

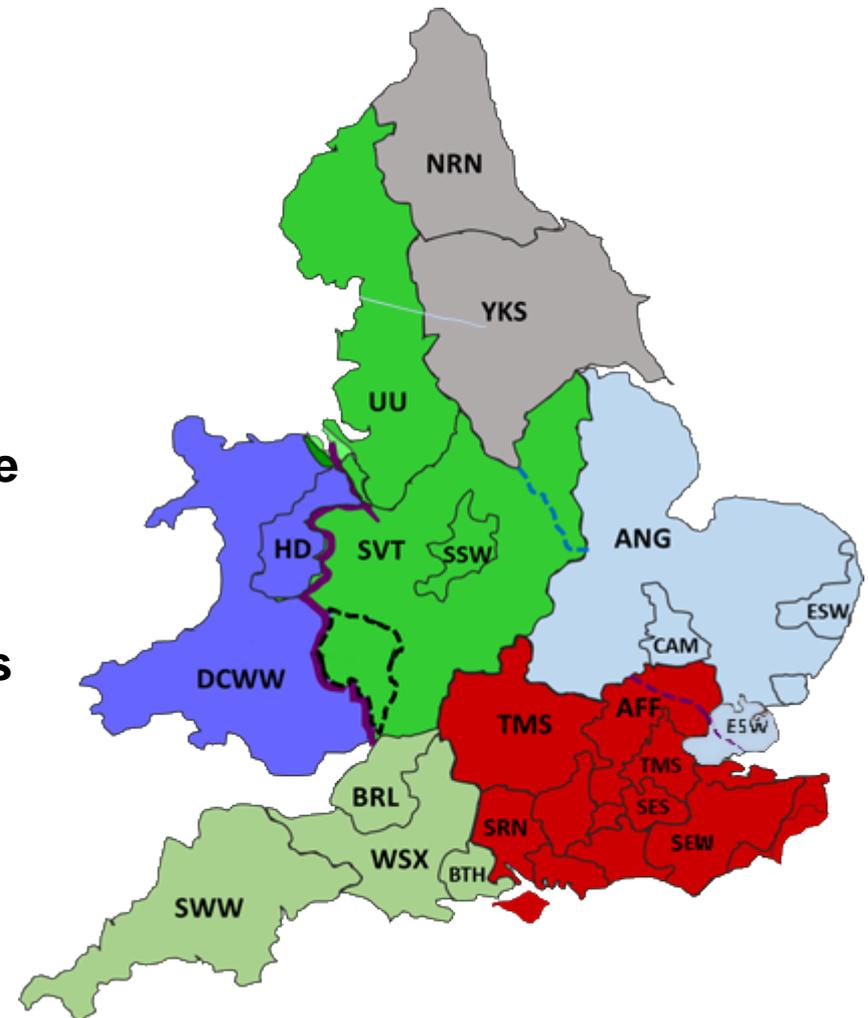


Transforming regional planning under a national framework

Meyrick Gough

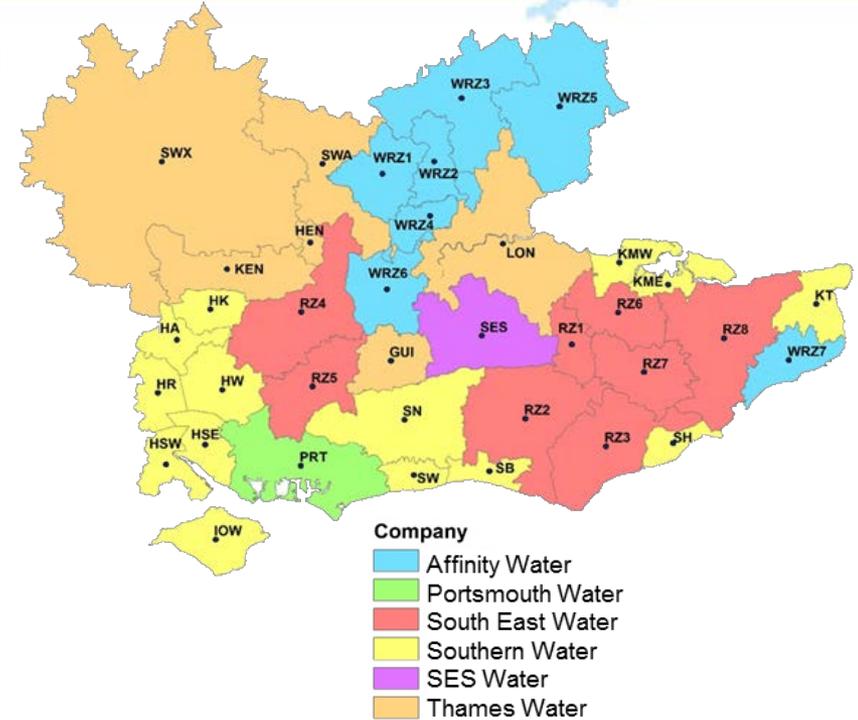
Technical Director WRSE

1. The WRSE challenges
2. Our ambition and priorities for regional groups
3. How regional groups can achieve this within the timescales
4. The support that regional groups will need to make this happen



WRSE today

- Established in 1996 to address fragmented water company operation and promote trading
- Partnership of water companies and regulators with input from consumer and environmental champions
- First regional group of its kind: focus on security of public water supply and greater collaboration between water companies
- The WRSE has evolved over 20 years: however its objectives are still relevant today due to the region's water scarcity and unique environmental challenges
- WRSE strategy **informs** company WRMPs, optimising company modelling by considering a wider range of options and identifying no-regret solutions and joint investments



Regional fact-file

- Home to 40% of UK population: 19m households and 2m businesses
- 5 billion litres of water supplied per day rising to nearly 6 billion when it's hot
- Contributes £627bn to UK economy
- Environmentally sensitive area

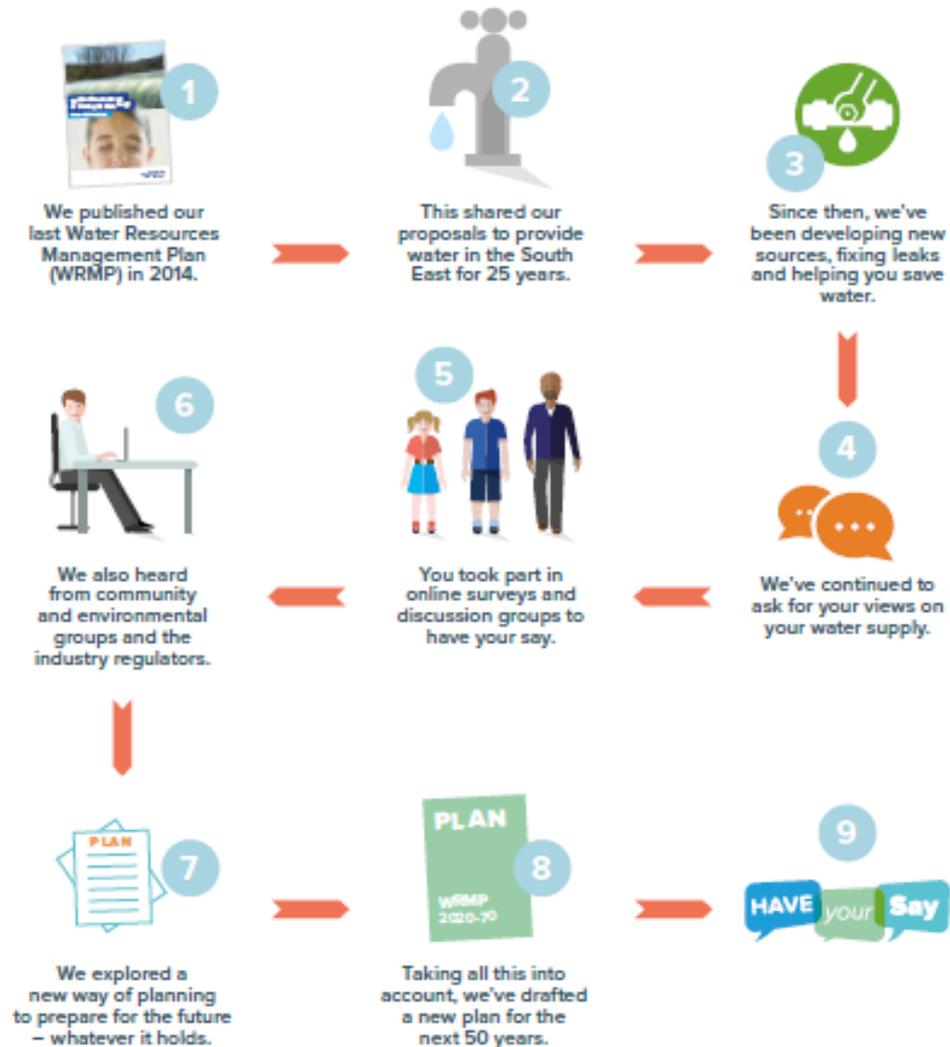


WRMP approach

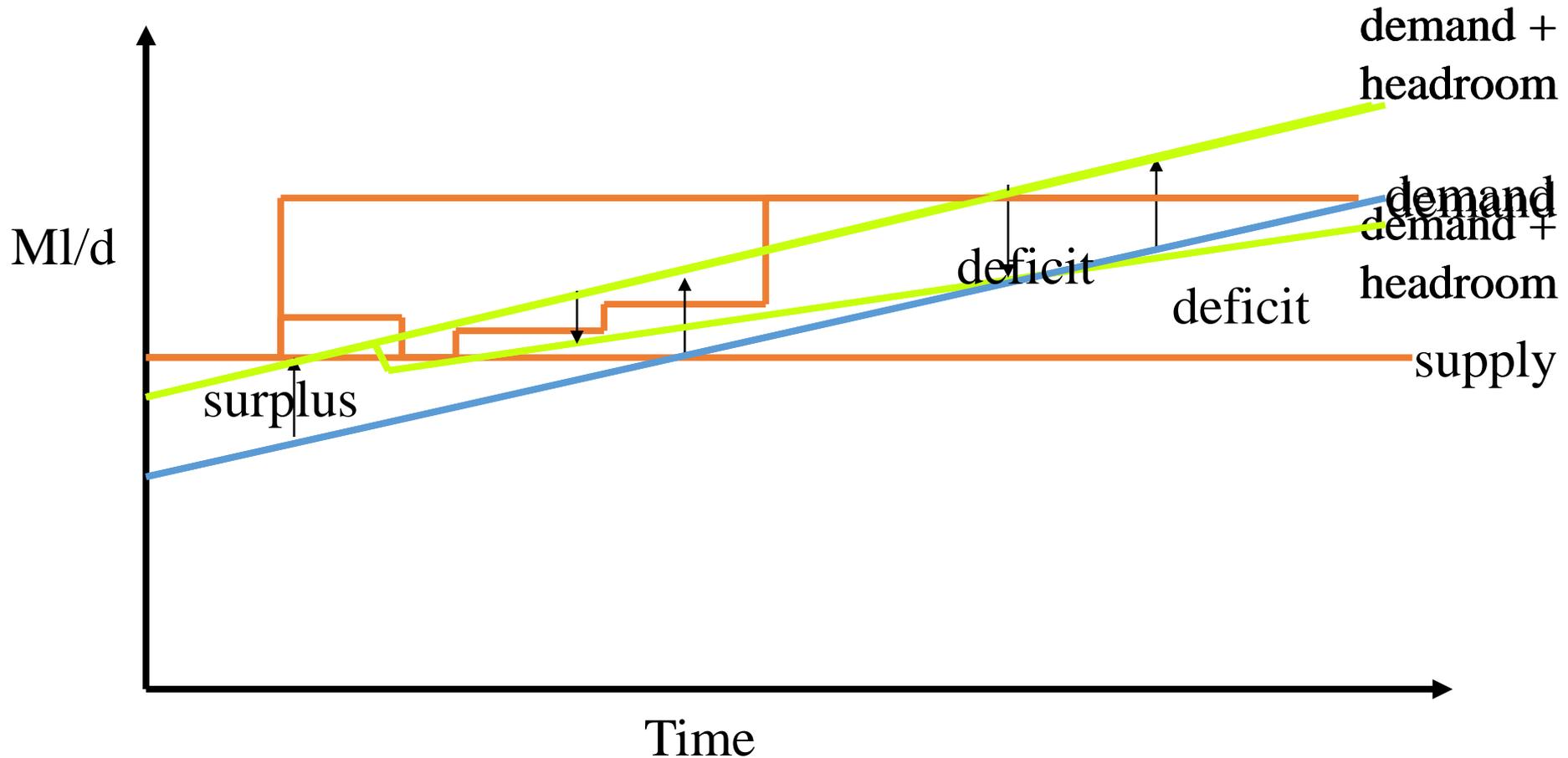
Understand	Understand the current and future requirements of: <ul style="list-style-type: none">•Customers•Environment
Forecast	Forecast supplies during a drought and see if they meet the future requirements
Determine	Determine the range of options available
Develop and consult on	Develop and consult on a plan
Revise and publish	Revise and publish the plan

Five years timetable

- WRMPs and drought plans now take 5 years to develop
- The planning cycle is continuous and evolving



Supply-demand Balance

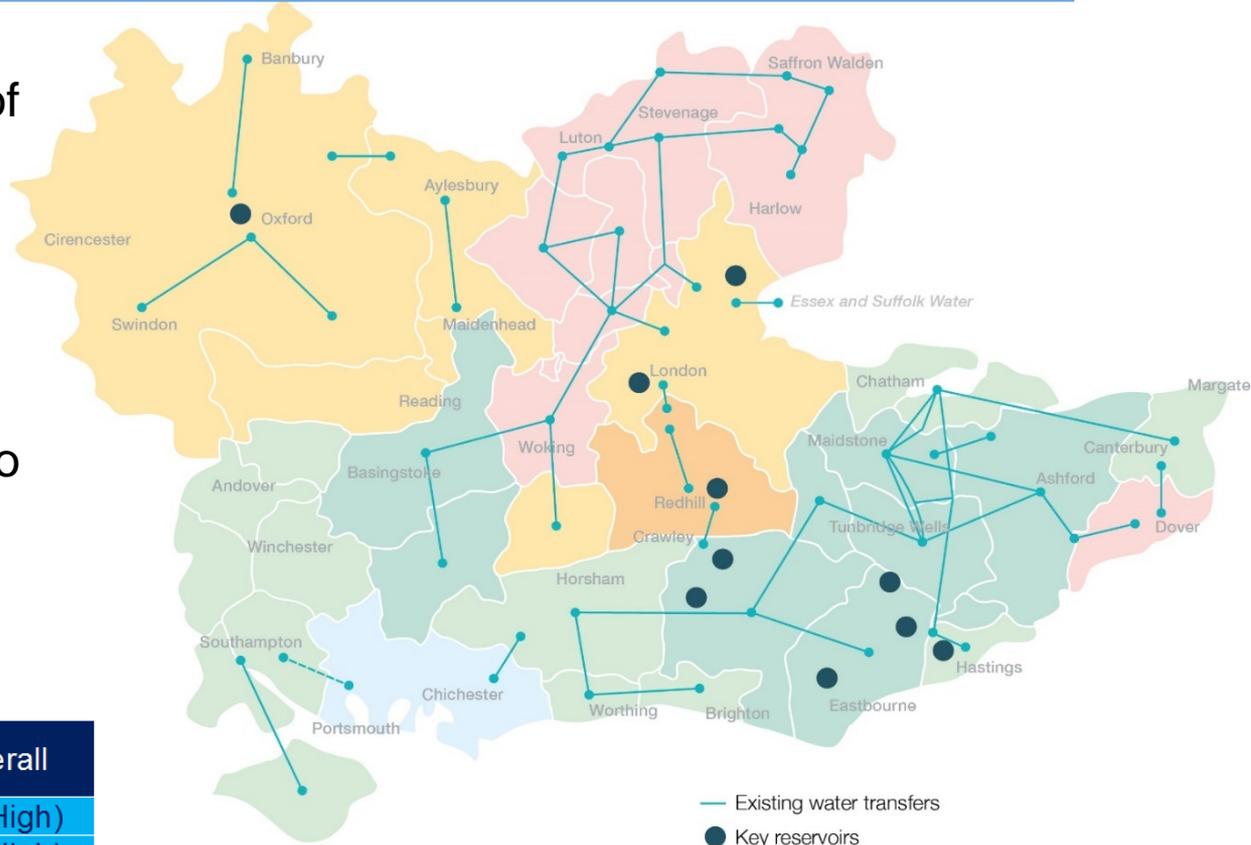


The regional challenges



The region requires additional resources over the next 60 years ranging from **910 MI/d to 2.6 BI/d**

- This range is driven by uncertainty in the amount of environmental protection; climate change; population growth and weather variability.
- The problem requires a more complex framework to derive a solution.



Complexity factor scores			Overall
Supply	Demand	Investment	
6	3	8	17 (High)
6	3	7	16 (High)
6	3	6	15 (High)
6	3	7	16 (High)

Estimated cost of severe restrictions = £1.3 billion per day through a 37% reduction in Gross Value Added



We recognise the WRSE organisational structure and governance need to change to strengthen the group's role. We have already:

- Committed funding from all companies for the remainder of AMP6 and AMP7
- Appointed an independent chair, supported by two dedicated senior directors
- Continued to support the work through providing additional skills and resources
- Committed to the development of a regional plan for WRSE24
- Continued open and regular dialogue with government and regulators, including contributing to the National Framework
- Increased engagement with key stakeholders
- Started engagement with other regional groups
- Started to review our wider governance structure to include 3rd party water users, experts and other stakeholders

Our Mission Statement:

Water Resources
in the South East



To develop an affordable, sustainable and resilient regional approach to water resource management – one that delivers for customers, stakeholders, society and the environment

A Regional Plan

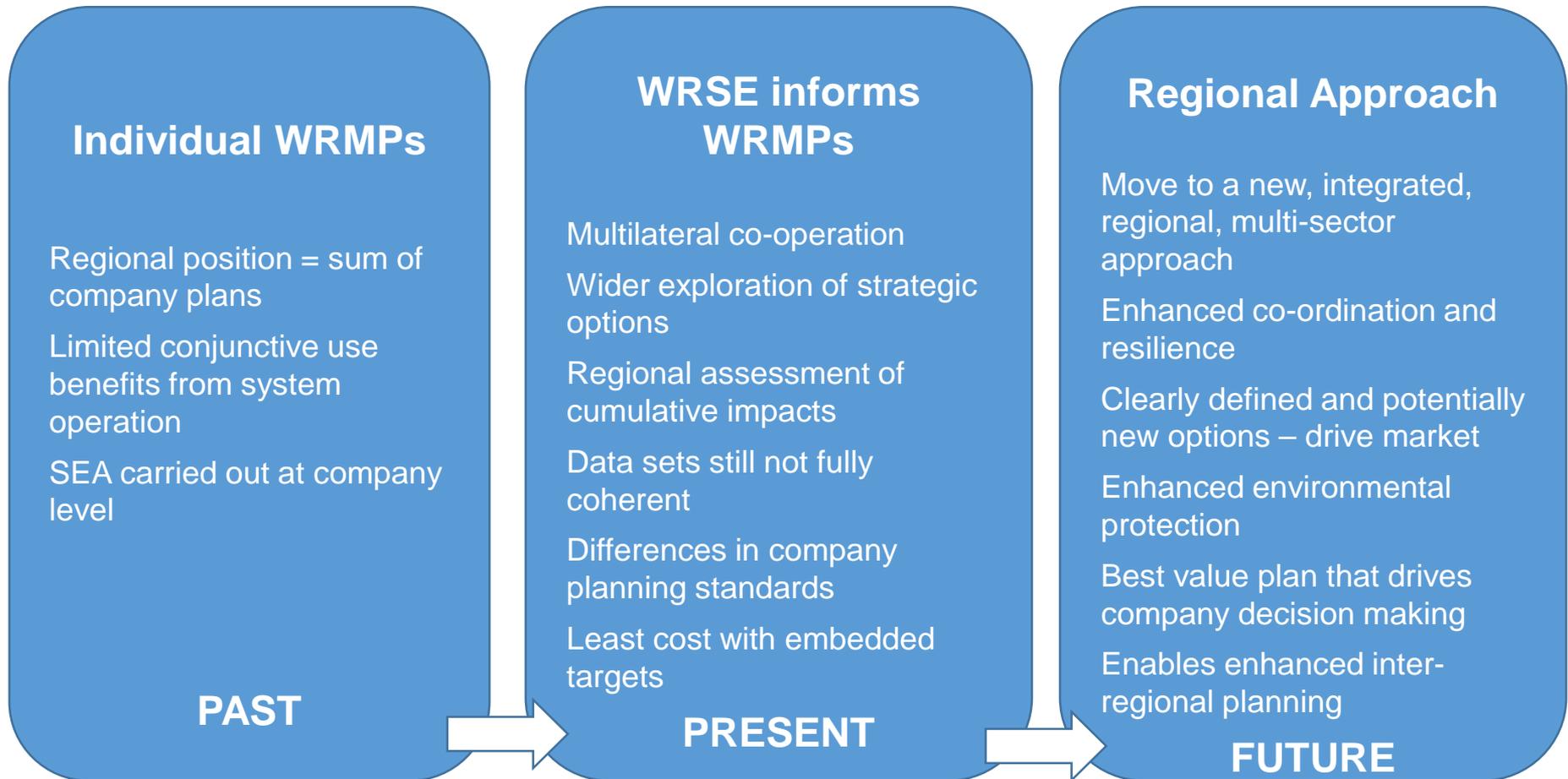
The technical work will culminate in a single **regional** WRMP, providing necessary information for each sector to understand the investment areas



Strengthening the role of regional planning



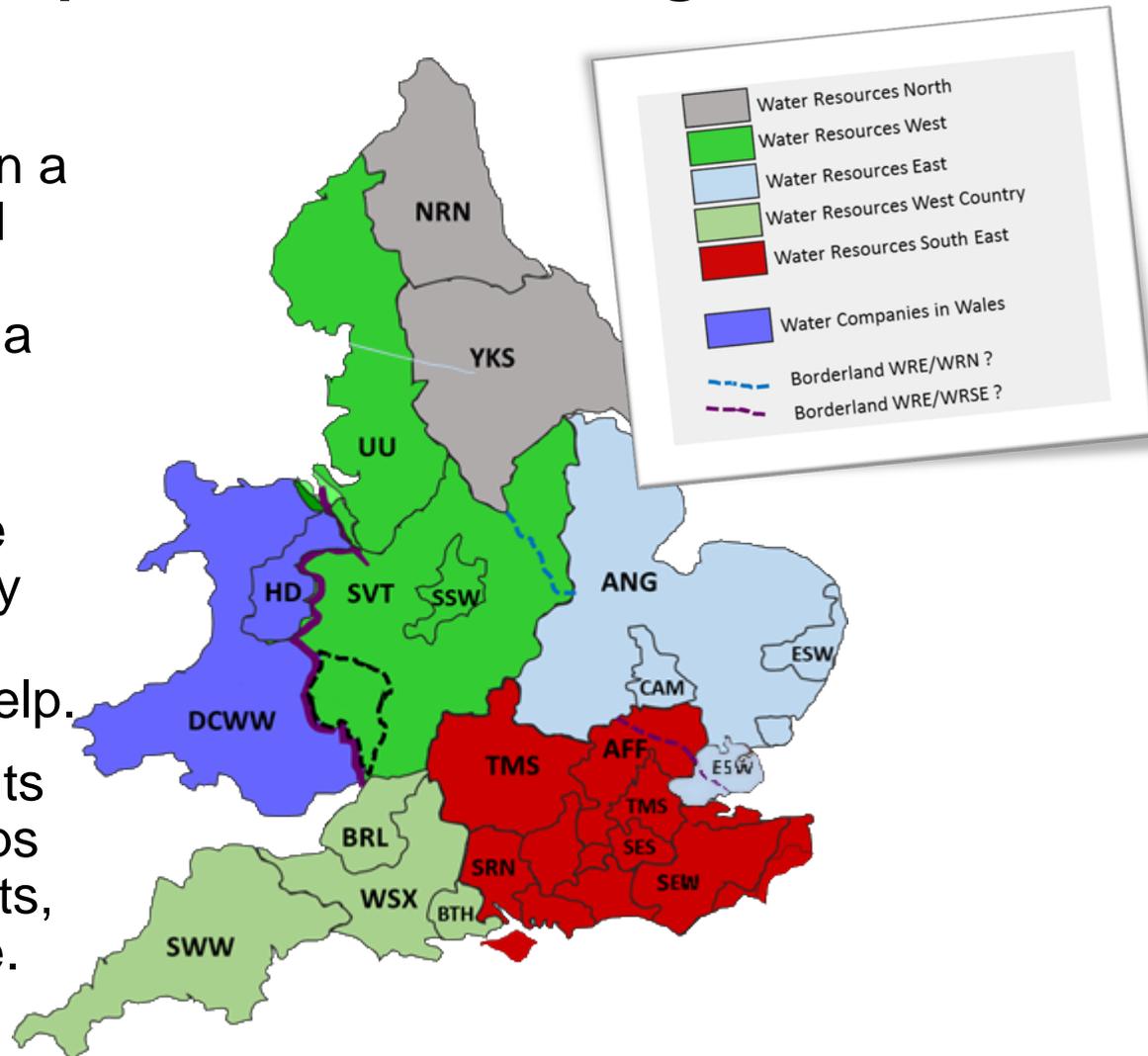
To optimise the identification and development of strategic water resources to provide benefit locally, regionally and nationally the role of regional groups needs to change



Requires significant changes to both technical work and organisational governance

WRSE recognises the potential for inter-regional solutions

- Members of WRSE sit on a number of other regional groups in order to assist with the development of a broader set of solutions
- We will aim to develop these links further where necessary and share any technical work with the other regions, if it is of help.
- We will also share outputs from our sprint workshops such as extreme droughts, water efficiency, leakage.





Potential solutions go beyond water companies, but also include other third parties



These types of solutions could range from saving more water; recycling water; or jointly developing resources for a number of sectors



Regional approaches will therefore look to see if solutions other than a traditional set of schemes can form part of a regional plan. For example:

Catchment based solutions (quality as well as quantity);

Transfers from non water companies;

Recycling process water at industrial

Options from third parties

We will need to develop new approaches for new challenges

Five planning principles underpin all technical work:
Adaptive, Forecast, Resilience, Environmental net-gain, Stakeholder

Technical developments to strengthen a world class regional approach

Consistency

- Common data sets
- Shared forecasts
- Common standards of resilience / levels of service / application of drought measures
- Application of methodology

Common platform

- One modelling platform
- Regional simulation to provide one view of existing system

Enhanced techniques

- Develop and test enhanced new methodologies and techniques in areas including natural capital, environmental net-gain, trading, resilience, demand management and leakage, drought management measures, customer engagement

Multi-sector need

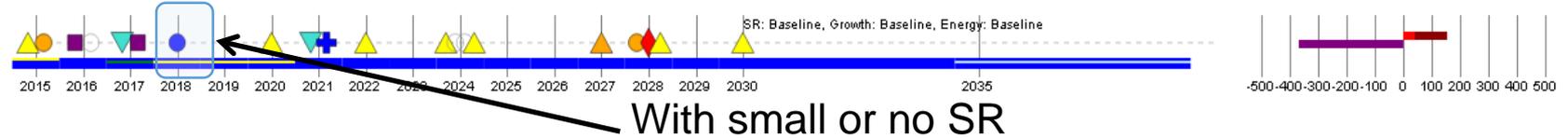
- Assessment and understanding of the needs of other major water users
- Develop regional vulnerability map that considers a range of climatic events
- Identification of interdependencies across the wider system

Deterministic Model Chooses Different Options

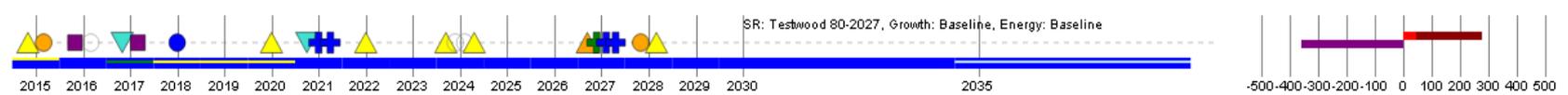


- Traditional approaches will evolve to cater for uncertainty

Western SR- Baseline Growth- Baseline Energy- Baseline Resilience

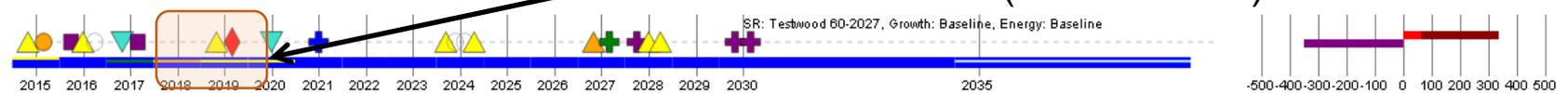


Western SR- Testwood 80-2027 Growth- Baseline Energy- Baseline Resilience

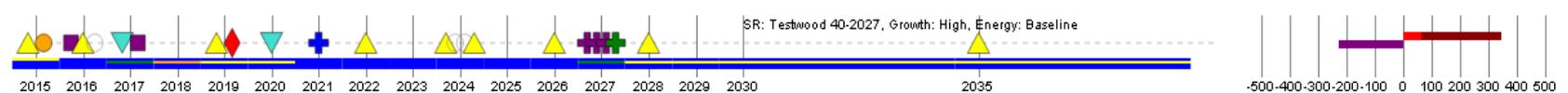


With large SR then use effluent reuse (red diamond)

Western SR- Testwood 60-2027 Growth- Baseline Energy- Baseline Resilience



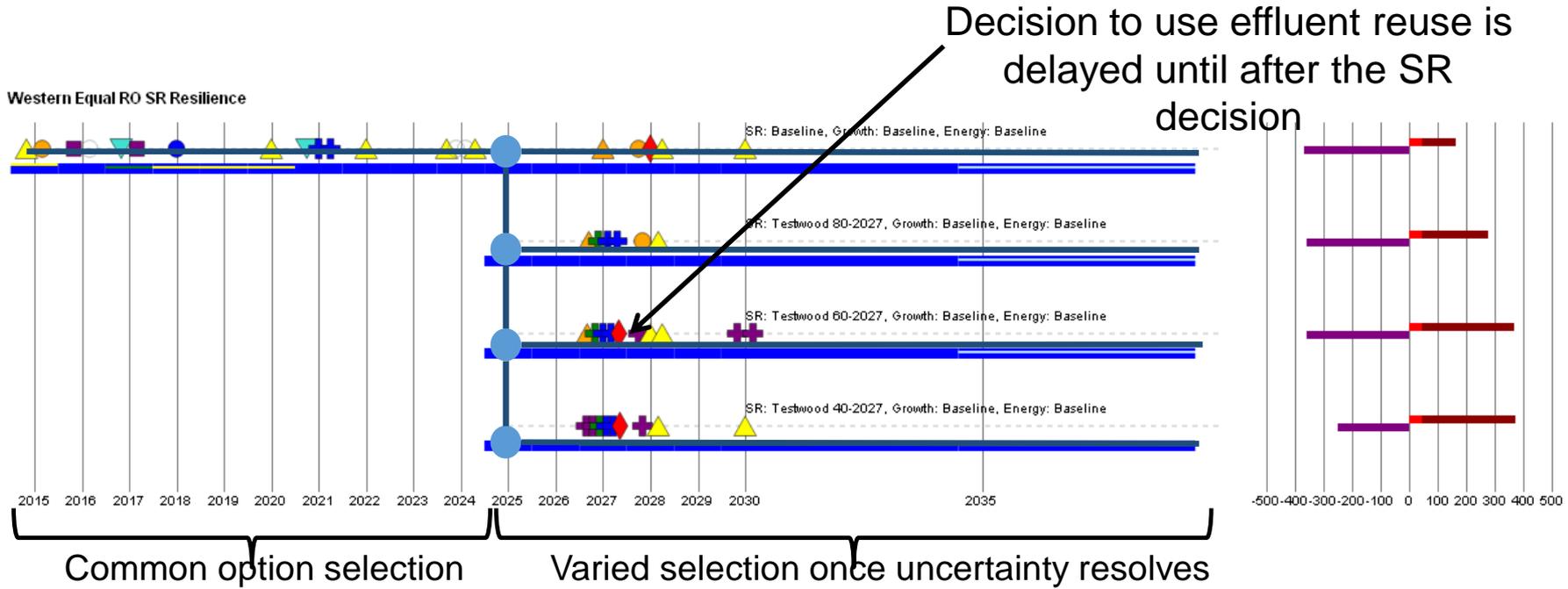
Western SR- Testwood 40-2027 Growth- High Energy- Baseline Resilience



Four SR Scenarios into a Real Option Problem



An adaptive plan approach can provide certainty for investment in the next 5 years while providing the flexibility for the future



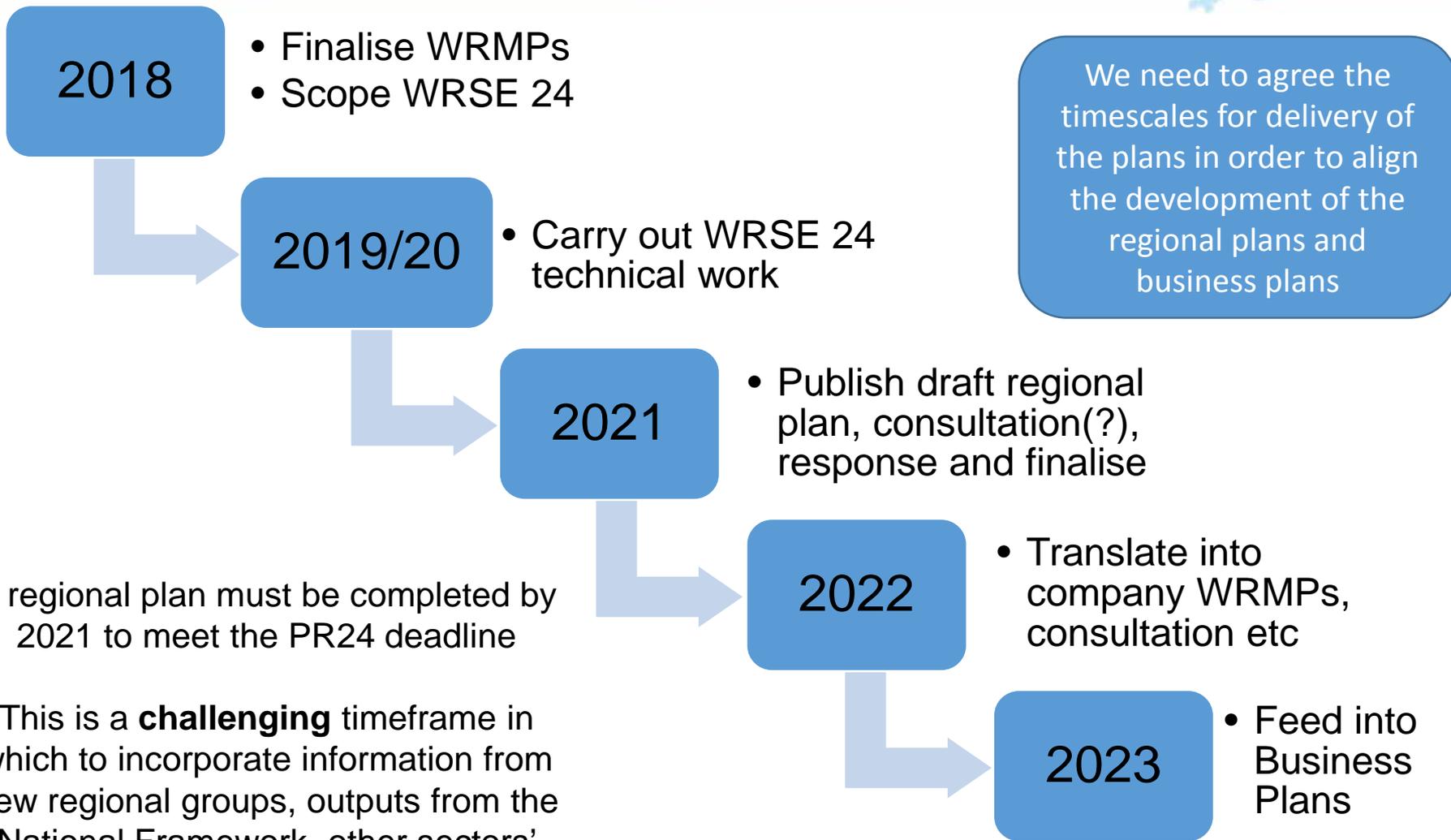


The future is about resilience

- For the regional plan this will mean that we will look at the regional assets to withstand droughts, but also floods, hot summers and freeze thaw events
- Likewise the connectivity in the South East will be reviewed to ensure that conjunctively the South East system (Water companies and other sectors) have sufficient transfer capacity for their own needs during these extreme weather events
- This approach will also include the sudden not availability of supplies from certain sources.



Timeframe to WRMP / PR24



A regional plan must be completed by 2021 to meet the PR24 deadline

This is a **challenging** timeframe in which to incorporate information from new regional groups, outputs from the National Framework, other sectors' needs, and agree consistent standards and specifications.



Regional groups can achieve much but need support to achieve their ambition and priorities in the timeframe available. Current areas of support include:

- Confirmation of the roles and responsibilities of the National Framework vs regional groups, and understanding of the interfaces and working arrangements
- Co-ordination of regional groups through a common framework that has flexibility to address regional issues and differences
- Support to align different modelling platforms
- Provision of catchment and nationally-consistent forecasts, datasets and standards (including costings) for regional groups to use and implement
- Sight of inter-regional transfers to ensure national optimisation of resources – governance / legislation needed
- Clarity on the legal status of regional plans, SEAs, and planning requirements around more and more extreme events
- Clarification on consultation requirements and timeframe
- Agreement on timescale to produce a regional plan, incl. production of guidance
- Resolution of any conflicts arising where a single scheme could benefit multiple regions; need to agree what is best for the nation

Reformed approach – key outcomes



National Framework

Legislation /
regulation

Enabling
guidelines

Timescales /
alignment

Long-term
forecasts

National data
sets

Inter-regional
alignment

Regional Groups

Multi-sector
resilience

Common
standards

Market
stimulation

Environment
enhancement

Drinking
water

Best practice
/ innovation

Individual Companies

Balance between
local and regional
needs

Enhanced levels
of service

Greater resilience to
extreme events

Enhanced asset
operation options

Summary

- Regional groups are being established to find integrated and optimal solutions, both at a regional and national level
- Some region are more advanced and therefore the framework will have to take this into account
- Other factors such as consultation on the regional plans, their legal status, etc are still being discussed
- There are still a lot of details to work out and the next plan in 2024 could possibly be a turning point for regional planning approaches. A key factor will be to ensure that the options that are selected provide the best solution today, tomorrow and the future given its uncertainty.