

## EMEA Copperleaf Community







### EMEA Copperleaf Community

Network. Share. Learn.

At Copperleaf®, we know that collaborating, sharing knowledge, and celebrating success is important in driving the Asset Investment Planning (AIP) community forward.

The Copperleaf Community is a network of Copperleaf clients, partners and team members who come together to share best practices on using decision analytics to enhance organisational performance. Community members provide input on the future roadmap of the Copperleaf Suite, and share ideas about how to leverage our products to make better value-based, risk-informed investment decisions.

This brochure features an overview of the Copperleaf Community across Europe, Middle East, and Africa (EMEA), including resources to learn more about their work with Copperleaf.







# Electricity





cerius · radius





































**50Hertz** is responsible for the electricity transmission system throughout northern and eastern Germany, supplying electricity to 18 million customers. The 380/220/150 kV transmission grid covers over 109,708 km² and runs a length of 10,325 km.

50Hertz is currently working on expanding the grid to accommodate the transforming energy system. Their goal is to create a portfolio of projects which addresses the replacement of ageing assets and the necessary grid extension required by Germany's planned transition to a low-carbon, nuclear-free economy. 50Hertz also lacked the flexibility to update their portfolio as projects, priorities and resources change.

50Hertz implemented **Copperleaf Portfolio**™ to streamline its asset investment decision-making processes and manage investments through their full lifecycle.

#### Benefits include:

- One centralised platform for capital investment planning, capacity planning, and portfolio optimisation to create a single view of the plan that can be reoptimised when things change
- Productivity enhancements through an automated short-, mid-, and long-term investment planning process that replaced several Excel worksheets
- Combining revenue forecasting and portfolio optimisation to realise the greatest value while honouring specific goals and constraints
- Integrating the portfolio planning process with SAP project execution processes to improve project management and execution



When the board made changes to the prioritisation of projects, it would result in a lengthy process to incorporate these changes on our end. Additionally, if we were asked, for example, to analyse the impact of a 10% increase in our resources, we didn't have the ability to do quick what-if scenarios. Instead, we would have to perform a complicated manual process to determine an answer."

#### JAN SCHOENEWOLF

Project Portfolio Manager

Read the Go Live interview here









**Alliander** comprises a group of network companies including the distribution network operator Liander and Qirion. Together they represent high-quality knowledge of energy networks, energy technology and technical innovations. The group consults with its partners and shareholders about future plans and proposes solutions to complex issues surrounding the energy transition.

Alliander selected **Copperleaf Portfolio** in 2024. **Copperleaf Portfolio** enables companies to maximise investment returns by optimising their investment portfolios within specified constraints and targets, improving risk visibility and asset performance, enhancing governance in both long-term and short-term planning processes, and significantly reducing planning time.



We are building as fast as we can to expand the energy network. We are substantially upscaling our operations, recruiting more technicians and innovating our processes. This will enable us to construct 23,000 transformer stations, put tens of thousands of kilometres of cables into the ground and modify or build hundreds of power stations over the next 10 years."

MAARTEN OTTO
CEO



### cerius · radius

**Cerius-Radius**, the largest power distribution company in Denmark, runs the electrical grid that supplies electricity to private homes, commerce, and industry in Zealand, Lolland-Falster, and other islands. The company owns the underground power lines and the electricity meters that record the electricity consumption of its customers and is responsible for a reliable supply of electricity to consumers.

Cerius-Radius selected the Copperleaf CNAIM solution, an optimised implementation of **Copperleaf Asset**™, to develop optimal asset management strategies that balance cost, risk, and performance across its entire asset base.

The Copperleaf CNAIM Solution is a rapid start solution for electrical utilities looking to leverage the Common Network Asset Indices Methodology (CNAIM) best-practice monetised risk approach developed by British Distribution Network Operators. Copperleaf CNAIM extends this framework for use in a streamlined and extensible asset management investment planning solution aligned with the principles of ISO 55001.



We are excited about the Copperleaf CNAIM Solution and look forward to utilising it to improve our risk management efforts and ultimately, increase value from our assets."

KRISTOFFER BREINER NIELSEN

Head of Portfolio Management







**EDP Redes España**, formerly Viesgo, is one of Spain's largest electrical generation and distribution organisations, managing over 31,000 km of network and serving 700,000 customers across five regions. The company has an installed capacity of around 1,400 MW of energy, in large part from clean and renewable sources.

EDP Redes España selected Copperleaf to automate the investment selection process and enable the company to rapidly generate viable investment plans. This process was previously based on multiple spreadsheets and manual tasks, and the organisation was unable to quickly and efficiently adapt plans as constraints changed.

The Copperleaf solution allows EDP Redes España to select the highest-value investment portfolios while considering multiple constraints. The organisation now has the ability to analyse different 'what-if' scenarios, and evaluate the impact of different constraints on costs, cash flow, IRR, risk, and value. With a fully automated optimisation process, EDP Redes España can now make the right choice at the right time.



The implementation of Copperleaf Portfolio has allowed us to transition from a laborious manual prioritisation process to a fully automated optimisation process that identifies the highest-value plan within minutes. We now can perform sensitivity analysis and quickly respond to questions if anything changes."

#### **JORGE GONZALEZ BASTIDA**

**Head of Investment Planning** 

Read the Go Live interview here







**Elia** is Belgium's high-voltage transmission system operator (30 kV to 400 kV), operating over 8,700 km of lines and underground cables throughout Belgium. Boasting a pivotal location in Europe, it is a key player in the energy market and the interconnected electricity system. Elia is focused on promoting the development of an efficient, transparent, and fair electricity market for the benefit of consumers. Together with their partner company in Germany, 50Hertz, they are part of Elia Group.

Elia is a frontrunner in planning the energy transition, creating long-term project portfolios that address both the replacement of existing assets as well as the needed extensions to accommodate the decentralisation of the energy grid. Optimised investment planning for an uncertain future becomes too complex for traditional tools, which is why Elia selected the Copperleaf solution.

With Copperleaf Portfolio, Elia can create the optimal investment portfolio that maximises value while respecting multiple constraints. The ability to run advanced scenarios and sensitivity analyses provides the flexibility to easily respond to change to ensure the highest value decisions are being made. Elia also has a set of complex project dependencies that must be considered during their portfolio planning process. To address this need, Copperleaf developed new 'milestone dependency' capability that provides the ability to define complex time-dependency rules between different projects based on their milestones or specific spends.

#### Find out more about our work with Elia







# 6-REDES

**E-REDES Portugal**, the company that manages the electricity distribution network in mainland Portugal, selected the Copperleaf solution to manage its ageing asset population, boost transparency into its planning process, and secure the long-term resilience of the network. The electricity distribution system operator serves more than 6.5 million customers across mainland Portugal, spanning a network of 228,000 km.

The objective of this transformative project is to enhance asset management strategies in order to effectively handle the temporal progression of asset failure risk, stemming from the anticipated deterioration of their condition. This will facilitate the development of modernisation strategies that, in combination with other investment drivers such as digitalisation, electrification, and decarbonisation, will form the multi-year investment portfolios. Leveraging the Copperleaf solution, E-REDES will refine and fine-tune these portfolios, ultimately delivering greater value for all stakeholders.



We are confident that Copperleaf's solution will strengthen and streamline the development of long-term asset management strategies."

#### **MIGUEL FREITAS**

Head of the Asset Management Strategy Department





**ESB Networks** responsible for building, operating, maintaining, and developing the electricity network in the Republic of Ireland. ESB Networks operates across the entire network–from generation, through transmission and distribution, to supply, and aims to achieve zero carbon emissions by 2040.

Serving 2.5 million customers, ESB operates across the entire network–from generation, through transmission and distribution, to supply. The organisation needed an out-of-the-box solution that could enhance decision making, optimise investment planning, and assist in regulatory reporting.

ESB Networks selected Copperleaf to support the company in its ambition to achieve zero carbon emissions by 2040 and become a world-class sustainable networks business. Copperleaf will empower ESB Networks to make risk-based, data-driven decisions, manage assets across the whole lifecycle, and ensure it can deliver reliable, sustainable services to its customers.



Electric companies face a number of key business challenges, including climate change, new technologies, and increased costs. Copperleaf will allow ESB Networks to identify, plan and deliver the most valuable projects to build a safer, more resilient network for its shareholders, customers and communities."







**Landsvirkjun** is Iceland's largest producer of electricity, and one of the 10 largest renewable energy companies in Europe. Landsvirkjun operates 18 power plants in Iceland, including hydropower stations, geothermal power stations and one wind power field. The company offers 100 percent renewable energy at the most competitive prices in Europe.

Landsvirkjun selected the Copperleaf Decision Analytics Solution to improve its asset management strategy and develop short- and long-term plans to replace ageing assets. Realising it needed a more sophisticated solution than its internal management tools, the company turned to Copperleaf for a more robust system that could support investment decisions and help prioritise projects while proactively managing risk.

With Copperleaf, Landsvirkjun is in a position to make better and faster decisions, improve efficiencies, and enhance asset risk management. The company can make compelling business cases based on transparent data, with the ability to iteratively adjust budgets and portfolios to ensure plans are always up to date.



With Copperleaf we've been able to get more focus on our assets than ever before. Our work is more structured, and our visibility is much better. Questions are often raised within Landsvirkjun—why our refurbishment projects are prioritised within the portfolio in that manner, how we see coming years in terms of renewals or refurbishments need within our stations—and Copperleaf gives us the transparency to answer these questions with confidence."

#### **GUDMUNDUR BJORNSSON**

Director of Asset Management and Project Support

Learn more about Landsvirkjun's AIPM journey here





### nationalgrid

National Grid Electricity Transmission (NGET) owns the high-voltage electricity transmission network in England and Wales. The company manages more than sixty thousand assets and delivers an investment plan of £800million – £1billion a year. This plan includes asset management work such as asset replacement or refurbishment due to the assets' condition, risk or age, the connection of new and existing customers to the network, and policy-based maintenance.

The Copperleaf Decision Analytics Solution, including **Copperleaf Portfolio** and Asset Aware, provides National Grid with a complete view of interventions and expenditure, including all maintenance and customer connection/network growth activities. In addition, Copperleaf and NGET worked together on the development of a new circuit optimisation capability that allows NGET to bundle asset interventions and minimise circuit outage requirements.



It is much more efficient and quicker than previous solutions and enables us to make better decisions both at team level and executive level. It has created a value-based decision-making framework that has enabled us to create a much better asset investment plan that is more efficient for our customers and internal and external stakeholders."

#### **STEWART WHYTE**

**Delivery Optimisation Manager** 

Learn more about our work with NGET









**Northern Ireland Electricity Networks** (NIE Networks) owns the electricity transmission and distribution networks which transport power to over 900,000 customers in Northern Ireland. The network is comprised of 2,200 km of transmission network, 47,000 km of distribution network and 300 major substations.

NIE Networks invests around £100 million annually in its network and recognised an opportunity to implement a more structured and automated system to model risk and determine the optimal time to reinvest in its assets. Additionally, NIE Networks adopted the Common Network Asset Indices Methodology (CNAIM) and required a solution to assess asset risk, enhance decision-making and deliver critical portfolio insight.

The Copperleaf solution has helped NIE Networks improve its Asset Investment Planning and Management (AIPM) processes, enhance long-term planning, and support the development and submission of its business plan in line with CNAIM. The organisation now has a single source of truth, with investments that can be traced back to robust and transparent data.





**Stromnetz Hamburg** (SNH) is the local distribution system operator for the municipality of Hamburg. The company is responsible for the operation, maintenance, and expansion of the network, and has more than 28,000 km of cable and 55 substations serving 1.8 million customers.

The organisation previously relied on Excel for investment planning, and the decision-making process was managed by stakeholders who would come to a conclusion based on their own requirements. SNH therefore required a solution that would help the company quantify asset risks, improve transparency and optimise portfolio planning.

With the Copperleaf Decision Analytics Solution, the company is integrating a risk-based approach into decision-making and developing a more consistent, objective process to identify the optimal investment. SNH is now able to cost-effectively manage its asset base to reduce risk, confidently tackle the energy transition, and create the highest-value plans.



We used to prioritise our most profitable projects, but with Copperleaf we can measure both risk and cost to create the highest-value plan. For example, a less profitable project may significantly reduce risk and therefore be more valuable in the long run."

#### DR. FLORIAN GÜNZLER

Asset Management System Coordinator

Read the Go Live interview here









**Tennet** is a leading European grid operator responsible for over 25,000 kilometres of high-voltage electricity grid in the Netherlands and large parts of Germany.

The energy transition and the ambitious grid development plans in both countries are driving an expansion of TenneT's investment portfolio. As this portfolio grows, the TSO encounters an increasingly complex environment for investment decisions, with a large number of variables and boundary conditions.

TenneT wants to ensure the highest value investment plans that are realistic in terms of deliverability as well as aligned with their strategic objectives.

Copperleaf Portfolio serves to create an overall project portfolio view across all assets and areas, and enables TenneT to make a step change in portfolio optimization. The execution of data-driven, strategic decisions within its asset chain for Onshore, Offshore, Germany, and the Netherlands is supported by the new intelligent solution.

TenneT also identified the need for a holistic framework and supporting APM (Asset Performance Management) tool to address important asset management challenges such as limited resources, as well as financial constraints and outage planning.

In addition to the tool, TenneT was looking to build a strategic relationship that will help the company reach its long-term goals. **Copperleaf Asset** empowers organizations to optimize asset planning decisions for the next one to one hundred years. Asset managers can create the best asset plans by incorporating risks, costs, and value overtime for each asset and calculating optimal intervention dates while accounting for all business constraints and targets. **Copperleaf Asset** aligns every decision using a Value Framework to balance operational needs with strategic objectives.

TenneT will use Copperleaf for Optimized Asset Investment Planning and Asset Performance Management.





**Vattenfall Hydro**, part of Vattenfall Group, is a leading provider of hydroelectric power, specializing in the generation, management, and distribution of clean, renewable energy. With a strong commitment to sustainability and operational excellence, Vattenfall Hydro is continuously improving its asset management practices to meet emerging environmental, regulatory, and operational challenges.

The Copperleaf solution will support Vattenfall Hydro's goal of aligning its investment planning with its financial and operational objectives (known as Hydro P25), enhancing asset risk visibility across their hydroelectric dams and river systems, and enabling value-based, risk-informed decision making.

With the implementation of Copperleaf's Al-powered solution, Vattenfall Hydro will streamline its investment portfolio, balancing time-varying risks, costs, and strategic objectives. The solution will also incorporate regulatory investments using a TOTEX driven approach, expand planning constraints to include resource and material limits and sustainability goals, and introduce non-economic measures like CO2 reduction and biodiversity, ensuring a comprehensive and transparent approach to asset management.

"Copperleaf will assist us in setting the right investment level based on our strategy," said Yvonne Björnström, Director Technology Dam Safety, Environment, Asset Management and Technology, Vattenfall Hydro. "Improved efficiency in asset investment planning enables higher focus on risk and puts us in an better position to run a profitable business."

Vattenfall Hydro will use Copperleaf to Enhance Asset Investment Planning and Risk Management.







**VISUE** is a utility consortium owned by a number of Distribution System Operators (DSOs) that provide services to over 1.5 million electricity customers in Denmark. Through the implementation of the Copperleaf Decision Analytics Solution, VISUE provides asset investment planning and management capabilities to participating DSO members: KONSTANT, TREFOR El-net, Dinel, RAH, Netselskabet Elværk, Flow Elnet, and most recently, Vores Elnet.

VISUE implemented the Copperleaf solution to enable their DSOs to plan investments and manage risk in a streamlined and optimised way. Previously, it was difficult for operators to explore multiple investment scenarios and get a complete understanding of how different funding and resource levels and timing will impact asset reliability and performance.

Copperleaf gives VISUE a complete view of all investments and one centralised system for stakeholders to collaborate on. It provides a new level of transparency around costs, risks, resource usage, and other parameters, like the System Average Interruption Duration Index (SAIDI). Paired with the capability to develop, optimise, and compare different what-if scenarios, the DSOs are able to make better decisions, and justify those decisions, resulting in higher value for their businesses.



In the past, DSOs used a system that was very hard to make or renew scenarios in, resulting in the lack of a complete overview. Now with Copperleaf, we are confident that all investments are in one system for stakeholders to collaborate on. The roadmap Copperleaf has created, and the way it is shaped through client input, is a great strength of the system today and in the future."

#### **CLAUS LUND**

**CEO** 

Read more about our work with VISUE







Rheinische NETZGesellschaft mbH (RNG) manages and operates over 30,000 km of distribution networks for electricity, gas, water, and district heating, supplying approximately 2 million customers in and around Cologne, Germany. RNG manages 25 networks with interfaces to different asset owners and asset service providers through centralised asset management.

The complexity of RNG's operating environment drove the need for a decision analytics software solution to help the company establish a value- and risk-oriented asset management approach and enhance its Asset Investment Planning and Management (AIPM) processes.

The implementation of **Copperleaf Portfolio** has enabled RNG to establish a risk-informed, value-based, and objective decision-making process that balances the needs of all stakeholders. Having a centralised platform provides:

- A complete, streamlined workflow from portfolio creation to execution
- Greater transparency at the interfaces to asset owners and asset service providers
- Management and control capabilities for risks and investments in a complex environment with 25 networks and 13 different asset owners
- Capabilities needed to consider and manage limited resources both internally and externally (e.g. with service providers)



Copperleaf is a key component for RNG to digitise asset management and implement the core requirements of ISO 55000. With the solution, we can achieve the required transparency and consistency for decision-making in accordance with these standards."

#### JAN PATRICK LINOSSIER

**Head of Network Strategy** 

Read the RNG case study here





IOTES	





## Gas





















#### **Company Profile**



**Gasunie** manages and maintains the infrastructure for the large-scale transport and storage of gas, with a total length of over 18,000 km. Today, this is still mainly natural gas, but as the energy transition accelerates this will increasingly shift to green gas and hydrogen. Gasunie ensures that this part of the energy supply is safe, undisturbed, and as sustainable as possible, so that everyone always has access to energy.

The energy transition and CO<sub>2</sub> reduction targets create the need to optimise the way Gasunie manages its assets and transport system. Gasunie's vision for asset management is to make transparent and well-founded choices about investments and maintenance of the energy infrastructure to maximise the value of these activities for stakeholders. Gasunie wants to realise this vision by implementing a digital platform which can facilitate risk-driven decision-making while supporting strategic portfolio planning based on maximum value creation.

The company selected **Copperleaf Portfolio**, an out-of-the-box approach to multi-year investment planning which enables value-based, risk-informed decision-making. **Copperleaf Portfolio** allows companies to maximise investment returns by optimising their portfolios within specified constraints and objectives, boosting visibility into asset risk and performance, and significantly reducing planning time.





#### **Company Profile**



**National Gas** (formerly National Grid Gas Transmission) owns and operates the high-pressure gas transmission network in Great Britain, including over 7,500 kilometers of pipe and over 600 above-ground installations. These assets are long-lived, expensive to maintain and repair, and widely distributed geographically.

National Gas embarked on a journey to improve its Asset Investment Planning (AIP) and Project Portfolio Management (PPM) capabilities—to deliver the highest value for its customers, today and into the future.

The Copperleaf Decision Analytics Solution, which includes **Copperleaf Portfolio** and **Copperleaf Asset**, will help National Gas deliver its RIIO-2 business plan as cost-effectively as possible, contributing to a 4% efficiency on capital expenditure, saving £11 million per year. These benefits are derived from the new capability to make value-based decisions on the future of the network—across the entire asset lifecycle and centred around the organisation's key strategic objectives.



We needed a system that would integrate all our disjointed data. Now that we have the Copperleaf Solution, we have synergies between our data and our departments. The work is driven by the software, and this has brought about a fundamental change in the way we operate."

#### **JOWITA ULER**

Portfolio Planning Manager

Read the case study or watch the webinar





#### **Company Profile**



**Northern Gas Networks** (NGN) delivers gas to 2.7 million homes and businesses in the North East, Northern Cumbria and much of Yorkshire, England. NGN has a network of 37,000 km of underground gas pipes, and associated network infrastructure, in addition to an extensive portfolio of non-network assets. NGN is aiming to spend £1 billion upgrading the gas network over the next eight years, with the goal of reducing pipe leakage by 18% in the same time period.

NGN selected the Copperleaf solution to prepare the RIIO-GD2 business plan submission, the strategic asset management plan and the annual asset risk regulatory reporting returns.

The scope was recently expanded to include new requirements, including regulatory asset risk reporting, long-term strategic planning functionality, and advancements in short- and medium-term investment planning capability. One specific area of new functionality was the installation of the linear bundling feature, called Rules-based Grouping—the grouping of linear assets to ensure that urgent and future work required in a specific area is considered. These bundles can be further evaluated using Copperleaf's predictive analytics capability where their costs and risks can also be considered in the analysis.



Overall, we're very pleased with the value of Rules-based Grouping. It makes sense to group similar assets or areas of assets together to be more efficient in our work. Having software that can perform the groupings creates a very effective process by considering many aspects of an intervention."

#### **IAN COATES**

**Asset Strategy Lead** 

Watch the webinar or read more about our work with NGN







#### **Company Profile**



**Società Gasdotti Italia** (SGI) operates more than 1800 km of pipeline throughout central Italy, transporting gas to key urban and industrial centers. The company is making significant investments in energy efficiency and network upgrades to ensure they can meet sustainability objectives and prepare for the energy transition.

Copperleaf Asset enables SGI to create optimal asset strategies, incorporating both financial and non-financial metrics in a streamlined investment decision-making process to maximise value while minimising risk in line with its corporate objectives.

SGI can make informed trade-off decisions between capital and maintenance costs and understand how different scenarios will impact asset strategies through powerful what-if scenario planning capabilities. This allows SGI to further increase safety standards, maintain its reliable service, and guide short and medium-term asset interventions.

Implementing Copperleaf has allowed SGI to calculate optimal intervention dates and get an up-to-date picture of their infrastructure. The gas company can now assess the health status of assets based on probability of failure and the subsequent consequences, and monitor how risk may evolve over time.



Partnering with Copperleaf is an opportunity for us to further raise safety standards, maintain our reliable service, and guide our short- and medium-term asset intervention strategies."

**RAFFAELE MAIELLO**Chief Operating Officer



#### **Company Profile**



**Scotia Gas Networks** (SGN) is a gas distribution company serving 5.9 million homes and businesses across Scotland and the south of England. With more than 85 years of experience, SGN is leading a number of cutting-edge research projects and targeting net zero status by 2045.

SGN adopted the Copperleaf solution to help them predict and monetise asset risks, optimise asset interventions, and manage project portfolios across their networks. Copperleaf helps SGN support an end-to-end investment planning process in line with the Network Asset Resilience Measures (NARMs) methodology and provide a roadmap for improvement and innovation.

With Copperleaf Decision Analytics, SGN has enhanced capability to monetise asset risk across its network, develop asset investment strategies and satisfy regulatory requirements relating to the NOMs methodology. The company now has one system it can use to integrate multiple risk models.



The community experience is invaluable and a large part of what makes Copperleaf more than just a software vendor, but a true partner, and I'm looking forward to being part of its continued evolution and growth."

#### **MARK SMITH**

Network Strategy Manager

Read more about the Gas Industry Awards featuring SGN







#### **Company Profile**



Established in South-West France, at the crossroads between major European gas flows, **Teréga** has exercised exceptional expertise for over 75 years in the development of gas transport and storage infrastructures. Today, it continues to develop innovative solutions to overcome the major energy challenges facing France and Europe. A true accelerator of the energy transition, Teréga operates over 5,000 km of pipelines and 2 underground storage reservoirs representing 16% of the French gas transport network and 25% of national storage capacity. The company had a turnover of €488 million in 2021 and has approximately 650 employees.

Teréga is at the forefront of the energy transition, lighting the path to carbon neutrality through the development of innovative solutions and a commitment to establishing and meeting Environmental, Social, and Governance (ESG) targets.

The organisation is focused on improving the reliability of its asset base to provide customers with a safe, high-performance grid, and accelerate the adoption of new technologies and energy sources.

Copperleaf Portfolio allows Teréga to optimise asset investment planning to ensure the organisation can maximise the value of every investment. The solution's portfolio planning capabilities enhances the efficiency of Teréga's decision-making process and provide a clear line of sight between strategic goals and operational decisions, helping to facilitate communication between stakeholders and simplify the approval process with the CRE, the French Energy Regulatory Commission.

These benefits will empower the organisation to realise the greatest value from its €173M investment portfolio, achieve its ambitious climate goals, and face the energy transition with confidence.



We are looking forward to working with Copperleaf on this exciting implementation project and joining the Copperleaf community. We are convinced that the Copperleaf solution will help us improve our asset investment planning capabilities and accelerate our journey towards asset management best practices, to make and deliver the highest value decisions from our asset base."

FABIEN FORTOUL
Asset Strategy Lead



**GAS & ELECTRICIT** 

#### **Company Profile**



**Enexis** is one of the three largest distribution system operators (DSOs) in the Netherlands, responsible for the construction, management, and maintenance of the gas and electricity network in the North and South-East of the country. Their electric grid comprises approximately 146,000 km of cable and 55,000 stations, while the gas network consists of more than 46,000 km of pipeline and 6,600 stations. In total, Enexis serves around 5.2 million customers and invests approximately €1 billion annually.

Copperleaf Portfolio empowers Enexis Groep to integrate processes, data, and technology to identify and optimise asset and investment needs, and implement a holistic, end-to-end risk- and value-based planning process to support its strategic goals.

Enexis now has the business agility to adjust investment portfolios and calculate alternative scenarios based on new developments in the energy sector, changing performance requirements, and/or shifting financial and resource constraints.



The Copperleaf solution gives us integrated insight into the entire investment portfolio in one system, supporting a structured and repeatable planning process. We wanted our investment portfolio to be optimised against our company values and linked to our new strategy, providing a clear line of sight between portfolio planning and company objectives."

#### **ROLAND BAKKER**

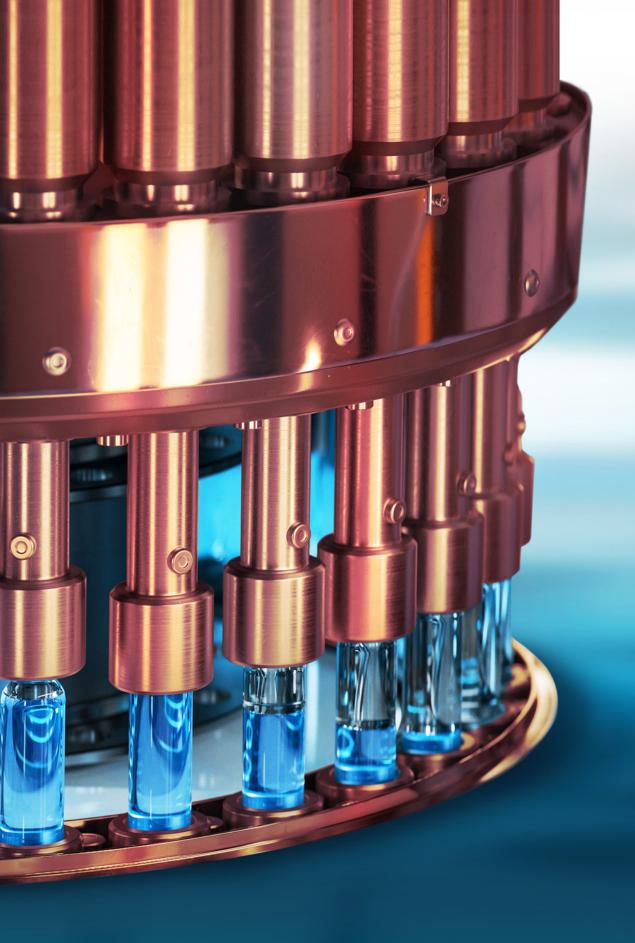
Senior System Manager

Read the Go Live interview here





IOTES	



Pharmaceuticals





#### **PHARMACEUTICALS**

#### **Company Profile**



**Abbott** is a global healthcare leader that helps people live more fully at all stages of life. The company's portfolio of life-changing technologies spans the spectrum of healthcare, with leading businesses and products in diagnostics, medical devices, nutrition and branded generic medicines. Abbott's 115,000 colleagues serve people in more than 160 countries.

Abbott selected **Copperleaf Portfolio** to enhance its investment planning process from a manual and reactive approach, focused mainly on operational and tactical planning, to a streamlined process that considers long-term strategic planning.

The Copperleaf solution will equip Abbott with data-driven insights into the condition and recapitalisation priority of its capital/production assets and improve investment decision making by leveraging a clear understanding of the associated risks and benefits. Abbott will be able to realise a balanced and optimised allocation of CapEx across its sites by creating the highest value investment strategies that respect targets and resource constraints.





# Railways













**Copenhagen Metro** operates the 24/7 rapid transit system in Copenhagen, Denmark. The metro system covers a length of 38.2 km, including 4 lines and 39 stations, and serves 73 million passengers per year.

The metro system in Copenhagen is ageing—the first two metro lines in particular have been in operation for over 20 years. As infrastructure assets mature and investment decision-making criteria become more complex, Copenhagen Metro recognised the need to implement an Asset Investment Planning (AIP) solution that enables a risk-informed, value-based approach to maintaining and expanding the network and supports its aim of achieving carbon neutrality by 2025.

Copperleaf Portfolio will allow Copenhagen Metro to streamline its portfolio planning process and develop the highest-value investment strategies aligned with the company's goals around service availability, customer satisfaction, safety, capacity, and climate footprint. The Copperleaf solution provides a robust process for creating and evaluating investment options based on a single source of truth, allowing the company to evaluate dissimilar investment options on a common economic scale and make trade-off decisions with confidence.



Implementing an AIP solution is an exciting step for us at Copenhagen Metro to digitalise our reinvestments in the metro, so that we can create data-driven plans to ensure we are making the most profitable reinvestments in the future. The Copperleaf solution will enable us to make more complex investment decisions, where economy, capacity, customer satisfaction, sustainability, and other important focus areas can be brought into play."

**REBEKKA NYMARK** 

**Executive Director** 







**Network Rail** owns and manages the national rail network in Great Britain. This includes a diverse portfolio of assets across a range of engineering types, such as over 31,000 km of track, more than 2,500 stations, approximately 20,000 structures and 1,600 signalling systems. Network Rail is also one of the largest telecom infrastructure companies in the country. In recent years, Network Rail split its operations into five regions and 15 routes covering Great Britain, each with different local priorities.

The implementation of the Copperleaf Decision Analytics Solution enables Network Rail to consolidate its diverse range of assets in one centralised system. The Copperleaf solution allows for complex optimisation and scenario analysis to develop optimal asset strategies that meet performance targets and balance sustaining existing operations with future planning requirements. The solution is underpinned by the Copperleaf Value Framework which ensures a common approach to modelling the organisation's diverse asset base. This allows Network Rail to make trade-off decisions across the different asset types and regions to find the most cost-effective approach for managing infrastructure.



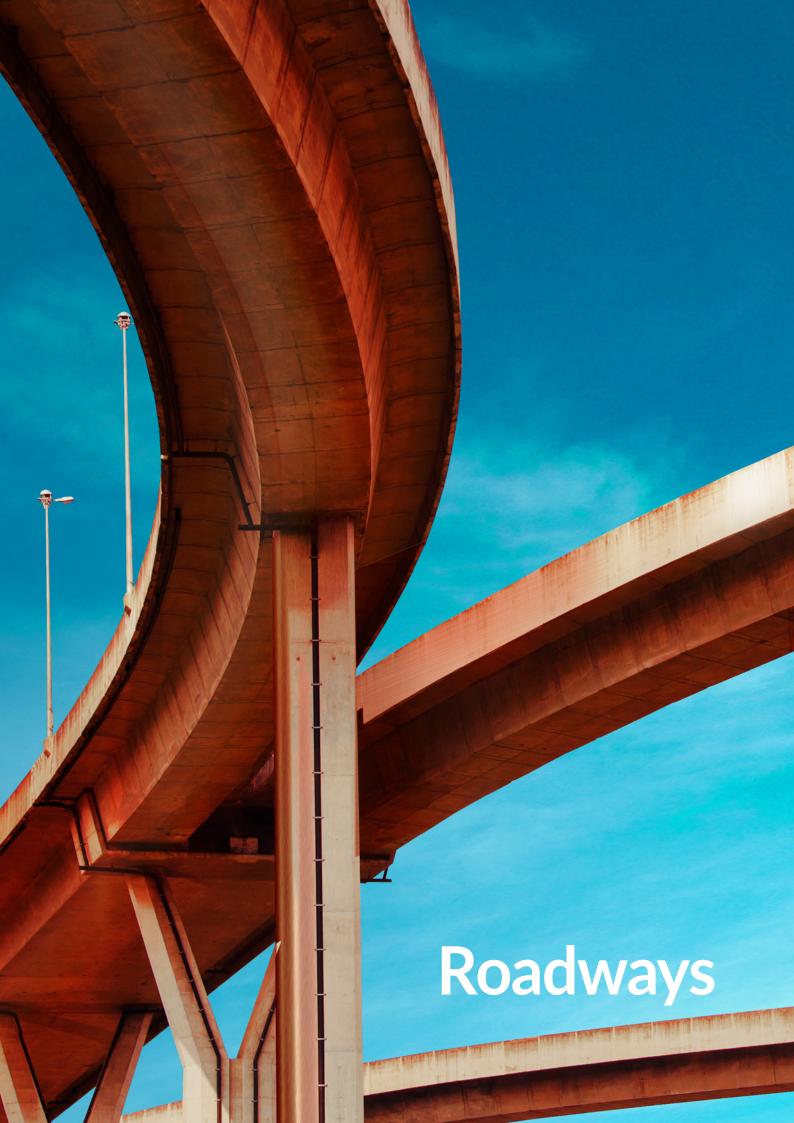
We needed to consolidate our suite of asset models onto a single platform—not only to make it easier for us to operate and develop the models, but also to allow better access to them across the business. Our devolved regions need to be able to evaluate their own investment scenarios to make the best decisions possible, especially when increasingly difficult choices have to be made about where money can be spent."

#### **PIERS TREACHER**

**Head of Advanced Analytics** 

Read the case study here











**National Highways** is the government company charged with operating, maintaining, and improving England's motorways and major A roads. The company's investment portfolio is valued at £27.4bn. The roads network, which totals around 4,300 miles (7,000km), carries a third of England's traffic by mileage and two thirds of all heavy goods traffic.

National Highways selected the Copperleaf solution to embed a consistent, value-based decision-making methodology to help the capital portfolio management team better understand the value of proposed and in-flight projects and ensure that optimal portfolio decisions can be made with confidence.

The implementation provides the company with a comprehensive view of the capital portfolio investment plan and baseline. This provides a 'single version of the truth' that is readily available to the business and supports an outcome and benefits-based approach for development of future RIS (Road Investment Strategy), road planning strategy and decision-making.

Expected benefits include:

- Enhanced capital portfolio management capabilities that are aligned to National Highways' Information Vision and Strategy
- Higher-value plans—Enhanced ability to optimise capital portfolio investment plans that maximise benefits delivered from National Highways' capital projects and critical assets within a defined set of constraints
- Enhanced risk management—Host and dynamically maintain baselines, manage change, and undertake proactive risk analysis to advise and support robust investment decision-making



The objective for our second and current control period is to establish and embed a fully integrated, enterprise-based approach to capital portfolio management and planning. I am delighted to be working with Copperleaf as our partner to help deliver this vital next step in our journey as we begin planning for RIS Road Period 3."

#### **ALAN COUZENS**

Director of Capital Portfolio Management





# Water

**AffinityWater** 

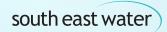




















## **Affinity Water**

**Affinity Water** is the UK's largest water-only supplier. The company delivers 950 million litres of water each day to more than 3.83 million people in London, Essex, Kent and surrounding areas.

Affinity Water selected the Copperleaf H2O solution, an optimised implementation of **Copperleaf Portfolio**, to enhance their investment planning and portfolio optimisation capability. The company wanted the ability to compare dissimilar investment options on a common economic scale to balance trade-offs between costs, risks, and performance.

Having all candidate investment options within a single system, investment decision-making criteria is applied in a consistent and transparent way. By integrating other systems, such as Oracle Fusion, the company can understand variances between what was planned and what has been delivered—providing the business agility needed to re-optimise and adapt quickly.



Copperleaf Portfolio delivers a significant step forward in our asset management maturity. Copperleaf Portfolio will also play a big role as we gear up for PR24, the next periodic review and asset management planning cycle with our regulator, Ofwat."

#### **SARAH SAYER**

**Investment Planning Manager** 

Read more about our work with Affinity Water







**Anglian Water** is the largest water and water recycling company in England and Wales by geographic area. The company supplies safe drinking water and water recycling services to more than six million customers in the east of England and Hartlepool.

Anglian Water chose the Copperleaf Decision Analytics Solution to support the company with its regulatory obligations, improve investment planning maturity and capability, and ensure investment decisions deliver on the organisation's strategic goals and commitments.

The integrated system's optimisation capabilities have been demonstrated to develop deliverable plans that meet customers' needs. Anglian Water believes Copperleaf's optimisation approach will offer 1.5-2% greater customer value in terms of service risk mitigation and benefit realisation than existing plans. Over the Anglian Water investment portfolio, this enables productivity benefits worth up to  $\pounds 50$  million over a 5-year period.

Anglian Water are also using Copperleaf to model capital and capture operational carbon associated with an asset's full lifecycle. The Copperleaf solution provides an enterprise-wide repository of all cost, carbon, and value information, which ensures every investment decision is based on a single source of the truth. At a strategic level, this provides greater transparency, visibility, and alignment with the company's purpose.



An important part of our success is working with Copperleaf to integrate carbon into our asset management process—ensuring that we are challenging our supply chain against the measures we put in place. A key message from us is there are brilliant suppliers like Copperleaf out there who will help organisations such as ourselves deliver against these ambitious targets and that's what we need."

#### **DAVID RILEY**

**Head of Carbon Neutrality** 

Watch the video or read the case study to learn more







**Northumbrian Water Limited** (NWL) supplies water and wastewater services to over 4.5 million customers in the north east and south east of England. Covering Northumberland, Tyne and Wear, Durham, North Yorkshire, Essex and Suffolk, NWL services an area of 9400 km.

NWL selected **Copperleaf Portfolio** to optimise its portfolio planning process, streamlining the development and management of investments through their full lifecycle. The Copperleaf software was implemented to help the organisation deliver better value and service levels to its customers and the environment.

At the heart of NWL's investment planning transformation is the Copperleaf Value Framework, which enables the company to value all investments on a common economic scale across the organisation. NWL now has the capability to assess its entire portfolio in one centralised platform, and make investment decisions based on robust data and value measures.



The Copperleaf tool gives us an opportunity to optimise our investment plans in the short, medium and long term. It helps us not only to value the financial benefits we generate, but also the societal and environmental benefits, such as biodiversity net gain."

#### **CAROL CAIRNS**

Strategic Planning Manager

Read to Go Live interview here









**Portsmouth Water** supplies water to Portsmouth and surrounding areas. The company delivers 170,000 million litres of water per day to 735,000 residential and commercial customers, covering a total of 868 square kilometres. With dozens of reservoir sites, treatment works and water sources, Portsmouth Water aims to supply high quality water, customer service and value for money.

Portsmouth Water selected the Copperleaf H2O solution. Using a predefined, best-practice configuration aligned with both the ISO55001 standard and UK Water Regulator Ofwat's Outcome Delivery Incentives, Copperleaf H2O allows UK-based water utilities of all sizes to take full advantage of the multi-featured, market-leading Copperleaf Decision Analytics Solution.



Portsmouth Water, like all water companies, faces a number of challenges to secure long-term resilience and continue delivering high-quality water services to customers. This future is uncertain, and therefore to ensure we meet these challenges in the most cost-effective way, we need to set out strategies that are adaptive to a wide range of potential future scenarios."

**JAMIE JONES** 

Regulations Manager





**Scottish Water** is a statutory corporation providing water and sewerage services across Scotland. The organisation, owned by the Scottish public, delivers nearly 1.4 billion litres of water every day to millions of households and businesses and treats a further 847 million litres of waste water. Scottish Water is committed to providing great value, excellent customer service, and industry-leading net zero initiatives.

Scottish Water sought an Asset Investment Planning solution as part of their wider Enterprise Asset Management transformation to support its SR21 investment period and long-term transformation programme.

The organisation needed a solution that could enhance strategic business and investment planning to maximise the value of its capital investment programme and operational activities.

Scottish Water selected the Copperleaf Solution to enhance its asset management capabilities, optimise portfolio planning, and manage risk and value more effectively. The Copperleaf solution will enable Scottish Water to align decision making with strategic goals, rapidly analyse multiple scenarios to identify the ideal plan, and develop long-term asset strategies in one centralised system.



We are excited about the implementation of Copperleaf and how it can help us to transform our investment decision making. We are seeking to understand how Copperleaf will support our System Planning, Near Term Business Planning (6 year) & Strategic Investment Planning (25 year) decision making to deliver great value & financial sustainability to the customers and communities we serve."

JOHN WIGHAM Senior Responsible Officer







**SES Water** supplies 160 million litres of clean water every day to over 745,000 people in Surrey, Kent, and South London. The company's supply area is 322 square miles, extending from Morden and South Croydon in the north to Gatwick Airport in the south, and from Cobham, Leatherhead, and Dorking in the west to Edenbridge in the east. SES Water maintains over 2,000 miles of water mains, with eight treatment works, 23 pumping stations, and 31 operational service reservoirs and water towers.

Ofwat, the UK water regulator, recently published its final methodology for the PR24 price review period that sets expectations around how water companies address immediate and long-term challenges to deliver higher value for customers and the environment. Water companies will be rewarded or penalised on the quality and ambition of their business plan submissions.

SES Water selected the Copperleaf H2O Solution—an optimised implementation of **Copperleaf Portfolio** designed specifically to align with Ofwat's regulatory framework. SES Water will use the Copperleaf H2O Solution to support the development and subsequent delivery of its PR24 business plan. It provides a consistent approach to developing, approving, and managing investments through their full lifecycle using a centralised, enterprise-wide platform.



This is an exciting project for us and we are relishing the opportunity to work with Copperleaf and its H20 solution. Our fundamental aim is to make better, more informed decisions, using the six capitals framework to optimise and prioritise our asset interventions and strategic investments in a way that meets the needs of our customers and wider stakeholder groups, now and into the future. Successful integration and use of the Copperleaf solution will be a valuable enabler to ensuring we meet our long-term delivery commitments."

DANIEL WOODWORTH Head of Asset Strategy





**South East Water** supplies 520 million litres of drinking water every day to more than 2.2 million people in Kent, Sussex, Surrey, Hampshire and Berkshire. The company operates 83 water treatment works and manages more than 14,500 kilometres (about 9,000 miles) of water mains. South East Water employs 950 people, ensuring that water supply runs 24 hours a day, 365 days a year.

The Copperleaf H2O Solution is an optimised implementation of the **Copperleaf Portfolio** product, designed specifically to meet the needs of the UK water sector. It will enable South East Water to make the highest-value investment decisions that are aligned with the company's corporate objectives. SEW will use the Copperleaf H2O Solution to support the development of its business plan for the upcoming regulatory price review (PR24), and subsequently support business plan delivery.



We are excited to be working with Copperleaf to enhance our asset investment decision-making processes as we prepare for PR24. As part of our asset management improvement programme, we wanted a solution that would help us quickly optimise our plans at an asset and portfolio level, ensuring that we are making the best decisions at the optimal time. With the Copperleaf solution, we will be able to focus on addressing specific performance commitments and outcome delivery incentives set by Ofwat."

#### **RICHARD SANDS**

**Head of Asset Management** 







**South Staffs Water** supplies high quality drinking water to approximately 1.3 million people and approximately 35,000 commercial customers over 1,500 square km in the West Midlands, South Staffordshire, South Derbyshire, North Warwickshire, and North Worcestershire areas. The company consistently achieves its twin objectives of delivering high levels of customer service and low charges.

South Staffs Water selected the Copperleaf H2O Solution, an optimised implementation of **Copperleaf Portfolio** tailored for water companies in the UK. The solution provides access to AIPM best practices—designed specifically to meet the needs of the water industry and aligned with UK regulator Ofwat's performance commitments and outcome delivery incentives (ODIs).

The organisation can evaluate different value measures such as benefits, risk mitigation, and delivery of performance commitments on a common economic scale. The Copperleaf H20 Solution also supports reporting against the six capitals to help South Staffs Water align decision-making criteria with its responsibility to customers and the environment.



A robust approach to business planning is vital for a successful outcome at PR24. It's a critical step to delivering a robust plan that delivers value to our customers, the environment, and our stakeholders. The Copperleaf H2O Solution will also enable us to track performance, ensuring our commitments can be delivered and the risk of penalties minimised."

#### **CAROLINE COOPER**

Strategy and Regulation Director





**Uisce Éireann** is a regulated asset-intensive organisation which must continually make investment decisions on its water and wastewater asset base against competing objectives. Serving approximately 80% of Ireland's population, the utility plays a critical role in keeping the country running and must balance priorities like safety, reliability, future-proofing, and other strategic goals.

With stakeholder requirements growing, Uisce Éireann realised it needed an advanced system that could optimise asset investment planning, enhance decision making, and support regulatory submissions. Uisce Éireann selected Copperleaf to elevate its approach to asset investment planning, and equip the organisation with a robust and transparent process to capture and evaluate investments.

Copperleaf will enable Uisce Éireann to develop its asset investment planning capability in a single, holistic platform. The solution provides full visibility and resilience across the decision-making space, allowing the organisation to efficiently manage workflows, increase transparency across the business, and embed consistency in the investment planning process. Uisce Éireann will be able to optimise its investment portfolio planning in line with strategic goals and regulatory requirements, ensuring it can make the highest-value investments and execute projects at the right time.







**United Utilities** is responsible for water and wastewater services in the North West of England. The company delivers 1.8 billion litres of water a day to more than 3 million homes and businesses in the North West, as well as treating all the wastewater which disappears around the U-bend. Keeping the region flowing relies on a vast behind the scenes operation, involving hundreds of reservoirs, treatment works and pumping stations; thousands of kilometres of water pipes and sewers and a 5,000 strong workforce.

United Utilities recognised the need to further improve its asset management capabilities by implementing an Asset Investment Planning and Management (AIPM) solution that enables the company to manage risk and value more effectively and ensure line of sight from planning to delivery.

The Copperleaf solution will enable United Utilities to make the highest-value investment decisions during the ongoing delivery of AMP7 and will facilitate a streamlined planning process to support the company in creating an optimal investment plan for the upcoming price review period, PR24.



Copperleaf supports our ability to deliver the best possible service to our customers at the lowest sustainable cost by enabling us to make the right investment decisions to meet our ESG, network resilience, and growth goals. We will be able to capture and assess the costs and risks of maintaining our current infrastructure over the long term—and balance that with the need for innovation and new developments in the short term. Copperleaf provides us with a single platform for all our investment planning and an adaptive value framework for optimal investment decision-making throughout AMP8."

#### IAN NICHOLSON

Head of Asset Lifecycle & Systems







#### **PORTS**

### **Company Profile**



**AD Ports Group** is a vertically integrated trade enabler, providing strategic access to the United Arab Emirates (UAE), one of the Middle East's fastest-growing economies. The company's five business clusters—Economic Cities & Free Zones, Ports, Logistics, Maritime and Digital – make up a resilient trade community bonded by strong partnerships which generate stable performance and consistent growth.

As part of its ambitious growth strategy and operational expansion, AD Ports is currently executing a 15 billion AED CapEx programme over the next five years. To ensure resilient expansion, the organisation needed a solution that could support the optimisation of its investment portfolio while proactively managing risk across the asset base.

Copperleaf's powerful portfolio management capabilities will streamline the planning process, giving AD Ports the confidence and agility to allocate funding and resources, manage risk exposure, and execute projects swiftly and efficiently. The Copperleaf Value Framework will allow AD Ports to compare different investment scenarios and identify the highest-value plan that meets all specified constraints and targets, supporting the organisation to enhance decision making by using a consistent, value-based methodology to assess all investments.

		<u>.</u>	Risk Manage -ment Asset St Develo		trategy pment	Programme Development, Optimisation and Management	
Capability Matrix	Location	Industry Sector	Risk Manager	Predictive Analytics	Community Asset Modelling	Investment Capture	Investment Evaluation
Cerius-Radius	Denmark	Electricity		✓			
Copenhagen Metro	Denmark	Transport					✓
Trefor	Denmark	Heat		$\checkmark$			
VISUE	Denmark	Electricity		$\checkmark$			
EON	Europe	Electricity, Gas	✓				✓
Teréga	France	Gas					✓
50Hertz	Germany	Electricity				✓	✓
ELIA	Germany	Electricity					✓
RNG	Germany	Electricity, Gas, Water, Heat	✓				$\checkmark$
Stromnetz Hamburg	Germany	Electricity	✓				$\checkmark$
ESB Networks	Iceland	Electricity		$\checkmark$			
Landsvirkjun	Iceland	Electricity		$\checkmark$			$\checkmark$
Uisce Éireann	Ireland	Water		$\checkmark$			$\checkmark$
SGI	Italy	Gas		$\checkmark$			
Alliander	Netherlands	Electricity, Gas	✓			✓	$\checkmark$
Enexis	Netherlands	Electricity, Gas					$\checkmark$
Gasunie	Netherlands	Gas					$\checkmark$
NIE Networks	N. Ireland	Electricity		$\checkmark$			
E-REDES Portugal	Portugal	Electricity		$\checkmark$			
EDP Redes España	Spain	Electricity					$\checkmark$
Vattenfall	Sweden	Electricity			$\checkmark$		$\checkmark$
Abbott	Switzerland	Pharma					$\checkmark$
Anglian Water	UK	Water		$\checkmark$			$\checkmark$
Affinity Water	UK	Water					H2O
National Grid Electricity	UK	Electricity					
National Gas Transmission	UK	Gas		$\checkmark$		✓	$\checkmark$
National Highways	UK	Transport		$\checkmark$			✓
Network Rail	UK	Transport		$\checkmark$			
Northern Gas Networks	UK	Gas		$\checkmark$			✓
Northumbrian Water	UK	Water				✓	✓
Portsmouth Water	UK	Water					H2O
SGN	UK	Gas		$\checkmark$			$\checkmark$
South East Water	UK	Water		$\checkmark$	$\checkmark$		H2O
South Staffs Water	UK	Water					H2O
United Utilities	UK	Water	✓	$\checkmark$		✓	✓
SES Water	UK	Water					H2O
Scottish Water	UK	Water		$\checkmark$			✓
SSEN Distribution	UK	Electrticity					✓

Op	Programme Development, Optimisation and Management cont.			Value Framework Management		Data Sharing				
Cost Estimation	Approval Workflows	Portfolio Optimisation	Performance Management	Performance Prediction	Framework Visualisation	Framework Designer	Reporting Interface	Dashboards	GIS Visualisation	Integrations
						✓		CNAIM		✓
	✓	✓						✓		
LICA	✓	✓	✓				✓		✓ ✓	<b>√</b>
UCM	<b>V</b>	<b>∨</b>	<b>V</b>				<b>V</b>		V	<b>V</b>
UCM	✓	<b>√</b>	✓				<b>√</b>			<b>√</b>
OCI-I	· ✓	· ✓	·				<i>√</i>			✓
	<b>√</b>	✓	✓				✓			✓
UCM	✓	✓								✓
		✓			✓	✓	✓	✓		
	$\checkmark$	✓					✓			
✓	$\checkmark$	✓	$\checkmark$		$\checkmark$	$\checkmark$	✓	✓		$\checkmark$
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Transforming how the world sees value



www.copperleaf.com