

## **RAPID standard gate-one draft decision for the River Severn to River Thames Transfer, September 2021**

### **Evidence of efficient expenditure**

#### **1 Introduction**

- 1.1 This is a joint response prepared by and on behalf of United Utilities, Severn Trent Water and Thames Water to the RAPID standard gate-one draft decision for the River Severn to River Thames Transfer SRO, September 2021. This response relates to providing further evidence of efficient spend in relation to the two workstreams: Tripartite company activities (Tripartite) and Programme Management and delivery (Programme Management, PM).
- 1.2 The STT partner companies acknowledge that RAPID have not at this stage made any judgement on the STT Gate 1 expenditure against the Tripartite and Programme Management workstreams. It would not be tenable to deliver the gated process without these workstreams and we are grateful for the opportunity to provide further additional detail to RAPID.
- 1.3 The workstream activities are solely in respect of specific STT SRO activities. Costs for other SRO activities and other company activity, including regional and WRMP24 planning, are not included in expenditure for STT Gate 1 activities.
- 1.4 The Gate 1 expenditure has been subject to both internal and external third-party assurance which has verified the efficient and relevant expenditure of STT Gate 1 activities. This has separately been reviewed by the companies in support of Board approval for the Gate 1 submission.
- 1.5 RAPID's draft decision recognised the complexity of the STT solution, requiring a notable intensity of both project management and company input. Further examples on how the nature of STT has specifically influenced the Tripartite and PM workstreams are provided in Appendix A
- 1.6 Acknowledging this complexity, the associated increased level of effort and to be transparent in our reporting to RAPID, the company tripartite activities were provided as a separate cost item at Gate 1.
- 1.7 The Gate 1 reported expenditure was based on actual costs through to the end of March 2021 and forecast costs through to the end of Gate 1. Reconciliation of all STT Gate 1 expenditure has seen an overall reduction the Gate 1 costs as a whole, including the two workstreams as below.

Activity	Reported at Gate 1	Final Reconciled value	Comments
Total Gate 1 expenditure	£4,494k	£4,014k	Reductions on actual cost across numerous workstreams and unrealised risk provision, totalling a 12.5% reduction in costs for Gate 1
Tripartite company activities	£431k	£248k	£183k reduction: reduced legal actuals & new company resource deployment cost deferred.
Programme Management	£400k	£372k	£28k reduction in actuals for Programme Manager.
All values are at 17/18 price base			

**Table 1: High-level breakdown of reconciled expenditure**

- 1.8 The reconciliation of Gate 1 expenditure has resulted in the total for programme management and Tripartite workstreams reducing by 25% from £831k to £620k.
- 1.9 We understand this reduction in SRO outturn costs is common to other SROs and is not unique to STT.

## 2 Further details of Tripartite Company Activities

- 2.1 Given the joint nature of the scheme between United Utilities, Severn Trent Water and Thames Water, a small programme team (Programme Management Board, PMB) was formed with members of each company to work collaboratively across the key workstreams and to drive governance and decision making. The PMB inputs, plus legal, form the Tripartite workstream.
- 2.2 The significance, complexity and risk profile of the STT scheme demands that each company has senior representation on the governance and decision making for the scheme. The deployment of senior staff by all three companies provides governance efficiency, with accountable senior staff able to make executive decisions without protracted in-company sign-off processes.
- 2.3 For Gate 1, each company committed part-time resources typically comprising an SRO lead and SRO strategy manger, with technical support. The level of input for Gate 1 equates to approximately half a fulltime equivalent (FTE) input for a senior member of staff per company.
- 2.4 The costs within the Gate 1 Tripartite company activities are solely in respect of specific STT SRO activities. Costs for other SRO activities and other company activity including regional and WRMP24 planning are not included in the reported Gate 1 expenditure. This has been verified by third line assurance and confirmed in our board statements.
- 2.5 To streamline delivery and interfaces with the programme manager during the start-up phase of the project, company representatives took oversight for specific workstreams. Annex B, figure 1 illustrates this and where company leads were assigned to workstreams as 'sponsors'.
- 2.6 The PMB mobilised at the very start of Gate 1 and was active over the full 15-month gated period, Refer to annex A 'Scheme complexity' for further details on why an early start was required.

2.7 Key activities and tasks included in Tripartite Company Activities are summarised as follows:

Activity	Principal tasks	Estimated level of effort % split
<b>Mobilisation*</b>	<ul style="list-style-type: none"> <li>• Setting-up inter-company MoU and procurement agreements, including 3-company legal interfaces</li> <li>• Procuring the Programme Manager (PM)</li> <li>• Initial meetings to agree ways of working, and common targets</li> <li>• Workstream sponsors – representative from one company working with PM on specific workstream activity. This fell away after ~ first months as workstream matured. (Exception for assurance and stakeholder)</li> </ul>	10%
<b>Standing meetings /calls</b>	<ul style="list-style-type: none"> <li>• Weekly co-ordination meeting (chaired by PM with three company representation)</li> <li>• Programme Management Board – monthly formal progress review and governance</li> <li>• Programme Steering Group - attendance with senior board members (typically every 6 months)</li> <li>• Review and sign-off of STT quarterly RAPID report and Company representation at RAPID QLM</li> <li>• Attendance and inputs into weekly ACWG**</li> <li>• Weekly / fortnightly 1-2-1 catchups with STT PM</li> <li>• STT Checkpoint meetings with RAPID</li> </ul>	10%
<b>Commercial and programme oversight</b>	<ul style="list-style-type: none"> <li>• Reviewing and approving proposals and procurements for Gate 1 expenditure.</li> <li>• STT budgetary review, challenge and approval</li> <li>• Developing principles for commercial arrangements for Gate 2 and beyond Gate 2.</li> <li>• At least Quarterly company cost reconciliation (more frequent nearer to Gate 1 reporting and close)</li> </ul>	10%
<b>Technical oversight</b>	<ul style="list-style-type: none"> <li>• Technical working group – monthly review of technical issues with selected PMB attendance</li> <li>• Numerous specific technical, water resources, commercial, planning consents, stakeholder, assurance and other workstream meetings where either an appreciation or direct input into the technical direction of scheme is required.</li> <li>• WRSE template completion (Oct20, Mar 21, Post Mar21 updates) – significant input from companies as this covered the <b>STT system</b>. Particular focus with UU and STW PMB members on provision of prices**. Review, governance and sign-off required by all.</li> <li>• Reviews of interim and final processes, reports, technical, commercial and procurement documentation.</li> <li>• Supporting interfaces with source and downstream SROs**</li> </ul>	30%

	<ul style="list-style-type: none"> <li>• Reviews of technical supporting reports and Gate 1 report including participation in 3-stage check-point process (off-line review and workshops x 3)</li> <li>• Taking Gate 1 report and appendices (including redactions) through company boards and governance streams</li> <li>• Sharing and taking best practice across SROs**</li> </ul>	
<b>Stakeholder</b>	<ul style="list-style-type: none"> <li>• Generally different PMB members represented with different forums and stakeholders. (e.g. Welsh government UU and STW, GARD and CCT covered by TW etc).</li> </ul>	10%
<b>Cross company / SRO support</b>	<ul style="list-style-type: none"> <li>• SRO representation at ACWG, RAPID**</li> <li>• Leadership and participation in RAPID 'task and finish' groups**</li> <li>• Ad hoc STT presentations, meetings and call to Ofwat, RAPID and others</li> </ul>	10%
<b>In-Company activities</b>	<ul style="list-style-type: none"> <li>• Internal company SRO presentations and reporting (varies typically monthly) **</li> <li>• Committee, exec and board level governance of STT deliverables – papers, pre-briefings, presentations and actions arising – for mobilisation, regional and gate submissions,</li> <li>• Managing queries and maintaining buy-in of other company functions (e.g. legal, regulatory, procurement, senior management) to STT activities and strategies and future approaches.</li> <li>• Source in-house staff and subject matter specialist support where required (e.g. for cross company working and steering groups and reviews)</li> </ul>	20%
<p>* the costs of any mobilisation activities that preceded the April 2020 Gate 1 start are excluded from the Gate 1 expenditure, with costs met by the companies</p> <p>** denotes tasks where sometimes representing multiple SROs that a company is participating with, but activity includes a component attributable to STT.</p>		

**Table 2: High-level breakdown of Tripartite activities.**

2.8 It should be noted Tripartite company activities specifically excludes the following activities that have not been charged to the SRO

- Any activities not specific to the STT SRO.
- Activities undertaken by the parties prior to the start of the Gate 1 activities (i.e. prior to April 2020)
- Company WRMP24 planning and reporting, and participation with regional planning process

### 3 Programme Management

3.1 Given the complexity, scheme maturity and scale of the project, the companies took the decision to competitively procure a senior full-time programme manager for the project who was independent from any of the three companies.

- 3.2 A senior experienced PM was required who had the necessary skills and competences to manage a complex scheme and work across and with three clients (two 'sellers' and one 'buyer'). Given the nature of the scheme, with three separate partners this was considered preferable to employing an in-house PM from within one of the companies.
- 3.3 The position was appointed following a process concerning all three companies' frameworks, with the successful candidate appointed in January 2020 and mobilised ahead of the start of Gate 1<sup>1</sup>.
- 3.4 The programme manager started full-time at the start of Gate 1 (see annex A, early start), working with the partners to agree processes and ways of working, establish budgets and an overall programme. The organisation chart in Annex B illustrates at high-level the workstreams and project setup required.
- 3.5 Additional part-time in-company project management support was provided to the PM principally supporting mobilisation, commercial and planning (timeline) activities and some notes of meetings. This represented approximately 30% of the overall level of effort.
- 3.6 The provision of this support enabled the PM to undertake other non-programme management activities (refer to Table 3).
- 3.7 Key activities and tasks included in the Programme Management and delivery activities are summarised as follows:

Activity	Principal tasks	Level of effort % split
<b>Mobilisation</b>	<ul style="list-style-type: none"> <li>• Establishing processes and procedures, lines of responsibility and communication and ways of working and governance</li> <li>• forming proposed gate delivery model using a combination of company in-house and external consultants</li> </ul>	10%
<b>Programme Management and programme support activities</b>	<ul style="list-style-type: none"> <li>• Producing, maintaining and monitoring Scope, Work Breakdown Structure, programme (timeline), procurement tracker, forecast, and risk register.</li> <li>• reporting and meeting processes</li> <li>• running Gate 1 cost reconciliation process between companies with set-up meetings, quarterly reviews and Gate 1 close out.</li> <li>• engage with NAU, EA, NRW, NE and other regarding external charges to the project</li> <li>• prepare, chairing and minuting – weekly call, Programme Management Board (PMB), Programme Steering Group (PSG),</li> <li>• RAPID quarterly report preparation (plus attendance at selected QLM meetings where invited or presenting for specific issues concerning STT)</li> <li>• checkpoint meetings with RAPID – preparation, presentations and notes</li> <li>• team management, workstream and overall programme delivery.</li> <li>• weekly meeting with environmental and engineering leads and regular progress and commercial reviews for other workstreams</li> </ul>	35%
<b>Commercial and procurement activities</b>	<ul style="list-style-type: none"> <li>• Managing procurement process,</li> </ul>	15%

<sup>1</sup> All costs incurred prior to the start of the Gate 1 period were incurred by the companies and not included in the Gate 1 expenditure. The selected PM offered broad technical and management experience within the UK water industry, as well as major UK water sector programme experience including direct DCO and regulated water sector PFI experience, and DPC process knowledge.

	<ul style="list-style-type: none"> <li>initially ad hoc and then weekly procurement for critical procurements with three company procurement leads.</li> <li>answering tender queries and contract award meetings</li> </ul>	
<b>Technical</b> (Engineering, Water Resources, Environmental, System)	<ul style="list-style-type: none"> <li>Setting-up river losses programme including procurements, environmental regulator briefings, daily 'go-no-go' meetings over Summer 2020 and managing post-trial analysis</li> <li>Writing and review of technical scopes of work for procurement of all workstream activities. Including preparing scopes of work for Gate 1, 'Gate1 for Gate 2' activities and Gate 2 critical procurement activities (briefs and tender documents) ahead of the start of Gate 2.</li> <li>Writing selected Gate 1 report chapters and associated supporting documents and appendices.</li> <li>Review and assurance of Gate 1 technical deliverables.</li> <li>Chair and attending meetings and dealing with technical issues and interfaces</li> <li>Regional planning (WRSE/WRW) interface and co-ordination</li> <li>Leading the work with the EA and NRW throughout to secure a 'put and take' agreement in principle</li> </ul>	30%
<b>Other activities</b>	<ul style="list-style-type: none"> <li>Stakeholder engagement and presentations - GARD, CCT, Welsh Government, NAU (EA, NRW, NE), DWI, RSWG, RAPID, Ofwat, WRSE webinars,</li> <li>Assurance, procurement, commercial and planning consents strategy and implementation and review of outputs</li> <li>Supporting Legal agreements and reviews</li> <li>Share best practice across SROs including regular PM meetings and feeding learnings into STT.</li> </ul>	10%

**Table 3: High-level breakdown of activities undertaken by the Programme Manager for Gate 1.**

- 3.8 It should be noted that some descriptions may appear in both the Tripartite and Programme Management activities such as various weekly and monthly meetings, and RAPID quarterly reporting. Whilst the descriptions are similar the activities and roles of the companies verses the Programme Manager are different.
- 3.9 For example the Programme Manager was responsible for meeting preparation, producing and collating presentation material, agreeing and sending out the agenda, chairing the meetings (e.g. weekly catch-up, PMB, PSG, monthly technical review, stakeholder meetings, RAPID checkpoints, etc) and producing notes. Whereas the PMB members input was through pre-meeting (where appropriate) with the PM, provision of specific information to the PM ahead of the meeting and attendance, participation, direction and governance at the meeting, plus follow-up actions. Similarly, for the RAPID quarterly reporting cycle the Programme Manager would update the risk register and collate the report, with the companies reviewing and approving this ahead of submission and attendance at the QLM.

- 3.10 As illustrated in the table above within the Programme Management workstream there are significant technical and other inputs included<sup>2</sup>. The costs for these other non-programme management activities could have been allocated to other workstreams.
- 3.11 If the costs of other non-programme management activities were reallocated to other appropriate technical workstreams this would reduce the reported programme management workstream expenditure. This would then present only the actual programme management effort within the Programme Management Workstream. If this cost reallocation of technical activities of the programme manager costs were done, whilst there would be no change to the overall costs, the Programme Management activities for Gate 1 would represent approximately 7 %<sup>3</sup> of the total (reconciled) expenditure.

## Conclusion

- 3.12 The sections above provide further details of the Tripartite and Project Management activities.
- 3.13 The reconciliation of Gate 1 expenditure has resulted in the total for programme management and tripartite workstreams reducing by 25% from £831k to £620k.
- 3.14 Expenditure by the companies on mobilisation and other activities that preceded the April 2020 Gate 1 start are excluded from the Gate 1 expenditure, with these costs met by the companies.
- 3.15 Each company typically committed part-time resources comprising an SRO lead and SRO strategy manager, with technical support. The level of input for Gate 1 equates to approximately half a full time equivalent (FTE) input for a senior member of staff per company.
- 3.16 Given the complexity, scheme maturity and scale of the project, the companies took the decision to competitively procure a senior, full-time programme manager for the project who was independent from any of the three companies. If other non-programme management activities were reallocated to other technical workstreams and removed from the reporting of the programme management workstream, the actual programme management level of effort for Gate 1 is approximately 7 % of the total cost for Gate 1.
- 3.17 We believe the activities and level of effort undertaken on Tripartite and Programme Management activities are commensurate with the requirements of delivering the STT scheme at Gate 1. As the project moves into Gate 2 the partners are employing a similar arrangement of Tripartite activity and continuation of a full-time programme manager with support.

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<sup>2</sup> It should be noted the PM technical and other inputs were contemplated as part the Programme Manager's appointment. The Inputs were efficient in utilising continuity of programme knowledge as well as utilising the expertise of the Programme Manager in particular areas.

<sup>3</sup> % based on PM related inputs (60% of the total programme manager cost + 100% of the PM support costs) divided by total reconciled Gate 1 cost.

## Annex A: Scheme Complexity

- 1.1 This Annex provides further background on aspects of STT that differentiate it from other SROs.
- 1.2 The SROs vary significantly in their level of maturity, development, requirements and complexity. We recognised that for STT the complexity of the scheme and the active involvement of three water companies required a significant level of company and project management input for Gate 1.
- 1.3 In order to be transparent with RAPID in the reporting of these costs, we elected to show the company tripartite activities as a separate line item from the programme management and highlight the inputs necessary by the three partners in delivering this large and complex SRO.
- 1.4 The following highlights some of the key features that differentiate the STT scheme.

### *Scheme Complexity*

- 1.5 The STT scheme is one the most complex of the SROs. Expanding on previous submissions, Table A1 lists some of the scheme complexities highlighted in the Gate 1 submission and responses, and how these have directly affected the level of effort for Tripartite and Programme Management activities.
- 1.6 This complexity is acknowledged by RAPID in the draft decision which recognises ‘the complexity of the solution requires a notable intensity of project management and inter-company management’.
- 1.7 In order to manage a scheme of this nature it has been necessary for active involvement of all three companies and to employ an appropriate level of programme management resources. These inputs are over and above those of other more discrete SROs’ or that have fewer partner interactions and complexity.

### *Tripartite working*

- 1.8 There is a significant level of effort required to administer and govern the scheme dependent on the number of partners actively involved. This level of effort is not linear as the number of active partners increases.
- 1.9 The involvement of three active partners with joint interests in the scheme, broadly equal levels of procurement and introduces a level of interaction that is different from other SROs.
- 1.10 We note that for other SRO schemes with more than one partner there is sometimes a ‘lead partner’ with other partners taking a less active role in the delivery. This is not the case for STT. The geographic spread and influence of the project, the level of joint funding and liabilities of two donor and one recipient company (with associated commercial confidentiality requirements) has required an equal and active involvement of all three partners from the outset.
- 1.11 The nature of the STT SRO, is such that if the STT SRO was not being progressed, the need for the input of company resources for these activities would not be required and resource effort could be deployed to cover other positions within the business.
- 1.12 The costs within the Gate 1 Tripartite company activities are solely in respect of specific STT SRO activities. Costs for other SRO activities and other company activity including regional and WRMP24 planning are not included in the reported in the Gate 1 expenditure.

### **Early start**

- 1.13 Unlike other SROs, STT needed to start on day one of Gate 1, with STT by necessity mobilising some 3- 6 months ahead of many of the other SROs which had less critical mobilisation timescales.
- 1.14 The companies recognised the challenges of the scheme and that there was ongoing work from WRMP19 that needed to be progressed early with commitment to stakeholders to do so. The partners at each companies' cost (not charged to Gate 1) formed the Tripartite leadership group in 2019 (Programme Management Board, PMB), placed orders for critical works including mini competition across all three companies' frameworks for a programme manager at the end of 2019.
- 1.15 Within the first 3 months following the start of Gate 1 the companies had formed the basis of the legal agreements necessary for them to work together and to procure the services required for Gate 1.
- 1.16 Critical procurement activities were undertaken including a literature gap analysis study which was required by the environmental regulators to underpin the STT river investigations. A mini-competition of river losses trials was undertaken comprising critical works for the start of river flow losses trials at for the start of Summer 2020. This included borehole installations, flow gauge calibration and monitoring associated with the releases, analysis and supporting environmental investigation packages. The value of these works exceeded £500k and were critical to meet stakeholder expectations for implementation over Summer 2020 in time to feed into Gate 1.

### **Stakeholders**

- 1.17 Over and above the interfaces with the environmental regulators, DWI and RAPID, the scheme has a number of other stakeholder interfaces including:
  - Welsh Government and members
  - Cotswold Canals Trust (with Canal and River Trust and Stroud Valleys Canal Company)
  - Group Against Reservoir Development (GARD)
  - River Severn Working Group and River Severn Partnership
  - Updates and briefings through company and regional (WRW, WRSE) forums and webinars to their constituent members.
  - Landowners affected by environmental investigation work
  - Customer research with 'donor' and 'recipient' companies
- 1.18 Many of the stakeholder interfaces are already established at a regional or company level, and it has been important to communicate across the stakeholder leads from the three companies to ensure continuity of messaging and use of appropriate and established lines of communication are followed.

### **Scheme maturity**

- 1.19 Whilst the interconnector scheme development for the pipeline options was reasonably well developed for WRMP19 this was not the case for the interconnector canal option which was not selected for WRMP19. Similarly other aspects of the scheme at a lower level of maturity at the start of Gate 1 included the Vyrnwy mitigations (Bypass and Shrewsbury), environmental considerations and investigations for the use of rivers for conveyance and transfer, and system and commercial operation.

STT differentiating characteristics:	Impact on Tripartite Activities and Programme Management and delivery (PM) activities
It is delivered through three equally funded, and equally participating partner companies (two 'sellers' and one 'buyer').	<p><b>Tripartite:</b> STT SRO is too significant, complex, effecting all three companies' areas and has too much at stake reputationally and commercially for any of the three companies to take a 'back seat' and let others lead. All three companies committing senior and experienced staff to the scheme as a consequence. The use of senior staff also allowed efficient and timely decision making within the project.</p> <p><b>PM:</b> The level of effort in managing three companies is significantly above that required in managing a scheme led by one or two companies. When something significant is changed by one it needs to be ratified and agreed by the other two. Some of the activities that have been required include</p> <ul style="list-style-type: none"> <li>• Setting-up processes and ways of working that are acceptable to all three companies' systems.</li> <li>• Managing, communication and co-ordinating of three partners jointly and through regular separate 1-2-1s and joint meetings.</li> <li>• Managing technical, commercial and programme reviews, promoting collaboration, resolving conflicting and alternative views and gaining three company sign-off and governance during the procurement, development and reporting of the scheme.</li> </ul>
There are integral dependencies with the four source SROs including the river systems into which the sources discharge.	<p><b>Tripartite:</b> Input required to manage and communicate efficiently the interfaces with the other four source SROs to support the integration and overall 'system' role taken by the STT SRO. Similarly, but less significant in terms of inputs, was ensuring interfaces with downstream SROs.</p> <p><b>PM:</b> Managing interfaces of multiple disciplines (including technical, planning, stakeholder or commercial) and workstreams between STT and multiple other SROs. The assessment of the River Systems upstream of the interconnector is a major undertaking (unlike any other SRO in scale and complexity). It affects three primary river systems with multiple workstreams (including environmental, river regulation, losses, drinking water safety plan) and multiple regulatory stakeholders (EA, NE, NRW) to deal with in respect of these. Introduces additional requirements to consider of Welsh legislation (SMNR and well-being of future generations)</p>
There are dependencies with three downstream SROs (SESRO, T2AT, T2ST) and the associated companies in the South East that may benefit from the STT.	<p><b>Tripartite:</b> Company regional engagement covered separately outside of STT activities. PM reporting, decision making and technical sign-off for STT activities for Oct2020, March 2020 and post-March 2020 updates by the companies was however a significant activity. Particularly aspects relating to prices, source optimisation and DO.</p> <p><b>PM:</b> Significant interfaces with WRSE and also WRW and co-ordination with the companies. PM the point of contact for regional engagement and co-ordination for STT. Required to understand and communicate programme and technical requirements, methodologies, and to raise and work through issues between STT SRO, the companies and the region. STT is by far the most complex SRO option going into WRSE. Working through these complexities with WRSE was/is a significant input from the October 2020 initial submission, March 2021 update and onwards.</p>
There are two regional interfaces (one 'donor' and one 'recipient' region).	<p><b>Tripartite:</b> Company regional engagement covered separately outside of STT activities. PM reporting, decision making and technical sign-off for STT activities for Oct2020, March 2020 and post-March 2020 updates by the companies was however a significant activity. Particularly aspects relating to prices, source optimisation and DO.</p> <p><b>PM:</b> Significant interfaces with WRSE and also WRW and co-ordination with the companies. PM the point of contact for regional engagement and co-ordination for STT. Required to understand and communicate programme and technical requirements, methodologies, and to raise and work through issues between STT SRO, the companies and the region. STT is by far the most complex SRO option going into WRSE. Working through these complexities with WRSE was/is a significant input from the October 2020 initial submission, March 2021 update and onwards.</p>

<p>The project whilst physically in England, has impacts and effects on Wales with associated stakeholder considerations.</p>	<p><b>Tripartite:</b> UU and STW in particular were involved in supporting Welsh stakeholder engagement and SRW with localised stakeholder issues (see PM).</p> <p><b>PM:</b> Introduced NRW as additional third environmental regulator and additional requirements to manage around Welsh legislation and SMNR. Additional Stakeholder management including presentations and meetings with Welsh Government and engagement with RAPID on their role versus SRO in engaging Welsh government. Localised issues also arose with Welsh Landowners around the purpose of the project in relation to access to sections of Rivers for monitoring which had to be carefully managed and communicated with support from STW.</p>
<p>The scheme has two major conveyance systems to consider. The Vyrnwy Bypass (10-20km) which mitigates impacts on the River Vyrnwy and the interconnector (~90km) with two primary options - a canal option and pipeline option.</p>	<p>The physical scale and geographical extent of the work on the Vyrnwy mitigations (Bypass and Shrewsbury) and interconnector are generally larger than other SROs and the maturity of the Bypass, Shrewsbury and Canal all required work to bring up to the required standard for Gate 1.</p> <p>The level of effort of Tripartite company input and PM level whilst significant, is probably not dissimilar to other large and/or complex SROs with areas of relatively low design maturity.</p>
<p>The geographical spread of the STT scheme is substantial. The STT scheme (excluding sources) extends from the head of the River Vyrnwy and raw water section of the Vyrnwy Aqueduct to Oswestry through the River Severn, River Avon systems and down to abstraction points in the fluvial, non-tidal Thames.</p>	<p><b>Tripartite:</b> The scheme directly affects and interfaces with all three companies' areas, their stakeholders and assets. STT required and benefited from their active participation</p> <p><b>PM:</b> The scale of the project itself has not necessarily mandated additional PM over and above that of other large/complex SROs. However, the work related to the river studies and investigations has been very extensive and diverse including gap analyses and investigations (losses) which needed kicking off at the start of Gate 1, river regulation (put and take agreement which was led by the PM) and the management of the full gamut of environmental planning and investigations. The vast majority of this work was packaged and procured competitively which was managed by the PM. The Pm was actively involved with environmental regulator engagement.</p>
<p>There is a requirement within the scope of the STT scheme for an over-arching 'system' view to be taken which incorporates the four source SROs across a range of engineering, environmental, consenting and commercial considerations.</p>	<p>A significant differentiator at <b>both Tripartite and PM</b> levels the requirement for STT to deliver for both the STT scheme and system level has added significant complexity at many levels and required strong company inputs and as well additional PM activities.</p> <p>Examples include: pricing and managing the provision of this data for processing ahead of regional submission whilst maintain confidentiality and competition compliance between suppliers (STW and UU); interface with WRSE also required significant increase in PM level of effort (see above); technical co-ordination across SROs; defining regional interfaces and deliverables required to WRW and WRSE, and identifying and working with team undertaking system pre-optimisation.</p>
<p>The commercial model within a regulated environment is complex with questions relating to scheme promoter, asset ownership, commercial operation and trading, and procurement model</p>	<p><b>Tripartite:</b> Particularly key to have very good tripartite engagement in this topic area with a commercial working group with all three companies represented. Undoubtedly STT is the most complex in this area (with more work to do in Gate 2) and significant interface with source providers and Thames Water in the forming a joined-up Strategy.</p> <p><b>PM:</b> Worked with one of the partners (UU) to scope and procure the workstream and then worked with the adviser chairing both 1-2-1 meetings with companies and working group meetings to develop the strategy for Gate 1 and requirements for Gate 2.</p>



<p>The scheme is unique and tends to be a flagship and/or testbed for many of the issues facing the SRO programme.</p>	<p><b>At both Tripartite and PM level</b> STT has generally contributed significantly into presentations, meetings and development of approaches including RAPID QLMs and task and finish groups, ACWG including methodologies, NAU methodologies as well as at broader Webinars and stakeholders.</p>
<p><b>Table A1: Examples of how scheme complexity has influenced Tripartite and Programme Management activities</b></p>	

### Annex B: STT Start-up phase organisation chart

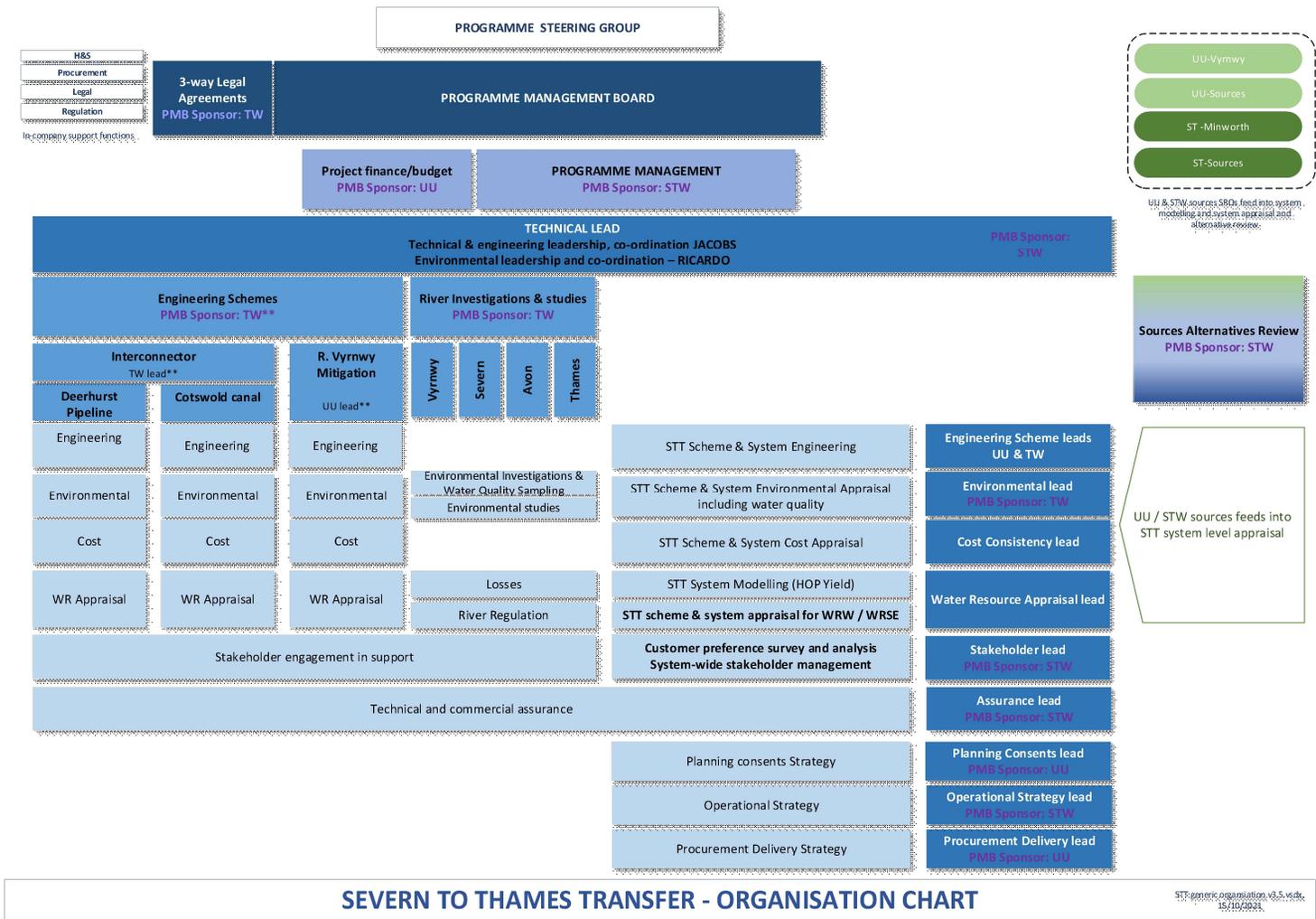


Figure 1: Illustration of the initial Gate 1 organisation and involvement of company ‘sponsors’ during the first half of delivery.

(PMB sponsors roles highlighted in purple text)