2014

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1-June-2014	1	James Yu - VISOR Project Manager, Transmission Innovation Lead, SPT		Draft 1
13-June-2014			Project Steering Board	Confidential Information highlighted

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Executive Summary

ScottishPower Transmission Ltd (SPTL), supported by other transmission licensees and the academic partner, made a full proposal submission for Visualisation of Real Time System Dynamics with Enhanced Monitoring (VISOR), under the Network Innovation Competition (NIC) mechanism in 2013, the first year of RIIO-T1 transmission price review period. Ofgem (the Office of Gas and Electricity Markets) approved the proposal and issued the Project Direction on the 19th of December 2013, which forms part of the electricity transmission license as per the Special Condition 3I.

This report covers the first six months of the project delivery (January - June 2014), and is the first Project Progress Report (PPR) according to the NIC Governance Document. It fulfils the Project Reporting obligation for SPTL as the funding licensee.

Project Highlights

The project delivery so far is in line with the original proposal regarding project programme, resources, budget, risk management, intellectual property rights (IPR) and knowledge sharing. The project has made significant achievements in:

- ✓ putting in place the enduring arrangement for the project, including the establishment of Project Delivery Team (PDT) and Project Steering Board (PSB);
- ✓ negotiating and confirming the collaboration agreement to enable the execution of the Project Direction
- ✓ progressing the procurement activities approved by the PSB and identified a preferable supplier

VISOR has also met one specific condition (9.5.1 in the Project Direction) outlined in the Successful Delivery Reward Criteria (SDRC) by making the Technical Specification (TS) available in February 2014 and confirmed Phasor Measurement Units (PMU) suppliers in March 2014.

Project Risks

The most significant risk during the reporting period was involvement and corresponding interfaces between each project partner. This risk was identified in the original proposal, and covers the potential inconsistent understanding of the project scope, level of commitment and the potential difference in the internal governances among partner organisations. This risk can be referenced in the collaboration agreement discussion where the project team had to employ dedicated legal resources to contribute to the drafting and negotiation of the collaboration agreement, as a mitigation measure stated in the original proposal. Having additional professional support helped to mitigate the risk of not meeting the project programme and scope. This risk was partly addressed thanks to the project governance structure where PSB provided overseeing and strong support. Written confirmations were received by 28-May that the VISOR collaboration agreement was formally accepted by all the project partners.

In the original VISOR proposal, recommendations were made to carry out public tender for certain elements to achieve value for money for customers. VISOR delivery followed this recommendation and confirmed a clear procurement strategy in the early stage of the project, which helped address

risks such as limited knowledge of suppliers, the quality of the Technical Specification (TS) and its impacts on supplier's engagement, as well as intellectual property (IPR).

In addition, there are risks in the interfaces between project partners and the same supplier, as this will involve different legal and commercial approaches by individual organisations. The details of Risk Management including Recruitment Risk and Procurement Risk can be found in a dedicated section on page 13.

Summary of Learning Outcomes

From the technical view point, the engagement with suppliers worldwide in the full tender process confirmed the effectiveness and accuracy of the original proposal. It also informed the Technical Specification (TS) regarding the data sampling frequency to capture the Sub-synchronous Oscillation (SSO) phenomenon at transmission level. This experience and key learning will be further captured and exchanged with other European utilities within ENTSO-E (European Transmission Network Operator) framework.

Regarding project management, the key learning is to ensure that all risks can be identified in the early stage with clear ownership and specific mitigation measures. The mitigation actions for these risks should be built into the project plan and tracked like any other project milestone.

VISOR will expect to see the project contract award and first deployment of SSO outstation devices on the transmission network in the next reporting period (July 2014-December 2014). The key risks will be the timescale of contract award, testing and deployment of the monitoring devices - both of which will impact the project programme and whether some elements in the SDRC can be met.

In the coming six months, VISOR will also continue with active stakeholders' engagement to maximise the benefits of knowledge sharing, and will attend or be involved in:

1. HubNet Smart Grids Symposium, September 2014, with academic stakeholders
2. Low Carbon Network Innovation Conference in Aberdeen in October 2014
3. Engagements with renewable developers
4. Engagement with European utilities
5. Engagement with EPRI (Electric Power Research Institute, USA)

Project Manager's Report

The project team received the formal approval from the Authority, and ScottishPower Transmission Ltd (SPTL) as the funding licensee, accepted the Project Direction in December 2013. This first project progress report covers January 2014 to June 2014, from which the period between January and April 2014 was termed the Interim Period in the full proposal submission to bridge the proposal phase and the actual delivery.

VISOR is on track regarding the project programme over the past six months. The most significant achievements during this reporting period include:

- ✓ putting in place the enduring arrangement for the project, including the establishment of Project Delivery Team (PDT) and Project Steering Board (PSB);
- ✓ negotiating and confirming the collaboration agreement to enable the execution of the Project Direction
- ✓ progressing the procurement activities approved by the PSB to ensure value for money and quality of the project supply-chain

Establishment of an Enduring Project Management Structure

The main project partners are SPT (Funding Licensee), SHE Transmission, NGET and The University of Manchester. Hence the first action was to establish the project team and enable its function.

Each project partner provided a dedicated Project Manager (PM) to ensure the successful delivery of the project and its objectives, and to minimise cost overruns or benefit shortfalls. Also, the SPT project manager would oversee the whole project delivery and act as the focal point with the Authority.

A Project Steering Board (PSB) will provide project governance, oversight, and business alignment for the integrity of the VISOR project and be responsible for driving and approving all strategic decisions. The PSB will be able to challenge, review and approve all outputs and recommendations from the Project Delivery Team (PDT). The PSB will also resolve all issues and conflicts that cannot be resolved by the PDT. The VISOR PM will be responsible to the PSB.

Upon the Project Direction acceptance, the Project benefited from the arrangement that the team who developed the proposal are now delivering the project. James Yu from SPT acted as the VISOR PM, support by Antonio Del Castillo (NGET) and Frank Clifton (SHE-Transmission). The establishment and function of the team served also as a mitigation measure to address resources risks which is detailed in the Risk Management Section.

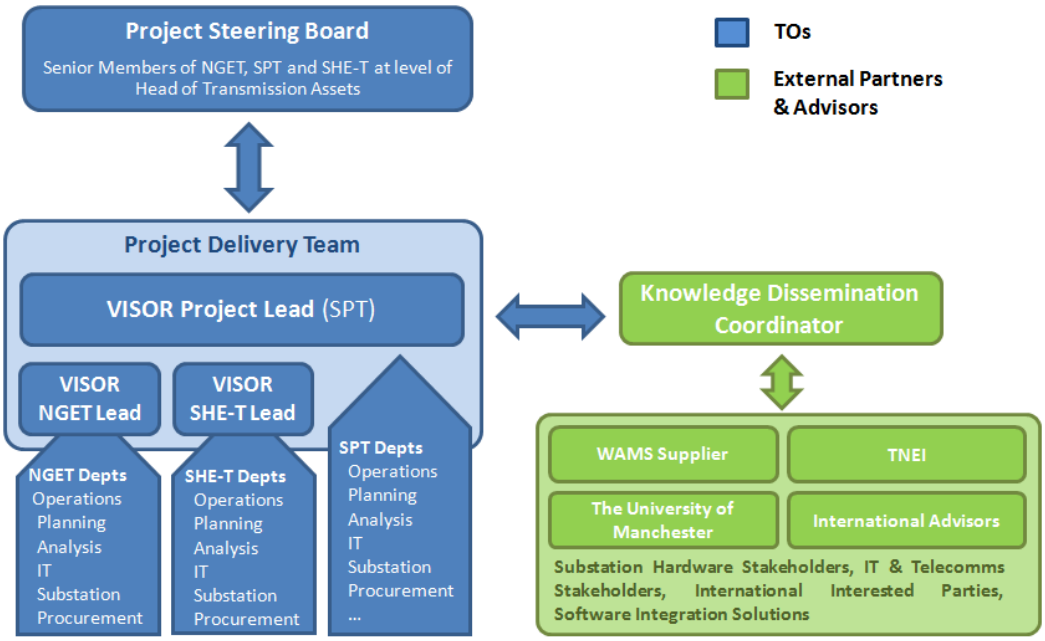


Figure 1 Project Delivery Structure

The first Project Delivery Team (PDT) meeting took place in Manchester in December 2013. The purpose of the meeting was to confirm the partnership, project scope and tasks allocated to each partner. Since February 2014, the PDT has a monthly meeting to report updates, exchange information, validate the latest risk registration and discuss any issues regarding project delivery. Meeting locations are rotated among partner organisations to enable wide engagement and easy access for all parties.

Recruitment efforts were made by individual partners to ensure appropriate resources were in place to support the project delivery. Among this, the following appointments were made within the delivery team over the reporting period:

1. Phil Ashton, National Grid (GBSO)
2. Chris Nendick, SHE Transmission
3. Peter Wall, The University of Manchester
4. SPT is presently recruiting for two vacancies associated with VISOR. The interview for one of the post will take place in the first week of July 2014.

From April 2014, the named personnel have joined the PDT and James Yu remains as the VISOR Project Manager on behalf of the funding licensee for the new PDT. By the end of May, a new project delivery team has been confirmed including:

- James Yu, Transmission Innovation Lead, ScottishPower Transmission [acting as the VISOR Project Manager, and the focal point with the Authority]
- Brian Palmer, National Grid (GBSO), supported by Phil Ashton
- Mark Osborne, National Grid (TO)
- Chris Nendick, SHE-Transmission
- Prof. Vladimir Terzija, supported by Peter Wall, the University of Manchester

Each of the representatives has been supported by their internal colleagues regarding procurement, legal, IT and project management.

The first PSB meeting took place on 13th March 2014 via teleconference. The PSB approved the procurement activities planned for VISOR and the Terms of Reference for the PSB. The current participants for the PSB include:

- George Spowart (chair) SPTL
  David Campbell SPT
- Nigel Williams NGET
  Ursula Bryan NGET
  Martin Bradley NGET
  Ray Zhang NGET (TO)
- Stewart Reid SHE Transmission
  Frank Clifton SHE Transmission

Before the end of this reporting period, a fully functional and enduring project delivery structure (including both PSB and PDT) has been put in place (refer to Figure 2).

Collaboration Agreement

The Project Direction issued to SPTL clearly stated that signed collaboration agreements between the funding licensee and the project partners should have been in place before access is granted to funding from the dedicated bank account.

The collaboration agreement discussion was formally initialised in February 2014. There is a TO/SO agreement to specify the duty of procurement, device deployment, liability, IPR, communication infrastructure requirement and etc. The University of Manchester signed a separate agreement due to its educational status and the work-packages being undertaken.

The TO/SO agreement mainly set out the project governance, the role of each transmission licensee in VISOR and the corresponding responsibilities. For example, the agreement made it clear that NGET and SPTL would share the VISOR procurement procedure while SHE-Transmission could gain access to the procurement outcome if they wish.

The partner collaboration agreements were reached on 28th of May to facilitate the fulfilment of the precedent funding condition. The lessons learned from this discussion and process will be provided in the **Learning Outcome** section (page 16).

Procurement Activities

A number of procurement options have been considered for this project especially due to the R & D nature of the work and challenging procurement cycle timeframes. These options were as follows:

1. **Single source:** One potential supplier has been consulted and engaged by SPT to develop the technical specification during the full proposal submission. All three TO's are familiar with this supplier who are deemed to have a high capability. However, the SPT proposal to Ofgem stipulates that this scope will be issued for competitive tender in order to

demonstrate value for money. That supplier understood this approach and developed the technical specification with SPT to facilitate this.

2. **Competitive Lotting Strategy:** The work-packages of VISOR can be further divided into two lots, 1) SSO outstation devices development, testing and deployment; 2) software development. There are some suppliers who are unable to offer both packages 1 & 2. This approach would potentially increase the amount of competition but leave the integration risk with the project if separate suppliers were successful in bidding for each of the packages. The resource to manage this integration risk is not available within the project and therefore, in order to ensure the supplier takes this responsibility, this option is not recommended. In addition, the output from the pre-qualification questionnaire (PQQ) process identified more competition for both packages than originally anticipated.

3. **Competitive Turnkey Strategy:** A sufficient number of qualified suppliers have now been identified to successfully complete a competitive process for both packages to be contracted as a whole with integration responsibility being the suppliers. In some cases, hardware suppliers have teamed with software developers and vice versa. This strategy should demonstrate value whilst satisfying any technical concerns or risks by the adoption of appropriate Contract Award Criteria that suit R & D innovative projects.

The PDT decided to go for Option 3 named above to ensure that the risks associated with interface between software and hardware can be mitigated. The PSB approved this approach in March 2014.

Installation will be quoted as an option to allow TO's flexibility to use their own or preferred third party certified staff. If installation is not performed by the supplier, they will nevertheless be required to oversee installation and commissioning, demonstrate performance and provide appropriate support during the term of the project.

VISOR has also adopted a flexible approach to facilitate competition regarding IPR arrangement. It was made clear in the Invitation to Tender (ITT) document that VISOR would comply with the Ofgem default IPR arrangement. Therefore, the option of receiving NIC funding to develop related foreground IPR or the option of independently developing and owning the IPR was open to the potential suppliers.

The completed procurement activities over the past months are shown in Table 1.

Technical evaluation of the returned ITT documents has since been completed and the recommendation was approved by the PDT on 27th of May. The procurement activities are expected to be concluded including identification of a preferred supplier by the end of June 2014.

Knowledge Sharing and Stakeholder Engagement

VISOR Team has a strong commitment in knowledge sharing and effective stakeholder engagement. This is to ensure that VISOR can adopt the latest technology advancements, share the lessons learned by/with other stakeholders, facilitate new entry to the market and disseminate the key learning captured along the VISOR delivery.

The following are meeting/events that the project team have organised or been part of during the reporting period:

- Engagement of Supplier Chain, including Small-Medium Enterprises as part of the PQQ and ITT process, January to May 2014
- Meeting and teleconference with transmission operators in Europe (Energinet, ELSE), March 2014 to exchange information on Wide-Area Monitoring Systems (WAMS)
- Interactions and engagement with OFTO and Offshore Renewable Developers – 2nd April, London (Carbon Trust Conference)
- Hub Net Engagement, Manchester, 8-10th April
- Transmission Stakeholder Engagement, Cumbernauld, Scotland, 8th May
- Transmission Innovation Coordination Workgroup, Manchester, 3rd June
- ENTSO-E Academy Meeting, Edinburgh, 11-12 June (attended by Transmission System Operators from 20 European countries. Details will be included in the next Project Progress Report)

Pre Tender Activity

Priority	Activity	% complete	Owner	10-Jan	17-Jan	24-Jan	31-Jan	07-Feb	14-Feb	21-Feb	28-Feb	07-Mar	14-Mar	21-Mar	28-Mar	04-Apr
1	Confirm Procurement route	100%	GW/JY													
2	Prepare RFI/PQQ & recipient list	100%	GW													
3	Issue RFI/PQQ	100%	GW													
4	Draft technical Specs	100%	JY													
5	Draft Scope	100%	JY													
6	Agree scope and tech spec	100%	JY													
7	Review PQQ responses	100%	GW/JY													
8	Agree bid list	100%	ALL													
9	Agree Award Criteria (incl. Tech scoring)	100%	ALL													
10	Agree & review t's & c's	100%	MG													
11	Draft Procurement Strategy	100%	GW													
12	Finalise & approve Proc Strategy	100%	ALL										PSB			
13	Prepare ITT's	100%	GW/JY													
14	Raise Requisition (internal to SPT)	100%	CB													
15	Issue ITT's	100%	GW													
16	Tender Responses	100%	GW/JY													

Table 1 Completed Procurement Activities

JY James Yu (SPT, VISOR Project Manager)
GW Graham Woodhouse (SPT Procurement)
MG Mary Gilmore (SPT, Legal)
CB Cheryl Blenkinsop (SPT, Project Management Office)

Outlook to the Next Reporting Period

It is envisaged that a preferred supplier will have been identified by the end of June 2014. This will accelerate the project delivery and the following project milestones are associated with the coming reporting period:

1. Sub-Synchronous Oscillation (SSO) Detection outstation device factory test
2. Sub-Synchronous Oscillation (SSO) detection outstation device testing report

These are both linked to one SDRC:

9.1.1. SSO Device qualification report (WP 4C, Dec 2014)

If the appointment of preferred supplier is delayed, there will be a knock-on effect on the future project programme and the timescale of the project delivery, and hence have an impact on meeting the SDRC. Therefore this has been identified as the key risk for the next reporting period.

The PDT appointed a dedicated Procurement Lead to address this risk, and this Procurement Lead is supported by the PM and legal resources to ensure that every endeavour is taken to conclude the tendering process in an efficient and timely manner.

In addition, the next reporting period will also see the delivery of another element of the SDRC:

9.6.1. Establish an online portal and keep up to date throughout project (WP 5.2, Sept 2014)

The University of Manchester (UoM) is to take on this work-package with support from the project partners.

This period will see further engagement activities with stakeholders and knowledge sharing, namely:

- ENTSO-E WAMS Workshop, Edinburgh, 11-12 June
- Low Carbon Network Innovation Conference, Aberdeen, October

Consistency with full submission

Six months into the project delivery, VISOR has been consistent with the original full submission with regards to resources allocation, project management and project programme.

The project management structure is extremely important for VISOR. In line with the original submission, an interim project team took on the responsibility to put in place the enduring management structure for VISOR, including recruitment and appointment of PDT and PSB. This was detailed in the Project Manager Report above.

In accordance with the aim to deliver a cost-effective solution, the following components will be publicly tendered, namely:

- Sub Synchronous Oscillation Detection Substation Hardware (WP4A)
- WAMS Platform & Application Demonstration, including:
    - WP1: Enhanced System Oscillation Monitoring
    - WP2.1: Line Parameter Estimation & 2.4 Generator Model Validation
    - WP3.2-3.4: Improvement of Initial Conditions, Improved Visualisation of Stability Limits, and Trial of Area Angle Measurement Reliability
- The following will be undertaken by the academic partner:
    - WP2.2: Oscillation Analysis Validation & WP2.3: Transient Stability Simulations
    - WP3.1 Understanding Uncertainty
    - WP4B.1.3 & 2.1: Development & Application of Optimal Monitoring Placement Methodologies
    - WP4C: Validation & Testing

Following this proposal, a full ITT procurement exercise has been undertaken. The details of this activity can be seen from the Project Manager's report above and the Risk Management section below.

Dedicated legal resources and procurement resources have been employed to address the resources constraint, particularly during the interim period.

These consistencies demonstrate the level of detail of the original submission, appropriate mitigation measures and set a solid foundation for the future delivery.

Risk Management (Confidential)

In the case of VISOR, the complicated technical nature and multiple interfaces between TO/SO, project partners and suppliers present as the most significant challenges. The VISOR Project Delivery Team has taken a proactive approach of reviewing the risk register regularly (on the monthly PDT meeting), allocating clear ownership of each risk, and putting in place appropriate mitigation measures. In addition, there is a mechanism within the project management team to highlight and act on any new risks in a timely and efficient manner.

For Project Delivery, involvement and corresponding interfaces between each project partner and suppliers are critical to the success of the project. Dedicated project managers have been appointed within each organisation to coordinate the project delivery resources. The risk should also take into account the interfaces and governance within each organisation.

One way of capturing the risks is to group them in the different categories. The following details the key risks identified and addressed in the past six months.

Recruitment Risk

The original full proposal highlighted the resources risk and proposed an interim team as an effective mitigation measure. The interim period ran from Jan 2014 to April 2014 to account for timescales to recruit dedicated resources. The team comprised:

- Antonio Del Castillo, Business Development Manager, National Grid Electricity Transmission Ltd
- Frank Clifton, Project Development Manager, Scottish Hydro Electric Transmission
- James Yu, Transmission Innovation Lead, ScottishPower Transmission

The principal functions of the interim project delivery team include:

1. Co-ordinate and allocate internal resources to ensure sufficient support to the Project, including:
   1.1. Outage co-ordinating and detailed equipment installation plan;
   1.2. Internal project delivery resources and ownership

2. Co-ordinate the activities among TOs and SO from the Project level, namely:
   2.1. Legal documents draft and approval (including the R&D Collaboration Agreement, and the Agreement with the Authority);
   2.2. Tendering Specification review, Tender Documents Issue and Evaluation;
   2.3. Recommendation and confirm of the Project Steering Group;
   2.4. Recruitment and appointment of Project Delivery Team

Each person named above is being supported by resources from Project Management, Procurement, Legal, Transmission Operation, IT and other business sections.

A complete team chart can be found within the Project Manager's Report.

Procurement Risk

The other two main risk elements identified within the project delivery, both of which would be linked with procurement, are the Technical Specification document and Software Development. The Technical Specification (TS) will be a comprehensive document to set out the existing network (and related infrastructure) conditions (across different TOs), and the expectations on equipment to be

deployed. One important aspect of the TS is to facilitate market-entry for innovation suppliers. As such, it is important to ensure the TS is not exclusive and can encourage interest from existing/new PMU/WAMS/State Estimator technology suppliers. With this in mind, a clear specification will also help to minimise the risk of delayed software development. The risk of delayed software deployment is also mitigated by active industrial engagement which ensures that suppliers with established track records are used.

Active industrial engagements had been carried out in 2013 to inform the full proposal submission and to ensure that the technical specifications are innovative, fit for purpose and achievable.

To further address these risks associated with project development, a clear procurement strategy was set out at the PDT, and approved at PSB level to ensure that good tendering practices are followed, even though that the nature of VISOR means it could be subject to R&D procurement rules. Procurement activities were led by SP Transmission, and supported by NGET. The procurement strategy paper can be found in Appendix 1.

Achieving competition might be a challenge and therefore every possible effort has been made through expression of interest, PQQ (Pre-Qualification Question) and selection for tender to be sure that we have captured all possible suppliers who may be capable of delivering such a project. This included:

- Consultation with NGET and SHE Transmission to determine possible candidates.
- Inclusion of suppliers who have had an involvement with Visor during the project definition process
- Consultation with technical experts who are also in the process of supporting a tender for similar monitoring and detection equipment for Series Compensation (although without the same IT interface)

This resulted in the call for expression of interest to 23 suppliers of which 4 declined and 5 failed to respond.

ITEO (Technical Evaluation) has been approved at the PDT in May, and commercial discussions are currently in the final stage. The Procurement Recommendation in due course will document all the above and make a case for award by the end of June.

The PDT has a responsibility to review and update the Risk Register regularly. The latest Project Risk Register can be found in Appendix 2.

Successful Delivery Reward Criteria (SDRC)

The Successful Delivery Reward Criteria set out in the Project Direction links with the Project Milestone and the identified targets directly. This SDRC can be used to check the progress of the project delivery and position the progress against the original proposal.

The first element of SDRC for VISOR, based on the target dates, is

9.5.1. System specification and PMU supplier contracts awarded (April, 2014)

This criteria is used to measure whether VISOR can establish the supporting infrastructure in time to baseline the network performance. The system specification is part of the Technical Specifications (TS) for the tendering exercise. The PMU (Phasor Measurement Unit) is the outstation device to capture transmission network data which will be the basis of real time system analysis.

This has been achieved in that the ITT document was prepared in February 2014 and issued externally in March and each TO confirmed their PMU suppliers by the PDT meeting in March.

It is envisaged that a preferred supplier will have been identified before the end of June 2014. This will accelerate the project delivery and the following project milestones are associated with the coming reporting period:

1. SSO Detection outstation device factory test
2. SSO detection outstation device testing report

These are both linked to one SDRC:

9.1.1. SSO Device qualification report (WP 4C, Dec 2014)

If the appointment of preferred supplier is delayed, there will be a knock-on effect on the future project programme and the timescale of the project delivery, and hence have an impact on meeting the SDRC. Therefore this has been identified as the key risk for the next reporting period.

The PDT appointed a dedicated Procurement Lead to address this risk, and this Procurement Lead is supported by PM and legal resources to ensure that every endeavour is taken to conclude the tendering process in an efficient and timely manner.

In addition, the next reporting period will also see the delivery of another element in the SDRC:

9.6.1. Establish an online portal and keep up to date throughout project (WP 5.2, Sep 2014)

An appropriate supplier will be identified to take on this work-package with support from the project partners.

Learning Outcome

Following the Authority formal approval in December 2013, VISOR made good progresses regarding project partner collaboration agreement, project management and governance establishment, procurement and knowledge sharing. There are challenges and risks (as detailed in the section above and the Risk Register in Appendix 2) along the development, and lessons are derived from every aspect.

Collaboration Agreement

VISOR identified the project partners in the full proposal development based on the technical nature and the integrated transmission network. This has also been confirmed as part of the project approval. The project partners are:

- SPTL (Funding Licensee)
- NGET (as both the TO and GBSO)
- SHE-Transmission (TO)
- The University of Manchester

VISOR project was designed to be a collaborative proposal among the transmission licensees to maximise the benefits of network innovation. Effective communications had taken place with NGET and SHE-Transmission during the proposal stage, and a letter of support was received from each partner during the proposal submission, confirming their resource commitments for the project.

It is evident that consistent commitment should have been secured from partners on behalf of their Legal, Procurement and Engineering departments. Fortunately, the project programme and the original proposal captured this risk and had built in two months as contingency. External legal resources were deployed to mitigate the risk and enabled reach the agreement before the end of May.

Procurement

The innovative nature of VISOR introduces some risks and uncertainties in procurement. The project followed good practices of a full tendering process and included information collected from the wide engagement during the proposal development stage.

As a collaborative project, the procurement activities were coordinated by ScottishPower and supported by partners. Given that governance in each organisation is different, this impacted the procurement exercise timescales i.e. stretched the project programme to close to its limit. However, the project benefited significantly from engaging with the supplier chain, raising the awareness of the project, increasing competition (hence value for money for the customers), and adopting latest technology development.

	Activities	Lessons Learned
Project Management	Collaboration Agreement	Dedicated legal resources, consistent information at different levels within each project partner
	Project Recruitment	Early sign-off, knowledge transfer during staff changeover
	Project Programme	Detail the risks, Update the team regularly (at least on monthly basis) to keep everyone informed
	Risk Register	Review regularly (at least on monthly basis) clear ownership, specific mitigation measures
Procurement	Strategy	Sign off on the clear strategy as early as possible
	Technical Specifications (TS)	Ensure wide market engagement to inform the TS
	Timescale	Extra weeks need to be built in to accommodate the internal governance
	Resources	Dedicated leader, with active support from partners

Table 2 List of Key Learnings over the reporting period

Business Case Update

N/A

Bank Account

In line with Section 8 of the NIC Governance Document, a dedicated bank account was made available by SPTL to act as the Project Bank Account. Upon receipt of Funding Direction from the Authority, NGET (as the GBSO) will make equal monthly transfers, for the entirety of the Regulatory Year commencing 1 April 2014 such that the total amount transferred over the Regulatory Year commencing 1 April 2014 equals the net amount set out in Table 2 in the Funding Direction. The enclosed bank statement confirms the compliance with this requirement.

As the Project Collaboration agreement was confirmed at the end of May 2014, there is no funding withdrawal from the Project Bank Account as yet in the reporting period.

The official bank statement can be seen at: Appendix 3

Intellectual Property Rights (IPR) Confidential

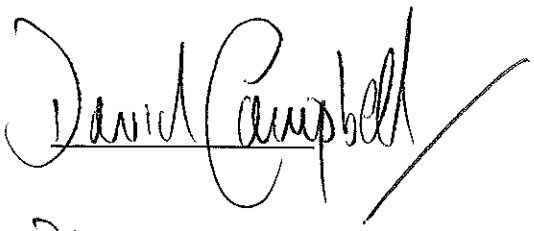
Knowledge transfer is one of the key aims of the NIC. The benefits of a project are maximised by the ability of other Network Licensees to learn from the project. In recognition of this, VISOR complies with the Ofgem default position regarding the IPR ownership. It is also part of the strategy (and made clear in the supplier's agreement) that the supplier can only own the IPR which they independently create.

Other

N/A

Accuracy Assurance Statement

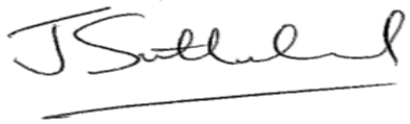
I therefore confirm that processes in place and steps taken to prepare the PPR are sufficiently robust and that the information provided is accurate and complete.

Signature: 

Name (Print): DAVID CAMPBELL

Title: FUTURE NETWORKS MANAGER

Date: 18th JUNE 2014.

Signature: 

Name (Print): Jim Sutherland

Title: Engineering Director

Date: 18-June-2014

Appendix 1 Procurement Strategy (Confidential)

Appendix 2 Project Risk Register (Confidential)

Appendix 3 Bank Account Statement (Confidential)