Gigabit Smart Build: The expert advantage for ultra-broadband evolution
Nokia Gigabit Smart Build makes ultra-broadband network transformation easier and more predictable. It helps you make a smooth transition to higher-bit rate access technology while assuring quality at every step, achieving the fastest time to market (TTM), and maximizing your return on investment (ROI).

With Gigabit Smart Build, you get proven expertise, methodologies, and innovations that can help you:

- Define the right network evolution strategy
- Get ready to launch ultra-broadband services
- Deploy ultra-broadband access technology
- Migrate legacy broadband services
- Manage and optimize ultra-broadband networks

Ensure predictable outcomes with Gigabit Smart Build

- 95% accuracy selecting best evolution path
- 2x faster time to market
- 3x fewer errors

Our industry-leading experts want to help you along the road to gigabit networks. Let’s work together to design and enable your unique broadband evolution journey.
What’s driving broadband evolution?
A 2016 report by leading broadband analyst firm Point Topic suggests that there could be 100 million gigabit subscribers by 2020, with the Asia-Pacific region seeing most of the growth. Several factors are currently driving deployment of ultra-broadband and gigabit technologies:

- **User demand:** Consumers and businesses want richer experiences that require more bandwidth and instant response times.
- **Competition:** Service providers want to use high-bandwidth services to boost market share and revenue.
- **Disruptive forces:** New gigabit players are giving users more options and compelling service providers to offer more bandwidth.
- **Government broadband targets:** Governments want to create a positive economic impact by mandating universal access to high-speed broadband service.
- **Mobile goes fixed:** Service providers want to deliver richer experiences to nomadic users by using small cells to extend their fixed network capabilities.

Figure 1. The race to gigabit is on

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Broadband evolution risks and challenges

The broadband market is intensely competitive. To satisfy customers and capture market share, you need to keep evolving your network so you can deliver more bandwidth to more people in more places.

But broadband evolution programs come with risks. They can be knocked off target by inefficiencies or difficulties with planning and implementation. They also require you to engage in long-term civil works, dig up roads, and enter buildings to install new infrastructure. These costly activities impact your bottom line and affect the communities where you do business.

Broadband evolution also presents some unique challenges. Your biggest challenges include:

- **Defining the right strategy**: To make your evolution business case work, you need a strategy that enables you to introduce the technology with maximum efficiency and use it to create successful services today and over the long term.

- **Making rollouts predictable**: Control of rollouts is essential for fiber or higher-bit rate services. You need to roll out and scale new services with quality and without errors that can frustrate users, create delays, and take your costs higher. The key is to implement repeatable processes that let you reliably deliver end-to-end network connections.

- **Managing the network lifecycle**: You need to keep your network up to date and ensure that it always delivers an excellent user experience. The challenge grows when you upgrade a large portion of the network, migrate subscribers to the new equipment, and need to detect network issues before customers start to complain. To satisfy subscribers and control your costs, you need tools and processes that ensure fast, first-time-right upgrades and migration. You also need technologies that let you inspect network element performance in detail.

How can you address these risks and challenges and move forward with your broadband transformation plan? With solutions that will help you evolve your broadband network quickly and cost effectively, roll out new services when you say you will, and get closer to the gigabit speeds users want.
Gigabit Smart Build: Three steps for simpler ultra-broadband evolution

Nokia Gigabit Smart Build makes gigabit evolution feasible by providing predictable outcomes relating to quality, cost, and time to market. It combines our proven networking expertise with a simple evolution methodology and innovative tools to help you roll out ultra-broadband access technology in an efficient, cost-effective way.

Gigabit Smart Build supports you at every key stage of evolution, from technology strategy development and network implementation to broadband network management and optimization. We help you adapt your approach to your unique challenges, needs, and market context. Our aim is to ensure that you can manage change and avoid costly errors as you transition to new ultra-broadband technologies.

Gigabit Smart Build provides a framework and methodology that divide broadband evolution into three phases: prepare, deploy, and operationalize.

Prepare: get ready for gigabit
You need to plan thoroughly before you deploy any ultra-broadband access technology. A central part of your preparation is to build a viable and accurate evolution business case. To do this, you must:
• Understand the technology options
• Select the technology that provides the best potential ROI
• Develop a strategy for rolling out services that deliver on this potential

We help you maximize ROI by ensuring that you deploy the right technologies at the right times and locations. We also help you handle the complexity that comes with these deployments. Gigabit Smart Build provides planning-stage support that includes:
• Innovation partnership: Our experts use a flexible innovation management framework to help you rapidly define and implement a network evolution roadmap. By managing innovation effectively, you can quickly introduce new technologies and acquire critical technology knowledge.
• Business and technology modeling from Nokia Bell Labs: We give you a business case framework that combines technology and rollout costs, modeling of new services, and the average revenue per user (ARPU) derived from these services. Our patented TCO models include migration and evolution steps. They provide accurate insights that can help you choose the best possible technology investment strategy.

Deploy: achieve fast, first-time-right evolution
Gigabit Smart Build enhances your revenue and market potential by enabling you to make a rapid, error-free transition to ultra-broadband. Our support ensures that you achieve publicly announced service availability targets and roll out higher-bit rate technologies in step with shifting demand.

With Gigabit Smart Build, you get to market faster by bringing the right skills, tools, and methodologies to the deployment process. We offer deployment support in areas such as:
• Customer self-installation: We provide a patented solution that lets subscribers self-install their optical network terminals (ONTs). This solution helps you avoid sending field technicians to homes and businesses. It can reduce your ONT installation costs by more than 40 percent.
• Network build control management: Our deployment framework combines end-to-end planning, optimized integration, and subcontractor performance management. It lets you roll out with speed, accuracy, and quality.

Operationalize: control and optimize upgrades and migration
Gigabit Smart Build helps you operationalize ultra-broadband deployments and turn them into revenue-generating services. It lets you migrate services flawlessly, execute smooth upgrades, and leverage analysis to keep your network in shape. These capabilities will ensure that your investments have a positive effect on ROI and keep your network competitive for years to come.

Gigabit Smart Build offers several optimization options, including:
• Legacy broadband migration: We provide proven methodologies and tools for migrating subscribers and data. With our help, you can scale the migration rate while minimizing cost and customer impact.
• Network software upgrades: Our systematic upgrade methodology and toolset can help you reduce costs by shortening the upgrade process and increasing the upgrade success rate.
• Network assessments and health checks: Our comprehensive analysis toolset allows you to view current network status, assess performance, and understand potential problems. It can also help you recognize and seize capacity upsell opportunities.
The Gigabit Smart Build advantage

Assured quality
Reduce rollout errors by a factor of three. First-time-right deployment and migration help you save money and avoid disruptions that drive users toward competitors.

Fastest time to market
Cut time to market in half by minimizing preparation time, accelerating rollouts, and increasing rollout volume. Remove barriers to fast migration by eliminating the learning curve associated with lifecycle management.

Maximum return on investment
Increase ROI with support that helps you choose the best evolution path with more than 95 percent accuracy. We can also help you reduce costs by optimizing rollouts, lifecycle management, and legacy migration.
Why choose Nokia for broadband transformation?

We use our proven expertise and decades of project experience to deliver the technology and support you need to succeed with ultra-broadband transformation. We are focused on helping you choose and execute the most profitable strategy for evolving toward gigabit networks and enabling new broadband services.

Gigabit Smart Build empowers your transformation project with:
- 40,000 service experts around the world
- A comprehensive set of tools that features innovations from Nokia Bell Labs
- Access to migration operations centers
- Central and remote service delivery and automation
- Industrialized execution for deployment and migration

Our unique credentials
- Global leadership in ultra-broadband technologies, products, and services. We serve more than 300 fixed access customers.
- Real-world transformation experience with more than 20 large customers and 80 successful projects. Gigabit Smart Build is based on knowledge we have gained in conducting more than ten major wireline broadband network upgrade and transformation programs with customers worldwide.
- Extreme automation that increases agility and quality to produce tangible benefits, including fewer errors, reduced time to market, and the best evolution path.

“A recent network transformation survey we conducted confirmed that service providers face numerous network transformation challenges, such as choosing the best technology strategy and understanding its impact on future upgrades, identifying new revenue opportunities, and meeting rollout targets and network optimization goals. Many of the cited challenges can be mitigated through enhanced vendor relationships with telecom partners such as Nokia.”

– Julie Kunstler, principal analyst, Ovum
## Customer references

<table>
<thead>
<tr>
<th>Customer</th>
<th>How we helped</th>
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</thead>
<tbody>
<tr>
<td><strong>Prepare for gigabit</strong></td>
<td></td>
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<tr>
<td>APAC tier 1</td>
<td>Reduced time to market and optimized TCO by using technology consulting and modeling tools from Nokia Bell Labs to define the ideal technology mix.</td>
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<tr>
<td>EMEA operator 1</td>
<td>Cut time to market in half for new broadband services through innovation partnerships.</td>
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<td><strong>Deploy gigabit</strong></td>
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<td>EMEA operator 2</td>
<td>Increased the number of nodes deployed by 1.5x and decreased onsite work by 80% through centralized staging and integration and remote deployment.</td>
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<tr>
<td>EMEA operator 3</td>
<td>Increased the number of homes passed by 16% by applying a blueprint, standardized tools and processes, and best practices in program management, planning, design, and build.</td>
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<tr>
<td>EMEA operator 4</td>
<td>Increased the success rate for end-to-end fiber connections to 95% with third-party work order and resource management capabilities provided through the FTTH Service Center.</td>
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<td><strong>Operationalize gigabit</strong></td>
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<tr>
<td>EMEA operator 5</td>
<td>Migrated 2.5x more legacy xDSL nodes and reduced human labor by 25% using industrialized migration execution and the Migration Operations Center.</td>
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<tr>
<td>Americas tier 1</td>
<td>Reduced network upgrade time from 6+ months to less than 1 month by applying a systematic methodology and proven tools.</td>
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Let us help you

Nokia is committed to improving the processes used for major network transformations. Our Gigabit Smart Build solution enables service providers of all sizes to transition to ultra-broadband network technologies with assured service quality, the fastest possible TTM, and maximum ROI.

We want to use our tools, methodologies, and experience to help your transformation project succeed. Contact us to learn how Gigabit Smart Build can help you make ultra-broadband network transition easier and more predictable.

To learn more about Gigabit Smart Build, visit https://networks.nokia.com/solutions/gigabit-smart-build
About Nokia
Nokia is a global leader in the technologies that connect people and things. Powered by the innovation of Nokia Bell Labs and Nokia Technologies, the company is at the forefront of creating and licensing the technologies that are increasingly at the heart of our connected lives.

With state-of-the-art software, hardware and services for any type of network, Nokia is uniquely positioned to help communication service providers, governments, and large enterprises deliver on the promise of 5G, the Cloud and the Internet of Things. http://nokia.com

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