

NTT Data

SKILLS

Bridge the growing
skills gap with
automation and
Tech Academies

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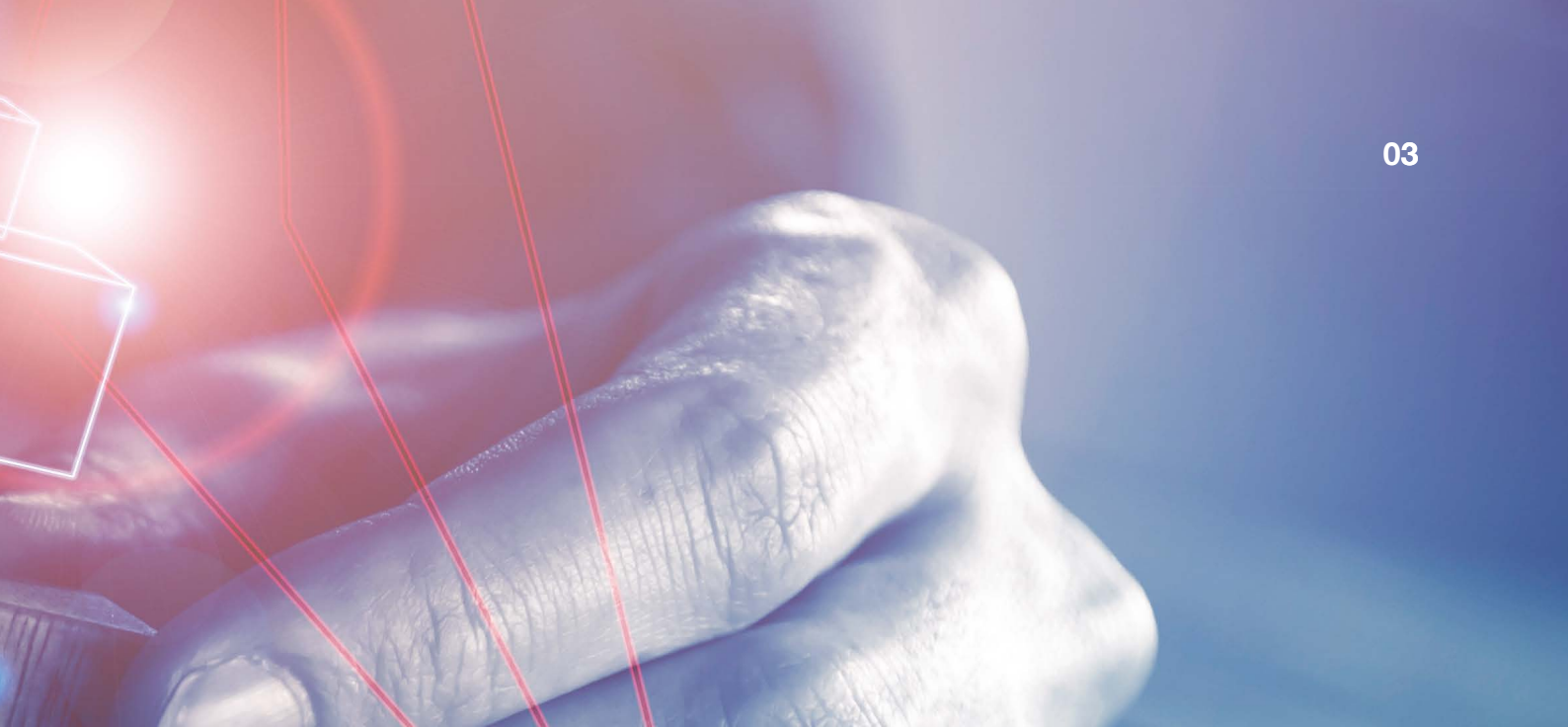
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Executive summary

Technology companies face a growing skills gap and the pandemic has made the situation worse. Automation can help, especially when combined with a structured programme of cross/upskilling using Tech Academies.

Automation typically frees existing personnel from the burden of routine manual tasks. This is in addition to other benefits such as improved efficiency and lower costs. These personnel are a valuable resource that can be redeployed to more rewarding roles, but only if they receive the right training.

It therefore makes sense to establish a structured approach to cross/upskilling alongside automation initiatives, and that's where Tech Academies come in.

Combining automation and Tech Academies can optimise costs and provide a more rewarding work environment, resulting in happier employees and a more productive workforce.

With sales personnel in the front line of generating revenues and delivering a great customer experience, sales can be an especially beneficial place for some of the newly upskilled personnel to land. Sales Academies add an extra dimension to more-general Tech Academies by preparing new arrivals and existing sales personnel to work with the latest digital solutions.

The skills gap challenge

Employers now take an average of 66 days to hire a new technology employee, up from 55 days in 2018 and 43 days in 2015. Hiring managers are losing time and money as they struggle to fill technology-related positions. Put simply, there is not enough technology talent available to meet demand.

The pandemic supercharged the drive for digital transformation, placing heavy demands on technology professionals. In fact, much of our collective business recovery from COVID can be attributed to their hard work. In theory that should make technology an attractive sector for talented professionals and early-career candidates, yet employers are still struggling.

One way to tackle the challenge is to automate manual processes/workflows in routine functions and use upskilling to recycle talent to other, more rewarding areas. This approach can optimise costs, as well as engaging staff and helping with retention.

Sales is another especially good example of a business area where the skills needed are changing rapidly with the adoption of advanced, digital solutions. That makes it a key target area where newly liberated personnel can be successfully redeployed, but only with the right training.





Develop an automation roadmap

Start by looking for automation opportunities and prioritise them based on business value. Use this to develop a clear roadmap for automation.

Establish a self-funded automation centre of excellence (CoE) to drive the delivery of automation and generate benefits. This will create cost efficiencies and, more importantly, free up talent from overemployed areas of the business.

Set up a Tech Academy to cross/upskill the recycled talent pool to serve understaffed or new areas of the business, such as cybersecurity, cloud migration, automation/RPA, digital engineering or low-code development. The Academy can also onboard graduates to create another cost-efficient source of talent with the right skills.

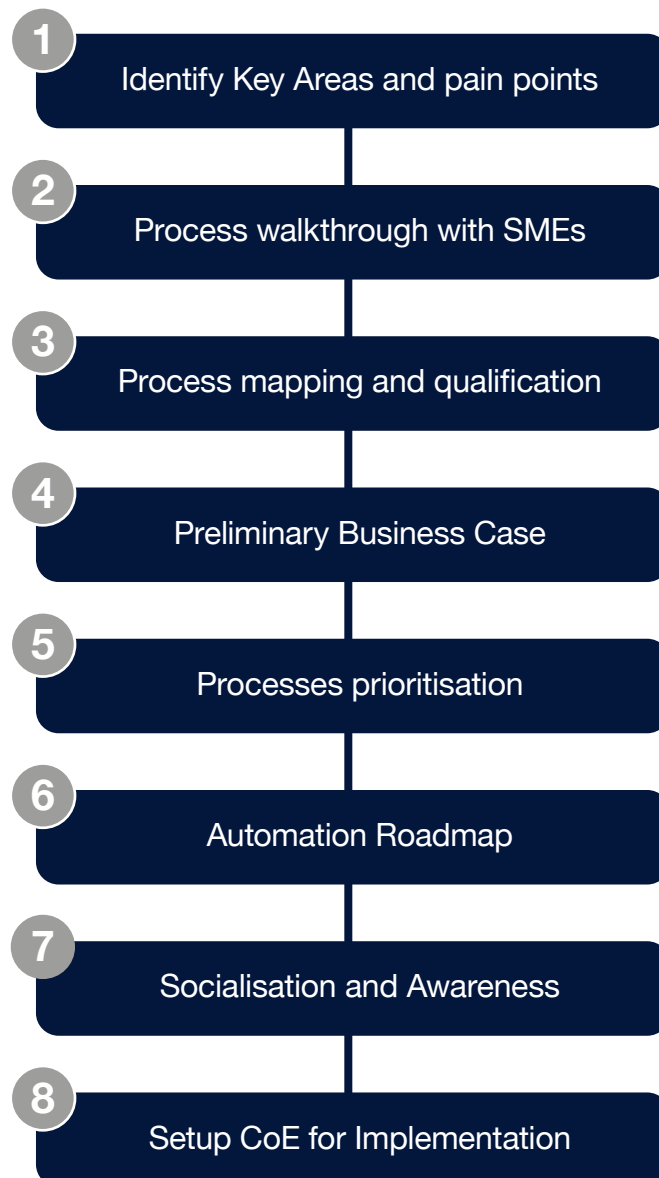
Similarly, a Sales Academy can be set up and operated in parallel to cross/upskill parts of the recycled talent pool. NTT DATA has helped many clients build and roll out operating solutions to develop their sales force, guided by the vision of the Sales Academy: The aim is to enhance each person's productivity, instil market-beating standards of behaviour and consistently deliver the best employee experience.

Our proposed solution

A. Discover automation opportunities

NTT DATA uses a robust framework to identify and prioritise automation opportunities across diverse business functions. We build an automation roadmap and communicate it across the

organisation, so everyone is aware of the potential benefits. This sparks the conversation needed to establish a self-funded automation CoE.



Our experience shows that most opportunities can be found in the following areas, although there may be others:

Finance:

- Accounts receivable processing
- Accounts payable processing
- Operational finance and accounting
- Financial planning and analysis
- Regulatory and management reporting
- Accounting change
- Expense reimbursement
- Intercompany reporting
- Account and bank reconciliations
- Standard journal entries

Procurement:

- Contracts management
- Purchase management
- Purchase orders management
- Conciliations
- Reporting
- Supplier management

Human resources:

- Resource onboarding
- User credential creation and access termination
- Time record validation
- Employee benefit invoice reconciliation
- Payroll batch import and validation
- Employee master data
- Travel and expense management

- Position management
- Learning and development administration
- Spend analytics and reporting

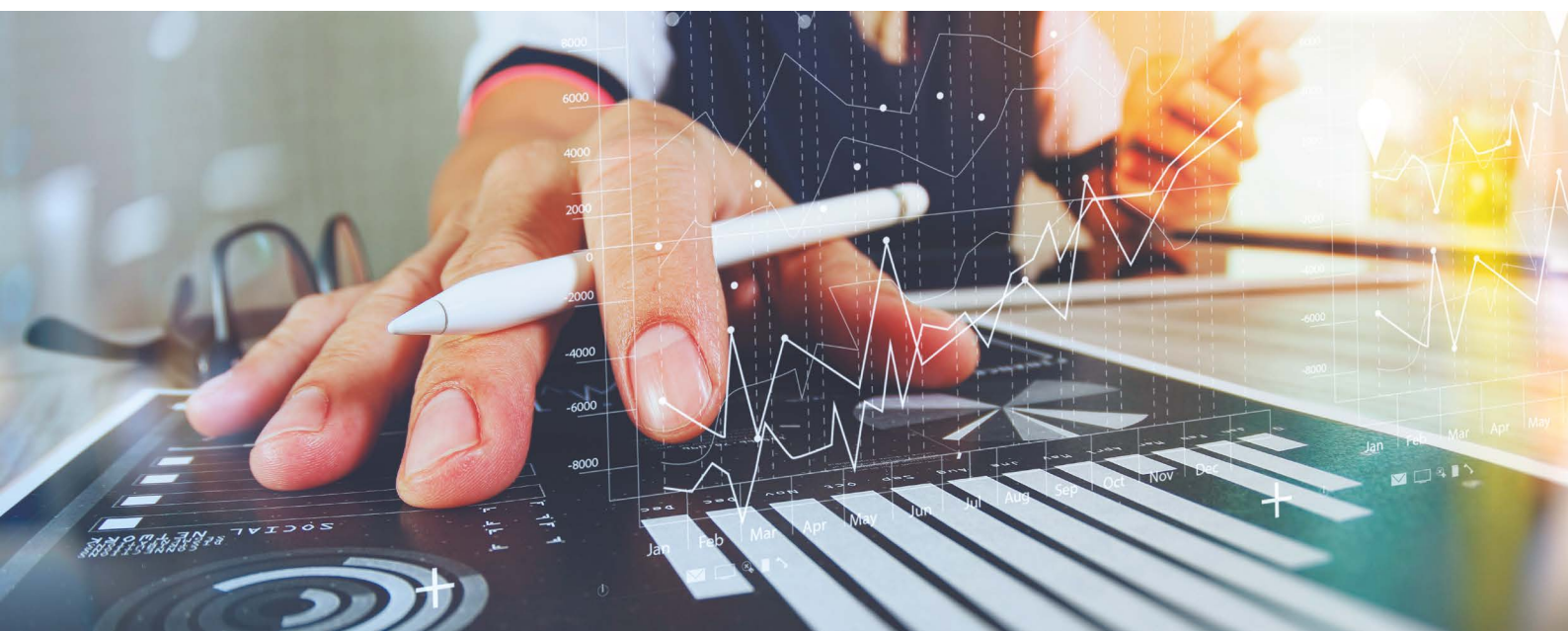
Operations:

- IT operations
- 1st, 2nd, and 3rd level operations
- Network operations
- Call centre operations

Cyber risk and resilience:

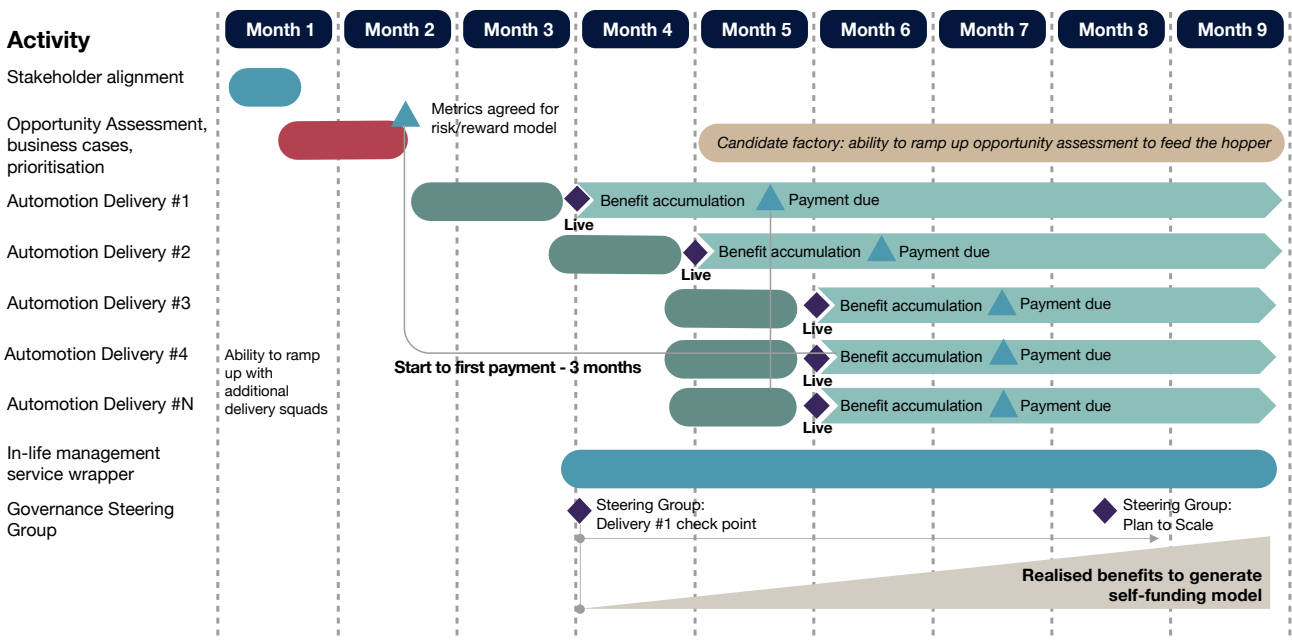
- Analyse standardised control evidence to substantiate effectiveness
- Examine system logs to identify suspicious or illegal activity
- Validate customer due diligence information and register it with the account opening system
- Compile information into standard reporting formats and act on the results
- Reconcile processes, risks and controls across operational risk management and business process management systems
- Suspicious activity report preparation based on AML monitoring outcomes
- Run models and prepare reporting based on model outputs

We identify and prioritise the automation opportunities to end up with a clear automation roadmap. We can then set up the automation CoE with confidence that the desired benefits will be realised.



B. Setting up a self-funding automation CoE

Before we examine the CoE setup in more detail, let's look at the self-funding element of it.



Once the automation opportunities are clearly defined, NTT DATA's automation experts can start work on the first set of prioritised initiatives. What makes our approach different is that investments are paused till benefits are realised. We go live with

the first initiatives, realise the cost savings and then use them to fund the follow-up initiatives. NTT DATA have proved this model with many clients, which is highlight by the work done with Global Tier 1 Telco further in this paper.

	Discovery Phase	Launch Phase	Scale up Phase	Expand Phase
Maturity level				
People	<ul style="list-style-type: none"> Draft the Robotic Operating Model (ROM), governance and change management approach 	<ul style="list-style-type: none"> Augment the Automation squad Assess job role impact Start communications and Automation awareness 	<ul style="list-style-type: none"> Establish an Automation Centre of Excellence (CoE) Training (business and technical) 	<ul style="list-style-type: none"> Move to RPA DevOps RPA for new business models/strategies RPA is BAU
Process	<ul style="list-style-type: none"> Identify processes and drives Define proof of concept (PoC) Create business cases 	<ul style="list-style-type: none"> Extend the pilot to production Measure outcomes Create demand backlog within initial domain 	<ul style="list-style-type: none"> Engage with other domains Establish best practices Update Business Cases Deploy RPA business continuity 	<ul style="list-style-type: none"> Enterprise wide - back middle & front office Lean methodology & process re-engineering
Technology	<ul style="list-style-type: none"> Define NFRs Vendor selection (if not identified) Infrastructure assessment 	<ul style="list-style-type: none"> Deploy platform Deploy methodology Deploy initial Automation rules Infrastructure provisioning 	<ul style="list-style-type: none"> Scale platform as needed Introduce AI & analytics 	<ul style="list-style-type: none"> Embed within IT change management to increase resilience

We follow a phased approach across People, Process and Technology to develop the automation CoE, transfer it to the client and support the subsequent scale up (see above).

The automation CoE can also benefit from our capability accelerators, which are powered by NTT DATA's Intelligent Automation platform, Clonika (<https://www.clonika.com/en>). These include:

- Digitalisation of documents through Optical Character Recognition (OCR)
- Invoice management classifies and extracts data from invoices using AI
- Document classification is automatic, even for documents using unknown typology
- Semantic analysis enables knowledge extraction from documents with unstructured text
- Integrated BPM enables automation integration between the robot and the human
- Process mining analyses RPA logs to spot improvement opportunities and anomalies

Clients can also benefit from NTT DATA's technology alliances in the automation space (Blue Prism, UI Path, Automation Anywhere). We always play the role of a vendor-agnostic provider, which means we can deliver a project using whichever technology best meets the client's needs.

NTT DATA assumes the risk for automation delivery. In plain terms, this means we don't get paid until our clients realise the risk. This helps ensure that the right solutions are deployed and any benefits are realised appropriately. We have done similar exercises for multiple clients, delivering significant business benefits:

- **Global Tier 1 Telco: Centre of Excellence and BPO solution factory setup**
 - 104 processes automated
 - 290,000+ workhours/year saved
 - 26 solutions implemented
- **Tier 1 UK Telco: Network faults**
 - Automate collation of Network fault ticket information before resolution
 - 180 FTE savings from 200 FTE baseline
 - 58% OPEX reduction in IP network operations

- **Global Tier 1 Insurer: Claims adjudication**
 - Used AFTE and OCR to fully automate decisions
 - 90% reduction in processing time per claim
 - 100% accuracy against a 99% target
- **Global Tier 1 Telco: Web service monitoring**
 - Monitor 'server unreachable' alerts
 - Productivity improvement of 60%
 - Cost reduction of 732 man-hours per month
- **Tier 1 UK Telco: Enterprise-wide automation**
 - Delivered automation initiatives using UiPath & NICE
 - 100+ processes across procurement, order fulfilment and finance
 - 175 FTE savings from 360 FTE baseline
- **Tier 1 UK Insurer: Duplicate claims**
 - Identification and processing of duplicate claims
 - 4 BOTs processing 6,000 claims per month with consistent results and speed
 - 100% accuracy rate against a 99% target
- **Tier 1 UK Insurer: Policy creation**
 - 41% improvement in team productivity with equivalent FTE benefits
 - 29% reduction in cycle time, where delays have a direct impact on same day policy approval

Employee resistance is often the main barrier when scaling automation initiatives. It's understandable, when 60% of workers believe they will lose their jobs because of automation. That's why a culture shift is so important.

Automation can deliver a more productive work environment that increases each employee's value to the organisation. Critically, automation at scale can also improve employee satisfaction, employee engagement and grow profits. Here's how:

- **Take over routine, repetitive tasks that employees dislike**
- **Mitigate higher workloads as the need for data and regulatory compliance increases**
- **Offer employees an opportunity to perform more interesting work, enabling them to reach their full potential**

Talent Academies help organisations fill sourcing gaps by repurposing the existing resource pool. But they also play a central part in automating manual tasks and freeing employees to explore their potential in more rewarding roles. The same structures can be used to onboard graduates, train them in specific skills and effectively fast-track them into the workforce. In addition, NTT DATA's Sales Academy framework can also be used to nurture the Tech to fill business development gaps.

C. Tech Academy for existing staff and graduates: Leveraging NTT DATA's PACE programme

We have built numerous Tech Academies for clients across multiple skill sets. They are an effective mid-to-long-term solution for plugging ongoing resource gaps. They can be used successfully to add further resources at regular intervals or in anticipation of demand increasing. They can also provide a way to cross/upskill existing talent that needs to be repurposed in response to automation.

NTT DATA's PACE (Programme for Accelerated Career Excellence) programme has been designed to address multiple challenges and focus on delivering value in different ways:

- Retain knowledge and IP through talent up/cross-training
- Reduce costs by limiting expensive new hires
- Nurture a passionate and loyal workforce
- Bring highly skilled, low-cost graduates on board
- Achieve a cultural and technical match

The four stages of the PACE lifecycle:

- **ASSESS the internal talent pool**
 - Understand the key skills required
 - Model how each resource fits within the organisation

- Define the value proposition for each resource
- Understand skills that still cannot be sourced internally, even after training

- **RECRUIT graduates to fill skill gaps**

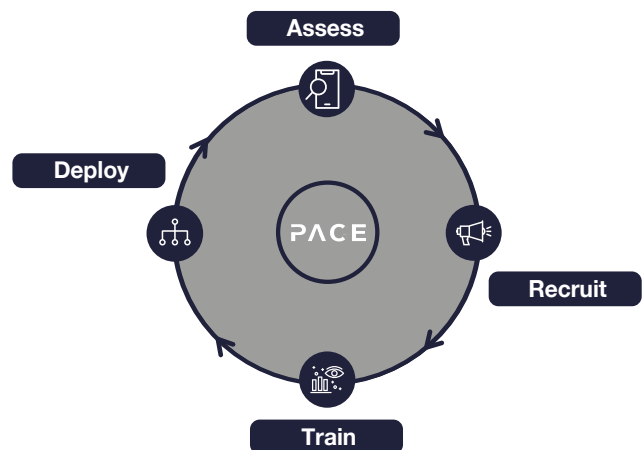
- NTT DATA interviews all candidates and puts forward the top 10%. The organisation then selects preferred candidates for joint interviewing
- Manage on-boarding and induction
- Focus on each applicant's appetite to learn and cultural fit

- **DEPLOY NTT DATA trainers**

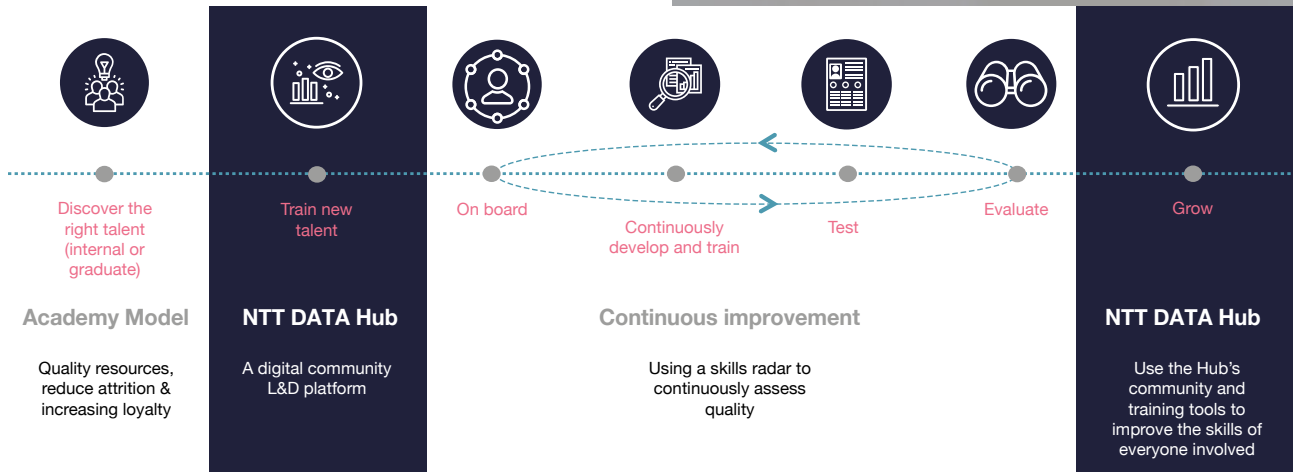
- A PACE squad works with senior NTT DATA delivery management to support and mentor recruits onsite
- Measure improvements and address skill gaps
- Explore TUPE options

- **TRAIN internal staff and graduates**

- Create a bespoke training programme via the NTT Hub
- Design training to match exact tools
- Combine live lab and vendor certifications with classroom-based learning



How PACE works:

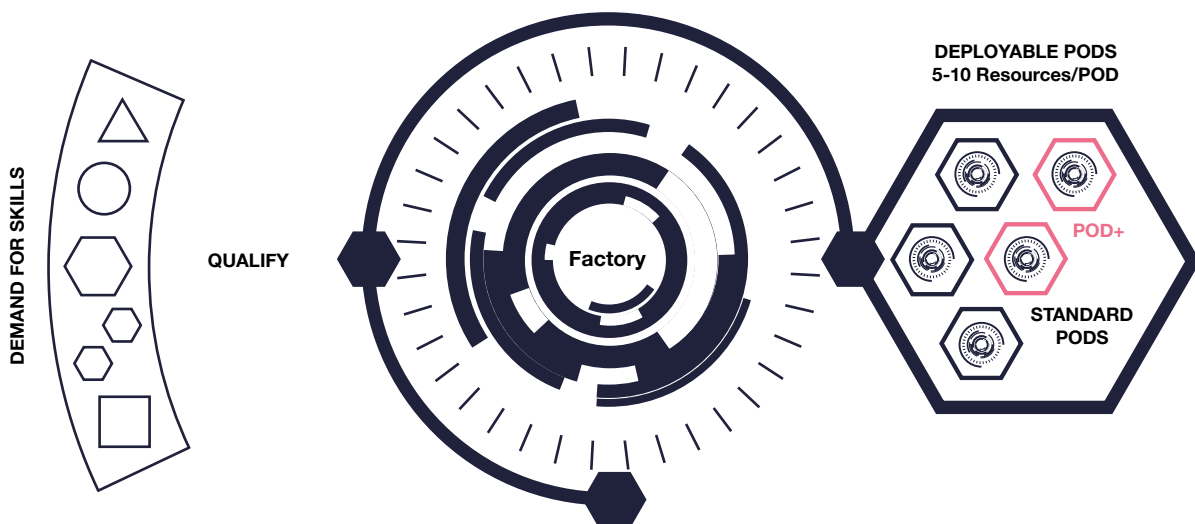


PACE is a structured learning platform that digs deeply into the skill gaps and learning needs of individuals. The programme is reviewed and adapted on a monthly basis.

- Identify learning needs across individuals and/or teams
- Combine qualitative and quantitative metrics to create consistent measurements of learning
- Measure individual, team and enterprise skill gaps
- Build a training plan based on accelerated, targeted learning



ACADEMY MODEL



BUILD ACADEMY & PODS

QUALIFIED PODS

ASSESS

- Question Bank
- Design Inputs for Assessment
- Assessment Criteria

RECRUIT

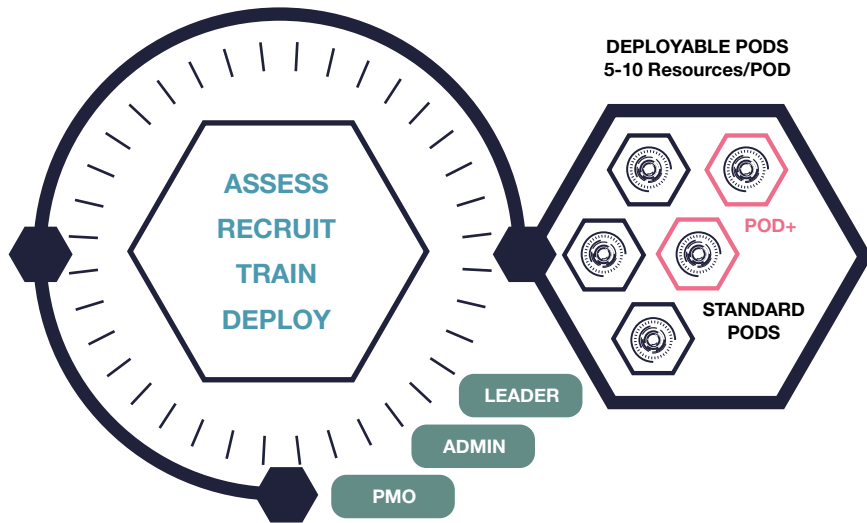
- Technical & HR Questions
- Design Input for Assessment
- Assessment Criteria

TRAIN

- Existing Training Material
- Or Procure Training Content
- End Point Assessment Criteria

DEPLOY

- Induction Material
- Project Related Material
- Roles & Community Design Input



The four phases of enabling the Academy structure are:

ASSESS:

- Build a customised recruitment campaign to assess talent from across the UK
- Define the employee value proposition (EVP)
- Provide a clear implementation plan

RECRUIT:

- NTT DATA and the client both interview each candidate but the successful recruits are hired by NTT DATA, who manage the on-boarding and induction process
- Focus strongly on each candidate's appetite to learn and cultural fit

DEPLOY

- The Academy is deployed in the form of a POD, with an experienced service delivery lead to mentor and manage on-the-job training
- The programme runs for a minimum of 12 months to reach the required level

TRAIN

- Create a bespoke training programme via the NTT Hub
- Combine classroom, practical and live lab training, including vendor certifications, to accelerate the learning process

RUN ACADEMY & PODS

QUALIFIED PODS

ASSESS

- Assessor (1 FTE)
- Admin (0.5 FTE)

RECRUIT

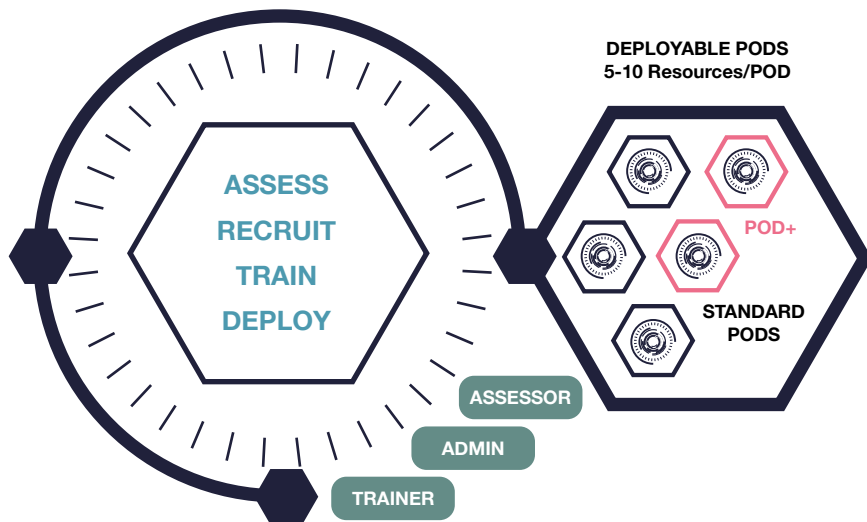
- Technical Assessor (1 FTE)
- HR Assessor (0.5 FTE)
- Admin (0.5 FTE)

TRAIN

- Trainer (1 FTE)
- Assessor (1 FTE)
- Admin (0.5 FTE)

DEPLOY

- Trainer (0.5 FTE)
- Moderator (0.5 FTE)
- Admin (0.5 FTE)

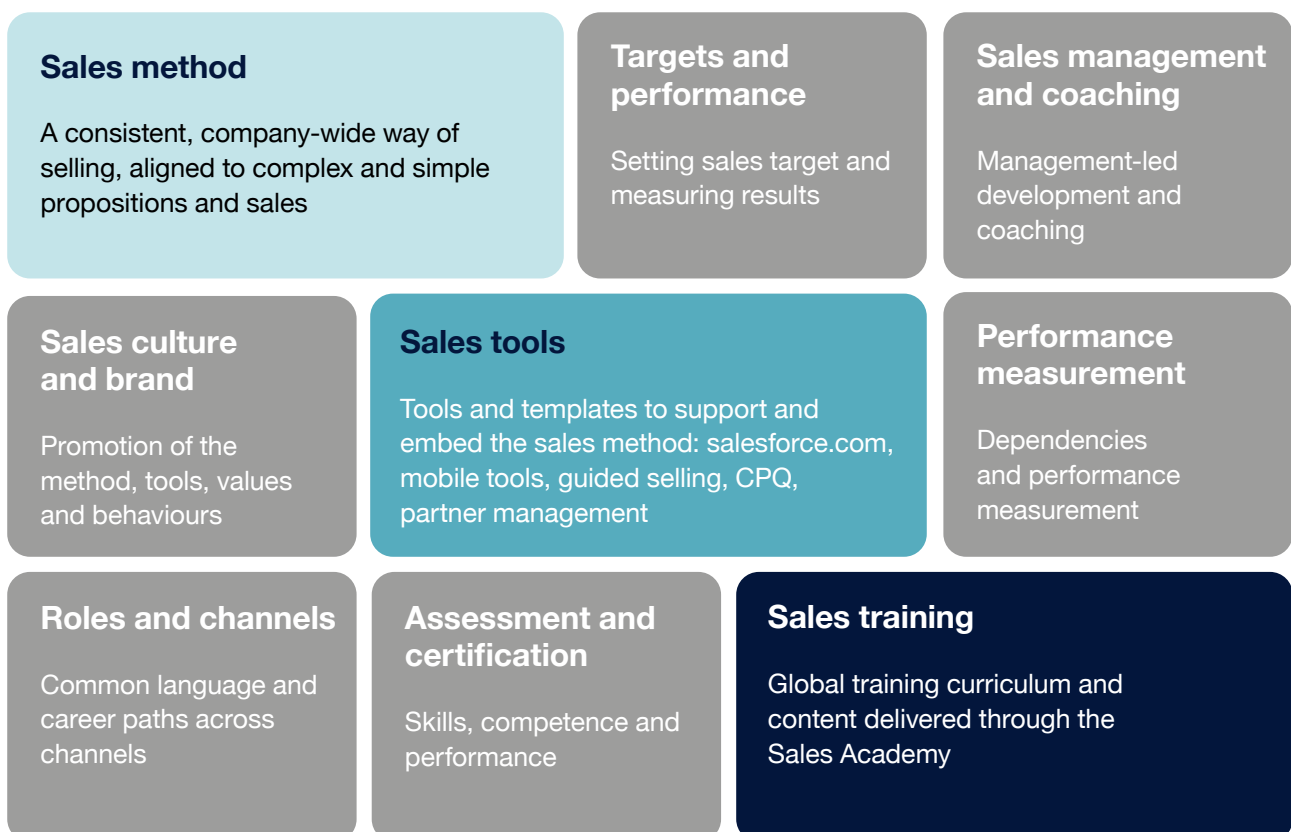


D. Sales Academy for existing staff, driving superior performance

NTT DATA's Sales Academy transforms our clients' salesforce, their customer interactions and their business outcomes. Over 15,000 client sales people globally have so far benefited from improved sales methods, integrated tools and tailored learning and development solutions.

Specific benefits include:

- Simpler, more accurate sales forecasting
 - Improved lead qualification, focusing sales resources on the best prospects
 - Increased lead-to-sales conversion rates, with 90% of sales people reporting improved pipeline and opportunity management
 - Increased win-rate because deals are better clustered according to type and size
- **Sales organisation diagnostic:** Conduct a rapid discovery phase and sales management health check to validate problems and recommend initiatives with near-term returns
 - **Sales performance and coaching:** Redefine the sales manager role as a coach with data-led performance management
 - **Organisation design effectiveness:** Review the team focus, design and culture across sales and adjunct teams
 - **Learning and development:** Adopt a tailored curriculum, with associated certification and career paths
 - **Sales strategy, resource allocation and targeting:** Plan for an improved sales culture, with a focus on business benefits and outcomes
 - **Accountabilities and governance:** Review operational sales processes and role/ channel profiles



NTT DATA has the right solutions to plug the skills gap

As technology companies continue to wrestle with the ever-widening skills gap, NTT DATA believes that at least part of the solution often lies close to home.

Automating routine tasks can free up valuable in-house resources to work in more rewarding roles. Our extensive experience of delivering digital solutions across a range of businesses means we have the proven tools and techniques to help clients identify and implement the automation initiatives that will deliver the biggest benefits. We implement digital solutions using agile techniques to minimise risks and maximise returns.

Meanwhile, our established Tech Academy structure for cross/upskilling enables the rapid redeployment of existing resources to more interesting roles. We also identify areas where needs cannot be met from the existing talent pool and help clients recruit and train recent graduates to meet outstanding resource requirements.

In addition, our Sales Academy can transform the clients' salesforce, customer interactions and business outcomes.

The business benefits of combining focused automation with the NTT DATA Talent Academies are significant:

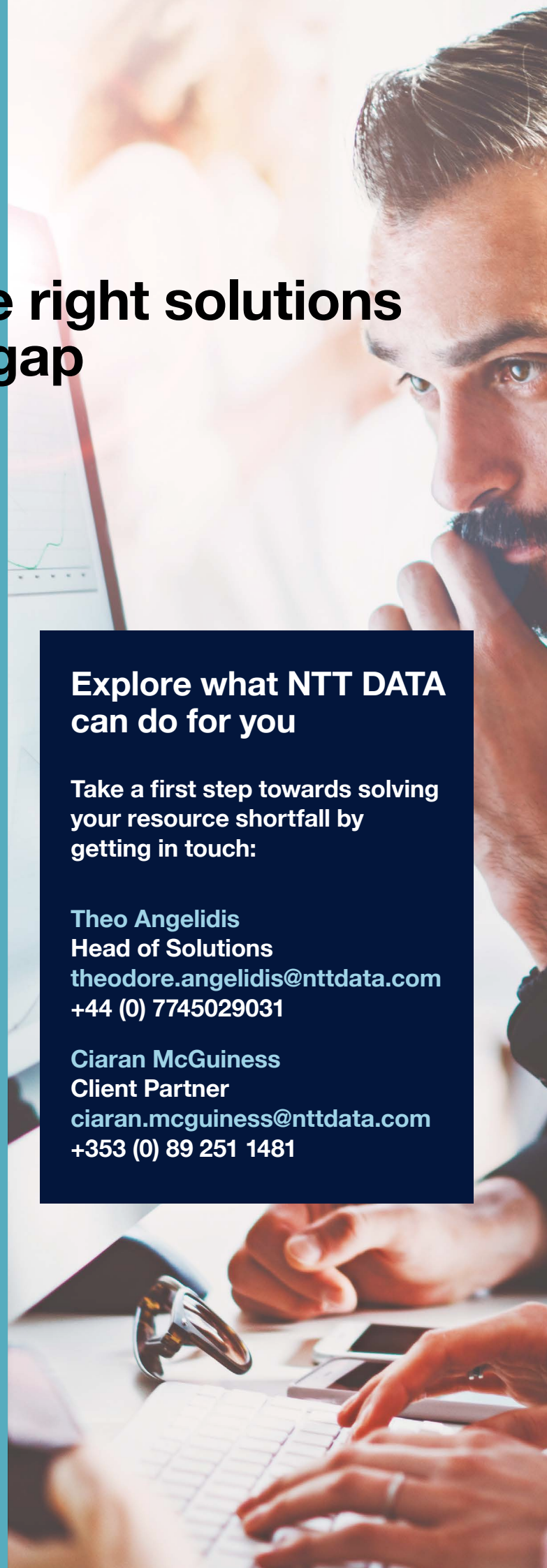
- Cost optimisation through automation
- Employee happiness through cross/upskilling and providing new challenges
- Lower workforce attrition by improving the EVP
- Avoid expensive hires to fill talent gap and use skilled graduates instead
- Achieve a fully productive workforce, limiting waste

Explore what NTT DATA can do for you

Take a first step towards solving your resource shortfall by getting in touch:

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NTT DATA is a leading consulting and IT services provider, combining global reach with local expertise in over 50 countries. Whether it's business transformation, enabled by digital, data and technologies, safeguarding against security breaches, improving operational efficiency or driving new revenue streams, our vision as the Trusted Global Innovator can help organisations navigate the ever-changing digital landscape and deliver outstanding results.

NTT DATA offers a portfolio of best-in-class consulting services and innovative enterprise solutions tailored to suit the entire life cycle of IT investment. Supported by our international Centres of Excellence, our team of local experts can deliver on a wide range of services from transformation to agile development and intelligent automation for industries across manufacturing / automotive, banking, insurance, telecommunications, media and public services.

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