

Agile integration of the complete solution lifecycle

Core Delivery services

Use case

Mobile network operators are facing an increasingly complex environment as they move to 5G and integrate cloud-based architectures. The complexity only increases as they engage with new partners and third-party suppliers, all the while under extreme pressure to shorten their time to market and ensure not only the satisfaction of their customers, but their security as well. Nokia Core Delivery services successfully deliver over 1,000 customer projects annually reducing complexity, mitigating risk, and ensuring that our customers deploy their services first-time right.

Challenges

Communications service providers are under growing pressure to launch new service offerings to their customers and create added value for them with services that meet a growing range of use cases and deployment models. The complexity of today's networks includes multivendor environments, a dizzying array of technical interfaces, and explosion in the number of vertical and horizontal integration points. These factors increase project complexity and risk, and increase the time required for project execution.

When it comes to designing end-to-end solutions, the multi-vendor environment introduces extreme complexity and raises issues in multi-domain solution planning and design. Security can also become more difficult. At the same time, integrating solutions with core and edge clouds and automating the various parts of the service lifecycle raise other challenges. Ensuring interoperability with other vendors' solutions and troubleshooting call flows are all required for a successful and seamless deployment of the service.

The core networks multi-domain service design also requires the establishment of requirements and KPIs for enhanced solution and acceptance testing. Designing acceptance testing needs to tackle the challenge of increasing timeframes caused by complicated manual test design and execution in order to ensure speed to market of new services. Important in reducing the operational burdens and ensuring customer satisfaction is the design and integration of automated product and solution testing.

Solution

Nokia Core Delivery services are focused on accelerating our customers' time to market, while our Agile Integration Methodology (AIM) is critical to ensuring first-time right. This takes careful planning and design to address the entire service lifecycle. Our projects with customers around the world translate into a wealth of experience and competence in addressing complex, multi-vendor environments.

We do not deploy individual products as isolated services. We work collaboratively with our customers to coordinate the various teams to ensure a comprehensive solution. This is reflected in our project structure with its multiple levels of technical management and deployment roles. Our carefully designed service packages consider all aspects of deployment, no matter how complex. We automate multiple aspects of the solution to ensure the highest quality within optimized timeframes.

Delivery service lifecycle

And its multi-dimensional challenges

Complexity

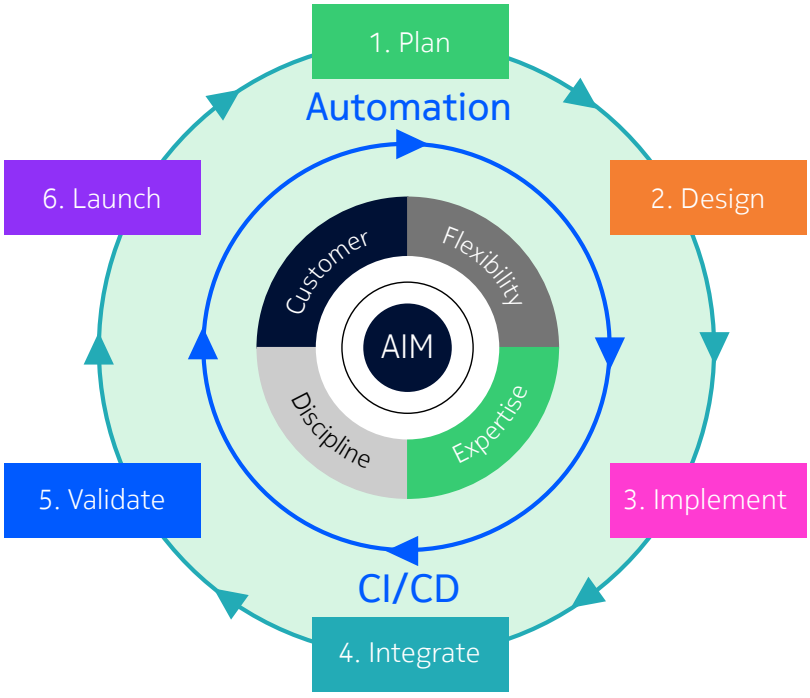
- Complex multi-vendor, multi-cloud environment
- Explosion in number of vertical and horizontal integration points
- Increasing regulatory requirements
- Extreme architectural complexity
- Multiple technical interfaces

Reliability

- Enhanced solution and acceptance testing requirements
- Extensive and manual test design and execution

Security

- Enhanced security challenges



Our process for delivering a comprehensive core network solution is as follows:

- **Initial planning** sets the foundation for the whole delivery project including agreement on milestones with the customer
- **Design** services cover the translation of the requirements into high- and low-level solution designs
- **Implementation** services cover the installation of the infrastructure and the onboarding of core network functions (NFs)
- **Integration and validation** services enable the 3G, 4G and 5G use cases in the customer's core network for customer acceptance
- **Launch support** services help customers to operate the newly deployed use cases.

Our Agile Integration Methodology (AIM) provides proven processes, templates, tool recommendations and, most importantly, a structure to ensure each of these principles is addressed in customer projects. We also manage our projects to meet top quality project execution standards like Kaizen and Six Sigma. Our quality gates process ensures that our customer engagements are comprehensive from pre-sales to go-live with thorough validations and internal reviews, as well as close collaboration with all stakeholders from customer teams to partners and suppliers.

Nokia seeks to implement automations throughout all phases of the customer project, ensuring the consistency of the continuous integration, continuous testing, and delivery pipeline (CI/CD).

- **Design automation** creates automated deliverables such as HLD, configuration artifacts and test books
- **Deployment automation** onboards Nokia Core products on the respective platforms
- **Test automation** executes product- and solution-level test cases.

Benefits

The benefits to the customer of employing Nokia Core Delivery services include:

- Shorter time to market for new service offerings that add value for end customers with a growing range of use cases and deployment models
- Reduced complexity and risk in multivendor environments that contain a wide array of technical interfaces and a fast-growing number of vertical and horizontal integration points
- Access to Nokia's global pool of delivery experts and their world-leading knowledge and experience
- First-time right delivery of our core products and solutions.

Why Nokia?

We work with customers all over the world, providing support for over 1,000 projects every year covering a wide range of product and solution deployments along with service-led portfolios and services.

Our recent highlights include deploying multiple Nokia core products for Telenet Belgium onto Google Anthos as part of Telenet's transformation to cloud-based services and zero-touch automation. We also acted as a key systems integrator for the greenfield operator DISH in the US, deploying the world's first telco network using a 5G SA (standalone) Core on the AWS public cloud.

About Nokia

At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks.

In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

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