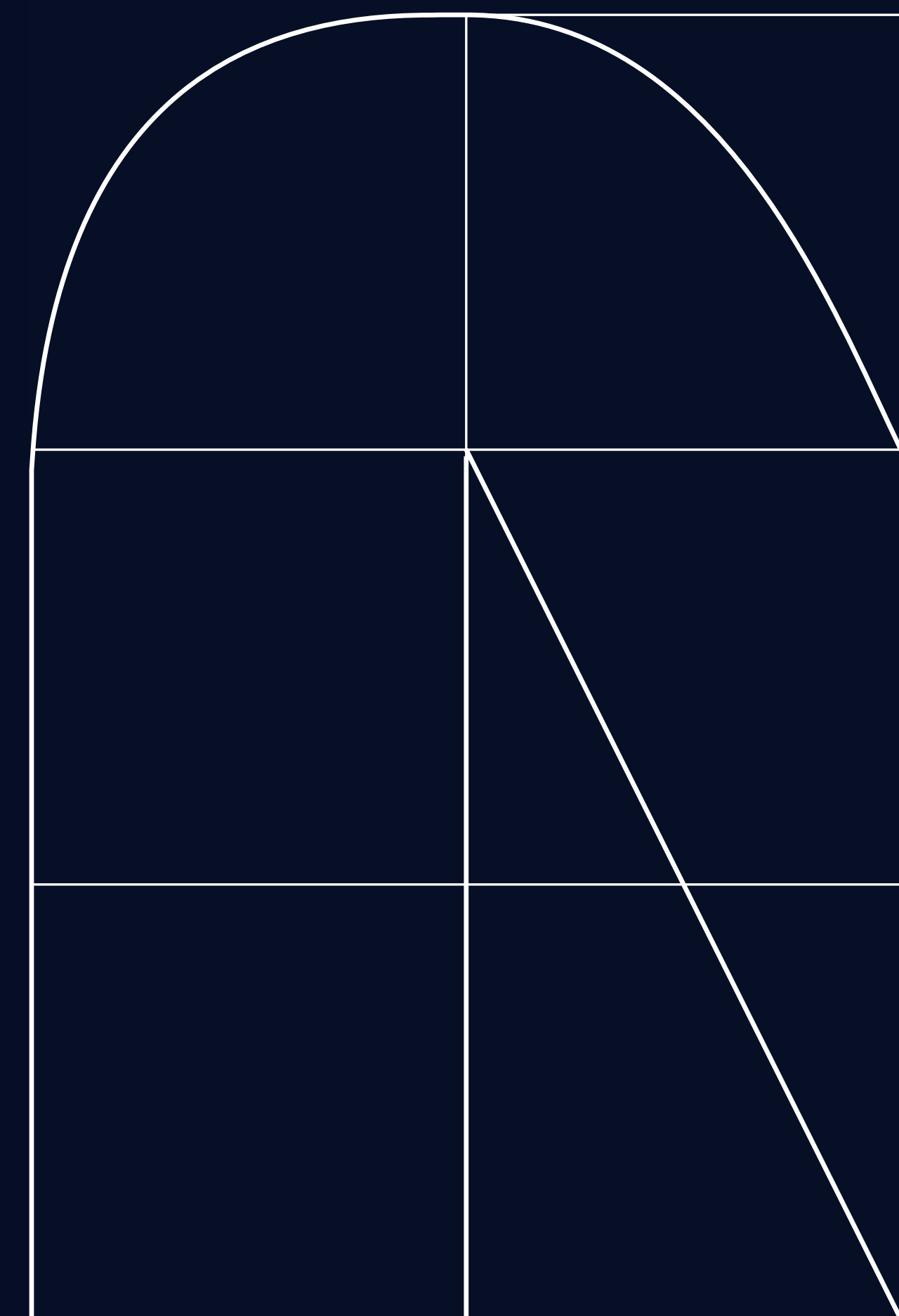




Let's  
talk.  
Less.

# Network and Operations.

Delivering more with less.





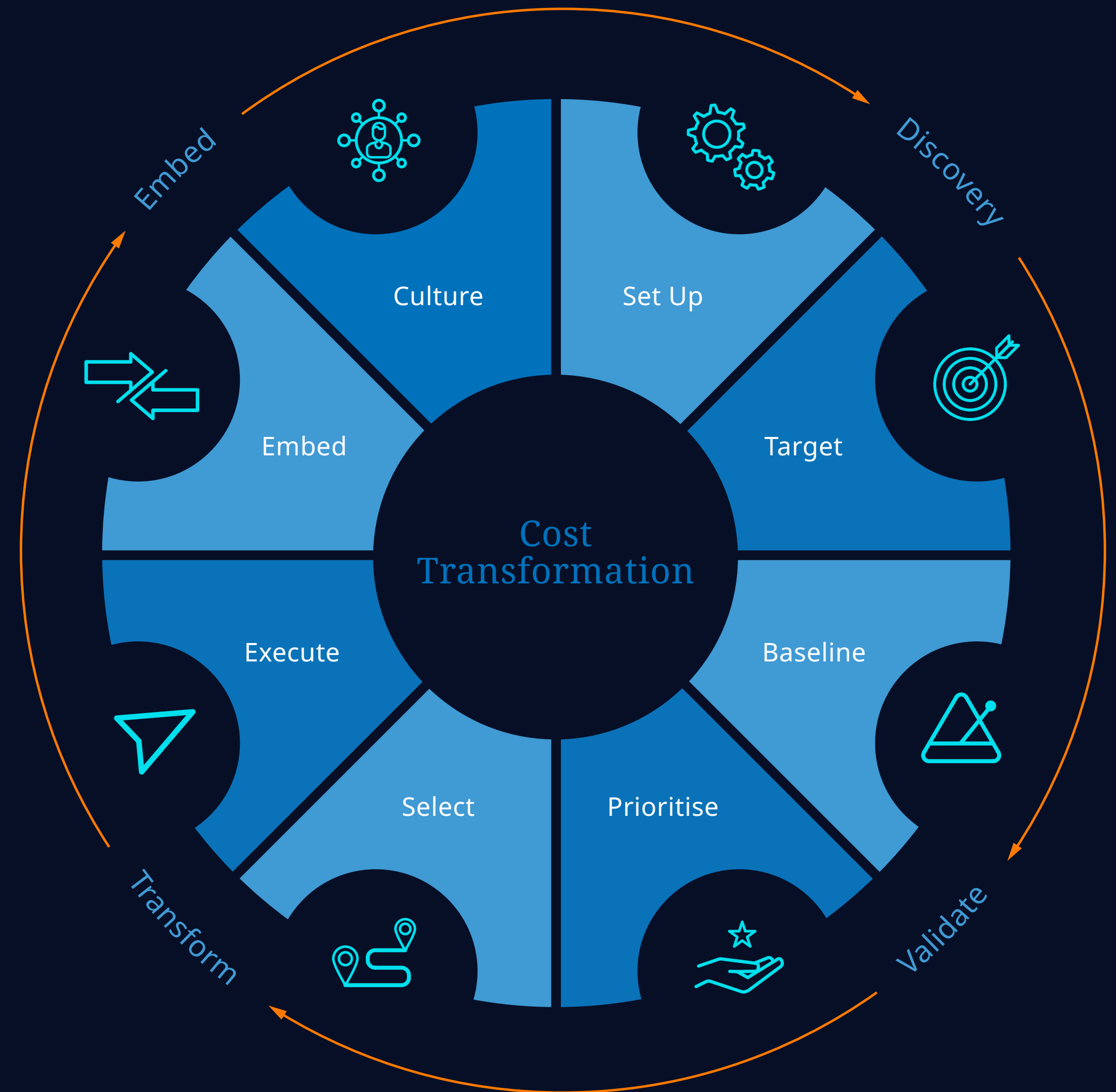
“ The network underpins a CSP’s core offering. Nothing else has such an immediate and direct impact on customer satisfaction, renewal and, ultimately, a CSP’s financial outcomes.

# Optimise network and operations for short-term wins and long-term gains.

The importance of the network and related operations to the success of any Communications Service Provider (CSP) cannot be overstated. It is at the core of your business. The digital requirements of business and society have driven the need for network reliability and speed to new heights, as well as increasing complexity and associated costs for CSPs.

With network costs representing an average of 50% of OpEx and 70% of CapEx for CSPs, network and related operations are the natural starting point when looking at significant and tangible cost transformation opportunities. This ebook is the second in a series that explores the strategies and executions that CSPs need to undertake to transform costs and embed efficiencies for sustainable growth. Our Cost Transformation Programme covers every aspect of the business as part of a systematic, continuously monitored framework that utilises world-leading AI technology to deliver savings.

Let's talk. **Less.**

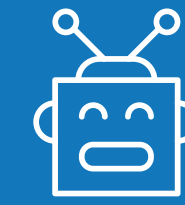


The NTT DATA  
Cost Transformation Programme.

# Where to start: Eight changes for network and operational gains.

Our goal is to enable CSPs to reduce and gradually eliminate inefficiencies caused by duplication or redundancy while driving better performance, operational efficiency, increased adoption of new technologies and improved customer satisfaction.

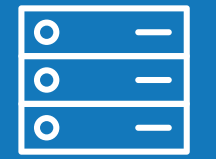
As part of our Cost Transformation Programme, we've drawn on our experience of delivering tangible results to identify eight areas of the network where substantial benefits can be delivered rapidly.



GenAI driven  
Predictive Fault Analytics  
Reduce network operational cost by  
30%\*



Operation process  
optimisation  
£18m-26m\*



Fixed line  
decommissioning  
£9m-18m\*



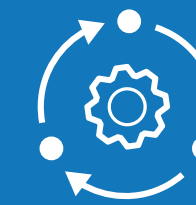
RAN optimisation  
and automation  
£9m-13m\*



2G & 3G sunsetting  
£26m-52m\*



Zero-touch assurance  
£9m-13m\*



Ways of working  
£13m\*  
per outsourced area



Reducing energy costs  
£18m-26m\*

\*Range of cost savings  
from actual projects

# 1. GenAI Predictive Fault Analytics.

## Situation

The move to the cloud over recent years has left CSPs with a complex hybrid of cloud and on-premises infrastructure.

## Challenge

The coexistence of new cloud and legacy infrastructure has made provisioning and maintaining networks and related services more complex. This has increased operating costs. In many cases, the existing Operational Support Systems (OSSs) are no longer fit for purpose and there is a significant risk that failure to detect and remediate faults quickly will cause service disruption and, ultimately, customer churn.

## Solution

AI-supported fault management allows you to analyse the necessarily vast amounts of data generated by new and legacy infrastructure in real time. NTT DATA's approach uses predictive analytics to remediate issues without human interaction. This drastically reduces service downtime while also controlling network and service operations and related costs.

Generative AI can be applied to deliver further benefits. Whether using text generation to create descriptive alerts and reports that make it easier to pinpoint issues, summarisation to condense network logs and reports or simulation to replicate situations without relying on the physical environment to carry out test and reconfiguration analysis, the scope for optimisation is vast.

## Outcome

The effective implementation and integration of AI support delivers **30%** network operational cost reductions on average.



## 2. Operation process optimisation.

### Automate processes with Robotic Process Automation underpinned by AI.

#### Situation

Robotic Process Automation (RPA) has been delivering higher levels of efficiency, with lower levels of cost for CSPs for the past decade.

#### Challenge

The increased power and availability of new AI technologies has expanded the scope of what can be automated and improved. A strong and consistent automation strategy is required to realise the full benefits and truly transform the cost base.

#### Solution

NTT DATA has successfully delivered the equivalent of £50 million in cost savings to date in a major European MNO, purely through applied RPA.

Now we are using AI to add higher levels of built-in intelligence and self-learning to core processes. It is becoming possible to optimise a whole range of processes, from OSS to incident response, through to end-to-end network patching. For one major European CSP, we have we have delivered a 40% reduction in cycle times.

#### Outcome

In all cases, the goal is to improve quality, and reduce the resources and time spent on managing processes. Taking cost out and delivering higher levels of satisfaction are the measures of success. Typically, we can deliver **£15 to £30m** in savings through OSS and process automation.



# 3. Fixed-line decommissioning.

**Remove obsolete infrastructure, simplify overall operations and deliver on the greener operations promise.**

## **Situation**

As the roll out of Fibre to the Home (FTTH) speeds up across the country, the traditional copper wire fixed lines to individual buildings are becoming redundant.

## **Challenge**

This step change in technology is an opportunity for CSPs to cut costs and deliver benefits.

## **Solution**

A targeted programme of copper wire removal makes it possible to eliminate maintenance costs, close down legacy energy and management hardware, phase out applications and recycle existing equipment. Often, this not only helps pay for the decommissioning costs but can also deliver a one-off profit.

## **Outcome**

Existing ducts can be reused for fibre rollout and operational costs are permanently reduced – fast. We have helped one client to recover and recycle or dispose of **over 40%** of their removed copper wire network.



# 4. RAN optimisation and automation.

**Reduce costs, accelerate roll-out, raise quality and improve flexibility.**

## Situation

Every mobile network depends on Radio Access Networks (RANs) to connect all devices to the network. The performance of all these contact points has a significant impact on cost and quality.

## Challenge

Optimisation of contact points at scale is always a challenge. However, it is particularly pressing when expanding networks, entering new territories or rolling out new technology. The drive to implement 5G makes this a critically important area for optimised management and targeted efficiency gains.

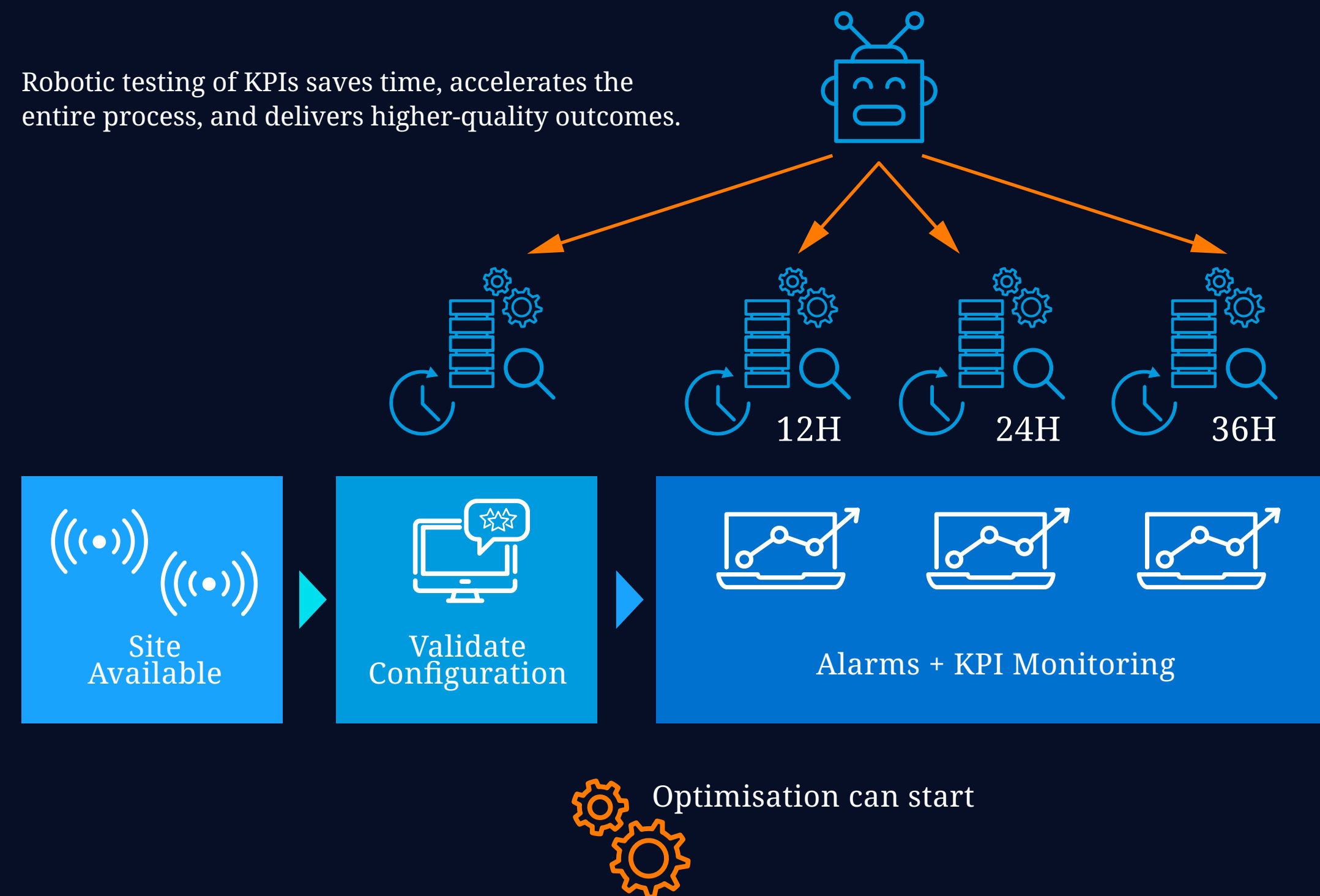
## Solution

With advances in automation, we can now use automated processes to identify the best possible configuration, validate the approach selected and then test KPIs in action. Whenever undertaking RAN optimisation, it is important that changes support the effective transition towards the deployment of Open RAN (ORAN). We are conscious of the need to realise effectiveness and we work with specialist partners to implement a robotic approach that delivers significant benefits.

## Outcome

Free up capacity to deliver extra revenue, reduce CapEx by making the whole process more efficient, and dramatically reduce roll-out time. Combined CapEx and OpEx savings can reach **20% to 30%** compared with existing assumptions.

Robotic testing of KPIs saves time, accelerates the entire process, and delivers higher-quality outcomes.





## 5. Sunsetting 2G & 3G.

**Eliminate redundancy, cut both energy and carbon use, free up capital and resources.**

### **Situation**

As the 5G rollout accelerates, the need for existing 2G and 3G networks, equipment and related systems is disappearing.

### **Challenge**

As long as these now largely redundant networks are in place, however, they continue to use energy, take up management resources and make it harder to invest in the future.

### **Solution**

We have a proven, systematic approach to decommissioning, based on...

- (1) undertaking network audit... (2) piloting action to test...
- (3) conducting field audit to identify.... (4) developing business case for each...
- (5) executing agreed action plan

### **Outcome**

The fast and efficient process leads to reduced OpEx through a lower network footprint and contribution to CapEx by freeing up funds for profitable investments. This typically saves **£25m to £50m.**

“

One of the most effective steps to save on energy costs and reduce the carbon footprint is sunsetting 2G and 3G, paving the way for improved services in the years ahead.



## 6. Zero-touch assurance.

**Manage CSP services effectively to improve customer satisfaction and drastically reduce operational expenditure.**

### **Situation**

Unplanned growth of infrastructure and the management systems required to handle it have left CSPs struggling to meet customer expectations on service delivery times.

### **Challenge**

The failure of operation platforms to communicate effectively with one another hampers CSPs' abilities to remain competitive.

### **Solution**

We draw on experience to design optimal management systems orchestration and plan for a smooth transition from current status to a fully automated, zero-touch capability. This is possible by leveraging Machine Learning and AI-related tools to automate much of the activity currently carried out at the Network Operating Centre (NOC).

### **Outcome**

This delivers better response times for incidents, cuts costs for resolution by **40%** and drives down management costs by more than **50%** while paving the way to drastically improve CSPs' time to market.



# 7. Ways of working.

**Work differently, work better, save money.**

## Situation

There are inefficiencies across almost every activity within a typical CSP's operations that, taken alone, may not lead to dramatic savings, but, solved together, can free up significant capital.

## Challenge

In practice, dedicating the specialised human resources required to manage these activities more efficiently is challenging. It can be difficult to achieve the right balance of in-house and outsourced resources.

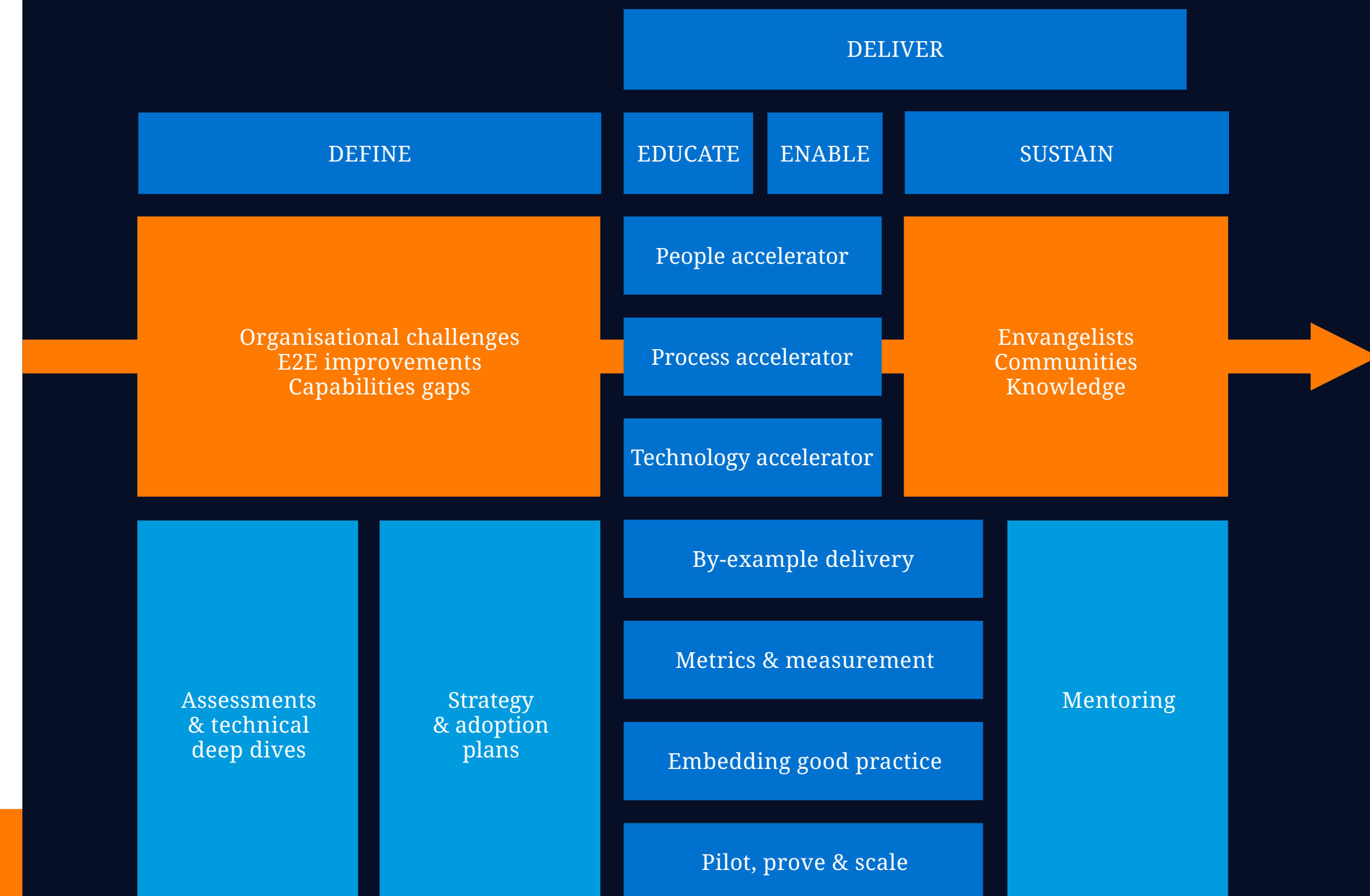
## Solution

By correctly sourcing the delivery of some key activities, it is possible to deliver significant efficiency savings. NTT DATA utilises a 'DEEDS' methodology to deliver the best operational model. We work with CSPs to define areas for operational improvement, enable a strategy for change, educate the resources responsible for managing the change and then deliver and sustain the measures and benefits at every stage.

## Outcome

The way an organisation operates and works is a key factor in maximising operational efficiency – there is a great deal of potential profit waiting to be unlocked and delivered – typically in excess of **£10m** per project focus.

NTT DATA's DEEDS methodology helps enterprises identify areas for operational improvement, develop a strategy for change, and then deliver benefits and measures at every stage.

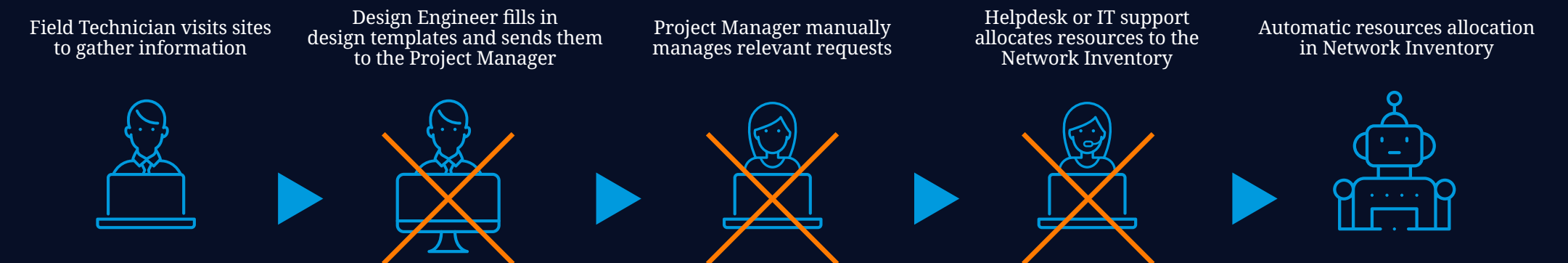


# 7. Ways of working, cont'd.

Four common areas to begin focussing on are:

- 1 Faster development and shorter time to market.** Using DevSecOps and now, increasingly, collaborative development platforms with simulation built in, it is possible to deliver Minimum Marketable Products (MMPs) in place of Minimum Viable Products (MVPs). This ensures faster delivery into the market and higher quality from day one of use.
- 2 RAN acceptance automation.** We have a proven method for automating field site surveys, cutting time and cost from the RAN process. This is a key factor in competitive advantage, while also delivering major cost savings.
- 3 Using standard templates for field site surveys.** This delivers continuing efficiency gains. The entire process can be largely automated, freeing skilled engineers' time for more productive activities.
- 4 Targeted insourcing.** Bringing key activities back into the company has been proven to deliver major cost savings if properly handled. We follow a rigorous method designed to identify activities that can be better and more efficiently handled in-house. We build a business case, with targeted savings for each transformation initiative.

## Use case: Automating the field site survey for RAN acceptance



# 8. Reducing energy costs.

## Identify, understand and reduce waste.

### Situation

Against a backdrop of rising energy prices, excess energy usage is perhaps the single greatest driver for unnecessary expenditure for CSPs.

### Challenge

Whilst CSPs are typically aware of their rising energy costs, it can be difficult to identify the causes of wastage and improve them.

### Solution

We use data collected by IoT devices and AI analysis to determine priority areas for efficiency gains in key facilities, including substations across the network. As well as reducing energy wastage, this enhances security and predictive maintenance, raising reliability levels.

We also improve connectivity efficiency for networked devices, reducing energy use, not just in the network itself but in the devices connected to it.

### Outcome

Customers can check their energy use in real time via a dashboard and make rapid adjustments, delivering up to **10%** savings per device.



# Move from ad-hoc initiatives to embedded cost saving.

There is a compelling need to reduce fixed costs, cut down on cost to serve and improve efficiency across almost all aspects of network infrastructure in most CSPs. It is the natural starting point for exploring cost transformation and long-term growth. NTT DATA's Cost Transformation Programme, driven by a dedicated Cost Transformation Office, focuses on cost savings through operational improvement. We help the entire business save money, increase efficiency, improve customer focus, become better able to deliver superior experiences, maximise the potential of advanced technology, and, ultimately, to rethink and remake their operational realities.

# Act fast to achieve greater efficiencies.

There are significant opportunities to make efficiencies across the full breadth of a CSP's network infrastructure and operations.

**£400,000**

collected from legacy disputes, 50% cut in backlog and 6-month reduction to dispute resolution time by transforming dispute resolution processes.

**£1 million**

savings identified in a year through the identification of 24 opportunities to reduce costs. Equal to 5% of the total regional budget.

**£12 million**

saved through cost improvement programmes that included reducing Selling, General and Administrative (SG&A) costs through process improvements and removing non-value-added activities.



See the possibilities of less. Book a complimentary, 45-minute network infrastructure cost transformation strategy session to get started. [Let's talk.](#)

With its heritage in the communications industry, NTT DATA is the global ICT services division of the NTT Group, which also contains Docomo, NTT East and NTT West. This gives us unique experience of transforming telecommunications companies.

As a trusted global innovator, NTT DATA employs over 140,000 people in over 80 countries, leveraging information technology to create new paradigms and values that contribute to a more affluent and harmonious society.

We support our clients in their digital transformation journeys through our portfolio of consulting, applications, infrastructure, business processes, IT modernisation and managed services, to deliver measurable business impact. Innovation is at the heart of our business, and we continue to explore advanced technologies – bringing to market pioneering ideas that respond to shifting customer needs.



“ Implementing true cost transformation is a complex challenge. Moving from strategy to delivery and adoption is the key for success.”



