



Operational KPIs

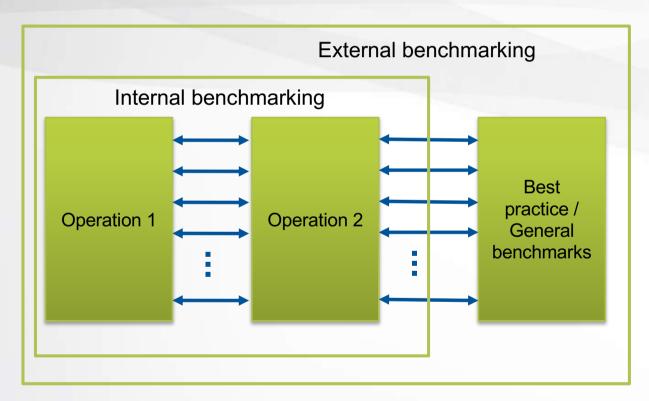
How we can help

References



Why operational KPI benchmarking?

Operational benchmarking helps telecom operators properly assess the efficiency of their operations as basis for critical reorganisation decisions.



- Serves as basis for considerations and decisions on for example:
 - Outsourcing
 - Use of managed services
- Processes improvement
 - Efficiency / profitability
 - Identification of best practices
- Internal (group) comparisons and/or versus external benchmarks



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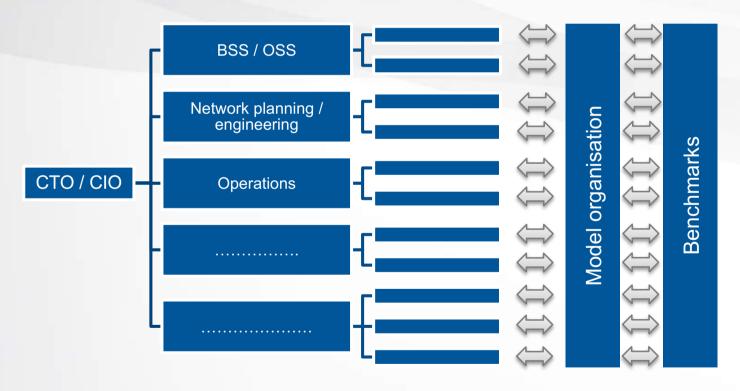
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Project scope and objective

Our operational benchmarking process is designed for analysis of resource utilisation in relation to performance in each functional unit of the technical departments in a mobile telecoms operation.



- Benchmarking is based on Key Performance Indicators (KPIs) for resource utilisation and performance
- For the purpose of benchmarking, actual organisation is aligned with model organisation through a formalised task/process analysis



Methodology

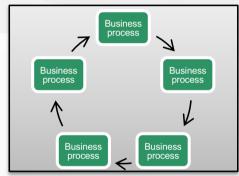
KPIs are defined so that they relate performance (business process outputs) to resource allocations (business process inputs) for each functional unit analyzed.

Input

Resource allocation KPIs

Resource utilisation per unit relative to volume of operations, e.g. subscriber volume, network size/complexity, etc.

Organisational units



Output

Performance KPIs

Measures of operational quality, e.g. network / service quality, etc.

- KPIs relate performance outputs to resource inputs
- The KPIs measure efficiency in terms of e.g. :
 - Process implementation
 - Organisational structure
 - Resource allocation
 - Skills & expertise
- The analysis considers both internal and external (outsourced) resources



Analysis – Collecting of KPI values

A formalised approach with templates and models is used for analysis of the organisational structure and functions in order to define and calculate the KPIs used for benchmarking.

Review of current structure

Mapping of tasks by functional units

Mapping of main tasks per unit against model

Mapping of external and internal resources

Reviewing impact of current outsourcing solutions

Review of key objectives by functional area

Performance objectives impacted by each functional unit Data collection and calculation of resource (input) KPIs

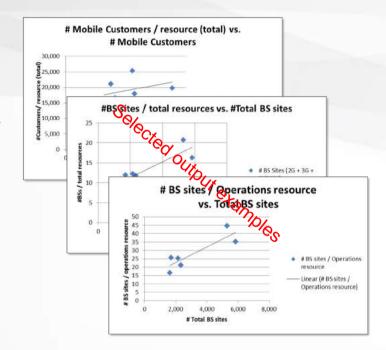
Data collection and calculation of performance (output) KPIs



Analysis – Identifying key factors

The analysis process first focuses on identifying the key factors impacting organisational efficiency, such as e.g. scale of operations, organisational structure, processes, skill mix.

Identification of factors impacting efficiency



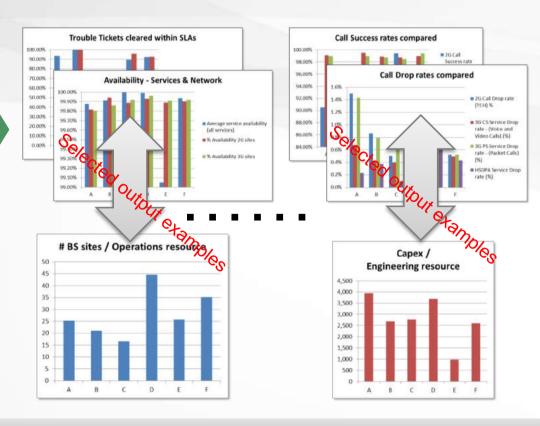
- Comparison of KPIs vs. best practice benchmarks
- Factors impacting efficiency, e.g.:
 - Scale of operations
 - Network/system complexity, etc.
 - Processes design
 - Quality (score on performance KPIs)
 - Availability of skills & expertise
 - etc.



Analysis – Determining causes and impact

In the following phases of the analysis, the reasons for efficiency variations are analysed as well as the relationship between resource utilisation and performance in terms of quality.

Analysis of efficiency variations



- Reasons for efficiency variations analysed through in-depth interviews and workshops with managers
- Degree of impact from various factors evaluated
- Focus on balance between efficiency gains and quality impact



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References



Results

Through our defined approach, we can help defining specific action points, areas with potential for efficiency improvement without performance degradation.

The analysis will identify:

- Areas with potential for efficiency gains without performance degradation
- ➤ Possible directions for improving efficiency (outsourcing, process design, reorganisation, etc.)



The typical key results:

- ➤ Outsourcing candidates
- Managed services potential
- Need for centralisation / reorganisation
- Areas requiring improvements (processes, skills, technology, etc.)
- Quantified basis for peer evaluation (e.g. between various country operations within a group)



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Examples of operational improvement projects

NGP' partners have assisted telecommunications operators in different market around the world improving operational effectiveness through a range of projects addressing operational performance issues.

Operational KPI benchmarking, International operator with multiple operations in Latin America

• Organisational review and benchmarking of the technical operations in all country operations, with the objective of streamlining the operations for best possible resource efficiency, quality and performance.

Operational Audits, International telecoms group

• External audit of the quality of operations (effectiveness and efficiency) of technical operations of telecommunication operators. Review of processes for capacity planning, performance control, etc.



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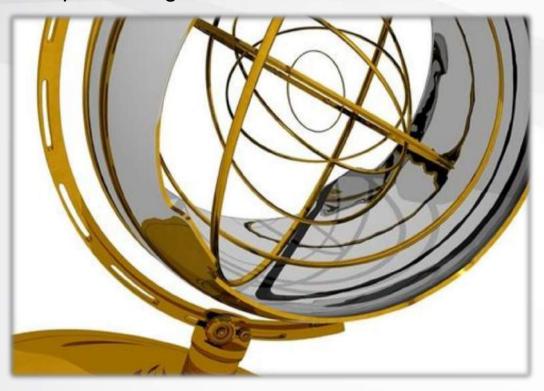
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Our company

NGP is a global consultancy providing telecommunications sector clients expert advice and support on strategy, technology, operational and other issues, enabling clients to profitably compete and grow their businesses.

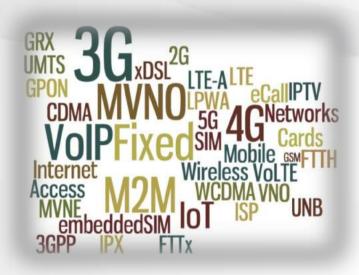


- The collective telecom expertise of our team of advisors, all specialists in their field, sets us apart as consulting partner to progressive telecom companies worldwide
- Our teams are engaged in projects worldwide, mostly in Scandinavia, Europe, Asia, Africa and Latin America.
- The global reach of our partnership creates the foundation for an international perspective and cross-cultural understanding of market and organisational issues
- As a strongly focused consultancy, with an in-depth understanding of our niche market, Netcom Global Partners is a responsive and flexible partner for the most demanding clients



Service overview

Based on our extensive experience in design, deployment and operation of telecommunications services, we help clients converting business ideas and technologies into successful products and services.



Market and business planning

- Providing effective market strategies and business plans
 Network sharing, interconnection and regulatory related issues
- Providing expert advisory services in connection with network sharing opportunities, licence award processes, spectrum auctions, interconnection and access, and other regulatory issues.

Network planning, design and deployment

- Supporting procurement and deployment of networks, systems and infrastructure
- Network planning and design, review/audit and optimisation
 Service development & product management
- Managing development and launch of innovative and profitable services
 Organisation and operations
- Assisting telecommunications operators in improving operational performance and efficiency



Our expertise and capabilities

We provide advisory and management expertise in planning, design, deployment and operation of telecom networks and services.

Some project examples:

- · Operational reviews and audits
- · Market opportunity evaluations
- · Network planning and design
- · Managed Services feasibility reviews
- · Indoor coverage solutions
- · Network consolidation strategy definition
- Market entry consultancy services for mobile operators and service providers
- · License acquisition support / spectrum valuation
- Interconnection, access and wholesale agreements
- Roaming and clearing audits commercial and technical
- Regulatory, standardisation issues, network numbering
- Number portability implementations (mobile/fixed)
- Fibre rollout, fibre unbundling and fibre sharing and access

- M2M/IoT technologies, solutions and concepts
- · Operational KPI benchmarking Service feasibility studies
- Customer Experience management
- Project portfolio and governance strategy
- Project Management Office (PMO) implementation
- Management of service launch and transition projects.
 Some recent examples: VoLTE, MVNO
- Network procurement RAN, Core
- Project management of mobile and fixed broadband network roll-out
- IMS Migration projects
- Power solutions, "Green Connectivity"
- · Commercial and technical due diligence
- Tower, Network and Infrastructure Sharing agreements and implementation



Our global experience

Our partners, coming from leading telecom operators, vendors and consultancies, bring experience from work with clients in a wide range of countries and regions with different

market and regulatory conditions.

Some clients our partners have worked for:

•	Amara	Communicat	ions	•

- Axiata
- Bell Canada
- Batelco
- CellularOne
- Canadian Imperial Bank of Commerce
- Digicel
- Du
- Emtel
- Ericsson
- FarEasTone
- Hi3G / 3
- 3GIS
- ICE / Net1
- · Intelig, Brazil
- Meteor
- Mobifone

- Mobtel
- Nokia Networks
- Orange / Getesa
- Orange / Jordan
- Orange /SwitzerlandUmniah / Jordan
- Orascom Telecom (now Global Telecom Holding /
- Vimpelcom)Ooredoo Group
- Our a Discussion
- OnePhone
- SabafonSmarTone
- Smart Philippines
- Sumitomo Group
- Swedish Post and Telecom Authority
- TALTDC
- Telefonica

- Tele2
- Telenor
- TeliaSonera
- Telkomsel
- Teracom
- T-Mobile / Germany
- T-Mobile /Poland
- Tigo / Millicom
- TIM Brazil
- Turkcell
- Viettel
- Vivendi
- Vinaphone
- VMS
- Vodafone
- Alcatel
- Huawei
- ZTE



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