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A NEW FUTURE-PROOF APPROACH TO SET NETWORK-EFFICIENCY TARGETS

A LEAN-NETWORK, TARGET-PICTURE APPROACH TO REPLACE ITERATIVE COST-CUTTING EVERY YEAR

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Improving cost efficiency in a telecom network is extremely difficult due to the multitude of conflicting goals as the need to continually upgrade the network. Instead of iterative cost-cutting rounds, operators should follow an aspirational, lean target-picture approach. This approach enables operators to reap recurring savings of 25 to 35 percent, or 4 to 7 percentage points of EBITDA improvement – plus additional savings in CapEx.

Telecom companies worldwide face revenue challenges and decreasing margins. Since network-related activities typically account for between 40 to 50 percent of an operator's total cost, they are the most likely target for cost cutting. Our experience shows that many operators tackle efficiency improvement in network operations with iterative, short-term exercises every year. This often leads to multitude *ad hoc* activities, misallocation of resources, demoralisation of staff, and ultimately to suboptimal (and often disappointing) bottom-line results.

At the same time, telecoms also need to cater rising demand – carry more customers, deliver higher bandwidth, close coverage "white spots", and enable new features. These upgrades are limited by resource constraints: frequency spectrum for mobile, signal strength in copper lines, number of new locations for mobile sites, radiation regulation, and cash for network operations and rollout. This complex dynamic makes it extremely difficult to cut costs in network operations and create new network value.

Some leading operators, however, work with a future-proof, lean-network, target-picture approach to tackle efficiency improvement in a more holistic way. A toolkit that links operational network KPIs to cost ensures quick ramp-up and consistency for the entire effort. This facilitates setting targets, quantifying measures, and tracking impact – and ensures a common driver logic for all involved departments. The lean-network, target-picture approach features a number of benefits compared to "conventional" cost-reduction efforts:
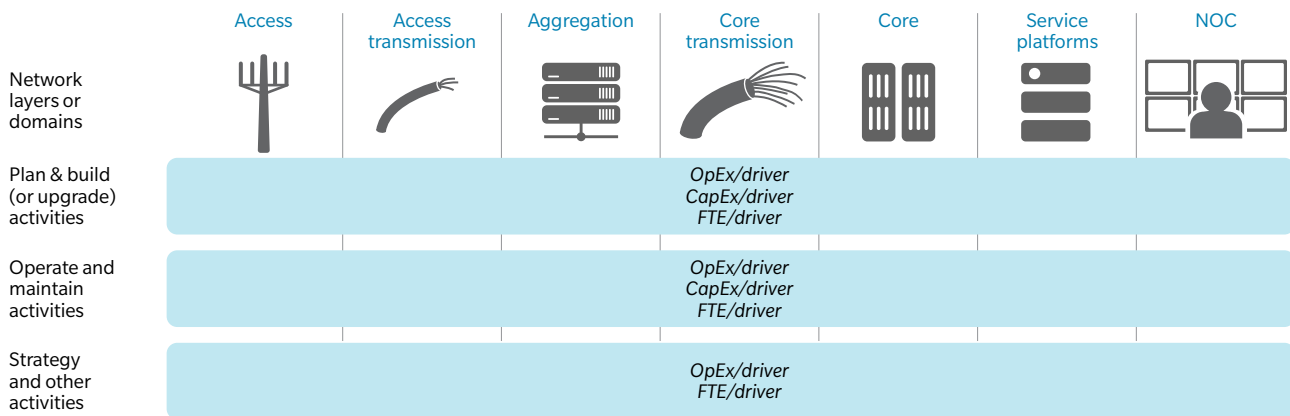
- Stable and actionable savings goals
- Forward looking, geared toward best-in-class efficiency per activity
- Transparent distinction between efficiency in rollout and operating activities
- KPI-based modelling of cost per activity, clearly differentiating volume and unit costs efficiency
- Adjusted for regional specifics, such as market environment, country topology, legislative obligations
- Rapid idea generation based on best practices to reach mid-term goal

The lean-network, target-picture approach consists of six steps, elaborated below.

1. CREATE EFFICIENCY TRANSPARENCY DOWN TO ACTIVITIES AND NETWORK LAYERS

To get a transparent view of cost efficiency in network operations, it is necessary to break costs down by key activities and to slice them along network layers, such as the operations of a radio-access network in mobile *(see Exhibit 1)*. Three elements are essential.

Exhibit 1: Breaking down network cost and FTE along network layers and activities

First, a total cost perspective should be taken. Both CapEx and OpEx should be considered to account for differences in operating models or sourcing setups (internal vs. outsourced). Second, the activity-based view makes it possible to detect costs "hidden" in units outside the network departments, such as those for rent or power. Third, in addition to pure-cost data, operational drivers and FTE (full-time equivalent employee) data is needed to make overall cost data comparable to peer operators. Typical questions asked during this cost analysis include:

- What is the cost incurred per new site built?
- How much does operating a mobile site cost from an end-to-end view?
- How much energy is consumed per fixed-line customer and what is the cost?
- How many internal and external FTE operate the core network(s)?
- How much does it cost to operate mobile-service platforms per subscriber?
- How many more FTE are employed in planning, strategy and NOC activities than at peers?

2. EXTRAPOLATE AND CHALLENGE THE "DO-NOTHING" COST BASELINE

For the lean-network, target-picture approach, understanding and aligning the "do-nothing" cost baseline for the subsequent three to four years is key to assessing savings potential and tracking impact during implementation. Network-cost baselines are influenced heavily by several factors:

- How will the number of subscribers change for fixed and mobile operations?
- Which new technologies should be rolled out, when and how? At what cost?
- What is the cost of legislative, regulatory, and network-quality requirements?
- Which infrastructure or network elements will need to be retired?
- How will network stability and durability evolve over time?
- How will wage levels and unit prices for hardware and service contracts change?

With these variables in mind, the question is how to draw a robust baseline. Leading operators found it helpful to use a model that links activity-based cost to operational drivers. It allows functional managers to quickly evaluate the standalone effect of changes in volume or in unit cost of a specific activity or in overall network cost. The result of the cost extrapolation is a clear-cut set of assumptions, financial effects, and a consolidated "do-nothing" baseline, which acts as the basis for sizing the savings opportunity and the impact of measures. It is also the foundation for establishing and managing functional managers' buy-in for all later steps.

3. EVALUATE AND QUANTIFY OPERATOR AND COUNTRY-SPECIFIC LIMITATIONS

Even though network operations are highly standardised and thus easily comparable with peers, some effects can keep operators from achieving best-practice, cost-efficiency levels. Such limitations include monopolistic wholesale market structures, rigid legislation, and unfavourable jurisdiction. Besides these socio-economic hurdles, physical limitations – such as mountain ranges, low population density, extreme weather, or possibility of earthquakes – can affect network operations and efficiency.

However, operators should not assume these limitations are intractable. Some limitations in market structure or regulation can be resolved by commercial tactics, focused lobbying, or investment. And many topographic limitations can be ameliorated in the medium term, for example, by sharing rollout and service costs with other operators in areas with low-population density.

In order to define the right efficiency targets for each network layer and activity, these limitations and their evolution over time need to be understood on a standalone level. Only then they can be adequately factored into efficiency goals. Again, the cost-driver model can help to flag the proportion of standalone site-maintenance costs that are driven, for example, by excessive legislation.

4. SET FULLY OPERATIONALISED AND BEST-PRACTICE ORIENTED TARGETS

In order to set stable goals with a three- to four-year horizon that a network organisation can deliver step-by-step, goals need to be both fully operationalised and plausibly achievable.
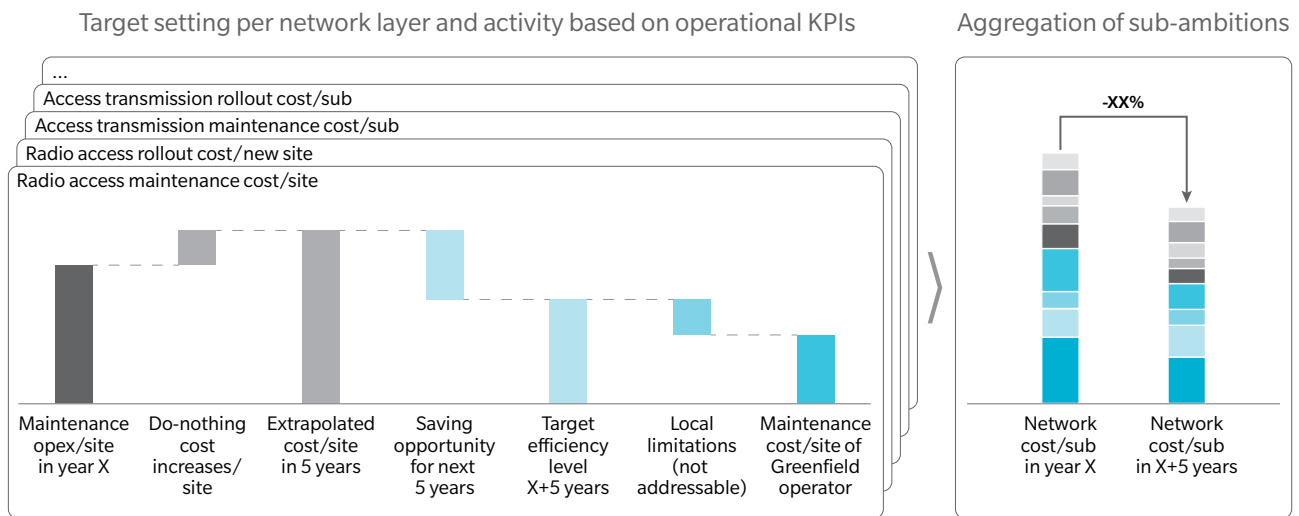
Operationalising efficiency goals requires describing them on an activity level, so that functional teams and managers are motivated to reach the goals. The most successful approach is to define clear downward "glide paths" for each relevant activity volume, such as maintenance interventions per site, along with the cost for each intervention. However, we found that while telecom operators typically have advanced activity-based systems in place, network operations often remain in uncharted territory. Here, a network cost-driver model – with ten standard activities that cut along network layers – allows for a granular target. The model combines functional cost information with operational drivers, and FTE volumes, and balances detail with pragmatic simplifications *(see Exhibit 2).*

Leading operators found it very helpful to link the cost-driver model to their P&L statement to increase ownership of efficiency goals. Our experience shows that applying such a cost-driver model creates a new level of transparency and awareness of efficiency in the organisation. It fosters a more consistent, end-to-end view of network efficiency, reduces iterations, and facilitates alignment across network departments.

Given the standardised operations of telecom networks, efficiency levels that one operator achieves should be achievable by other operators, all else held equal. Of course, the socio-economic or country-specific limitations noted earlier can alter this steady-state normality. Thus, to define the proper lean-network, target picture, we can leverage insights and data points from our extensive network KPI database (with data from more than 60 operators) and combine them with foreseeable efficiency improvements and specific limitations faced by an operator.

By so developing their lean-network, target-pictures, operators can break out of iterative cost-cutting rounds and define targets in a more systematic and holistic way. The approach couples stable and value-creating efficiency improvements with an operational vision that network teams can understand and implement.

Target setting per network layer and activity based on operational KPIs | Aggregation of sub-ambitions

...
Access transmission rollout cost/sub
Access transmission maintenance cost/sub
Radio access rollout cost/new site
Radio access maintenance cost/site

| Maintenance opex/site in year X | Do-nothing cost increases/ site | Extrapolated cost/site in 5 years | Saving opportunity for next 5 years | Target efficiency level X+5 years | Local limitations (not addressable) | Maintenance cost/site of Greenfield operator |

-XX%

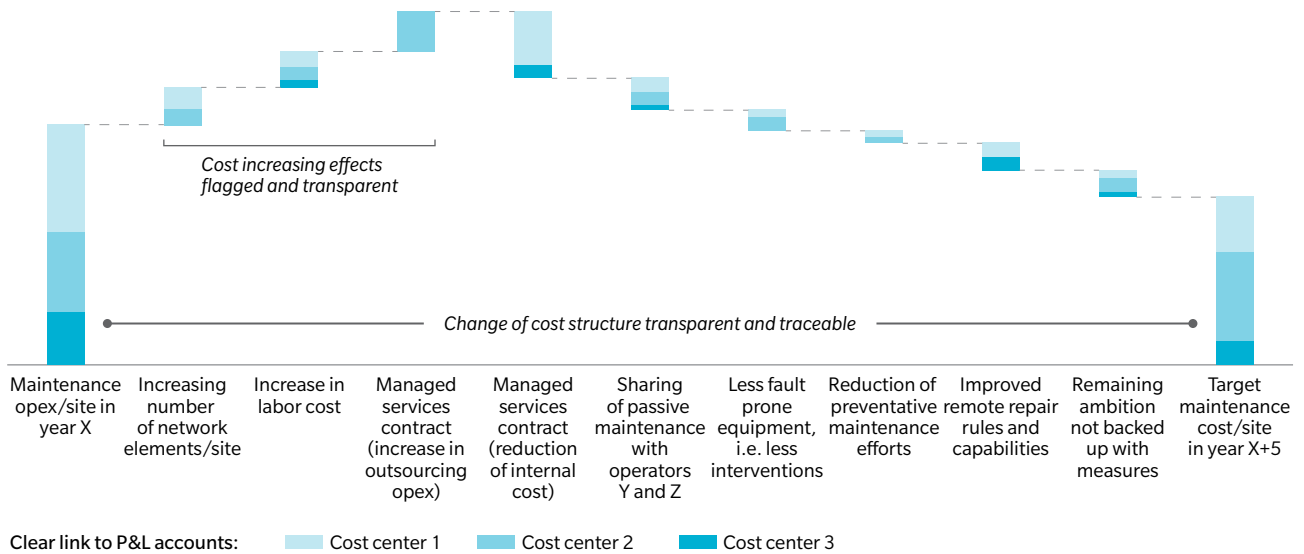| Network cost/sub in year X | Network cost/sub in X+5 years |

5. BACK UP TARGETS WITH CONCRETE MEASURES AND QUANTIFY SAVINGS IMPACT BASED ON KPIs

Our extensive experience from a multitude of large and successful efficiency-improvement programmes fuels seven core beliefs for backing up goals with concrete measures *(see Exhibit 3)*:

1. **Don't wait for a "silver bullet."** Successful network-efficiency programmes are typically driven by a mix of selected transformational initiatives and a broad set of operational measures. Typically half of improvement goals can be achieved with operational improvements.

2. **Act aggressively.** Success is not usually due to new ideas, but to the level of aggressiveness in ambition, design and implementation. For example, a telecom might pursue network sharing not only for new but also for existing infrastructure.

3. **Customise "standard" solutions.** Even though operators can leverage our large repository of successful network-efficiency improvement measures, operators need to assess them in context and tailor them to individual needs to ensure bottom-line impact.

4. **Tie ownership to KPI-based quantification.** Measures need to be formally described, with clear documentation of baseline and savings mechanics, including KPI impact and a link to the P&L. Managers should sign off measures and a part of their compensation should be tied to savings potential and implementation of milestones.

5. **Get a grip on planned cost increases.** Understanding and operationalising planned cost increases is almost as important as developing measures to ensure a full-picture view.

6. **Account for network revenues.** Gross cost views – not taking into account revenues, e. g. from network sharing or leasing transmission lines to third parties – are misleading. But they are the predominant way in which network departments are controlled today. To obtain a fair view, network cost should be netted against network revenues.

7. **Adequate buffer for overlaps and risk.** Cost-cutting programmes often underestimate overlaps and dependencies between measures. These effects need to be assessed and deducted from measure potential. Realisation risks should also be quantified and accounted for in a dedicated risk buffer.

Cost increasing effects flagged and transparent

Change of cost structure transparent and traceable

| Maintenance opex/site in year X | Increasing number of network elements/site | Increase in labor cost | Managed services contract (increase in outsourcing opex) | Managed services contract (reduction of internal cost) | Sharing of passive maintenance with operators Y and Z | Less fault prone equipment, i.e. less interventions | Reduction of preventative maintenance efforts | Improved remote repair rules and capabilities | Remaining ambition not backed up with measures | Target maintenance cost/site in year X+5 |

Clear link to P&L accounts: ▢ Cost center 1 ▢ Cost center 2 ▢ Cost center 3

The few "silver bullets" we see are transformational levers worth assessing (and re-assessing) for all telecom operators:

- Network sharing both in mobile and fixed;
- Managed-services outsourcing;
- Fixed/mobile integration; and
- Radical legacy retirement.

Given significant interdependencies, each lever should first be investigated with the aim to maximise standalone potential. In a second step, they need to be looked at in a combined view and then adapted and sequenced in cross-functional teamwork.
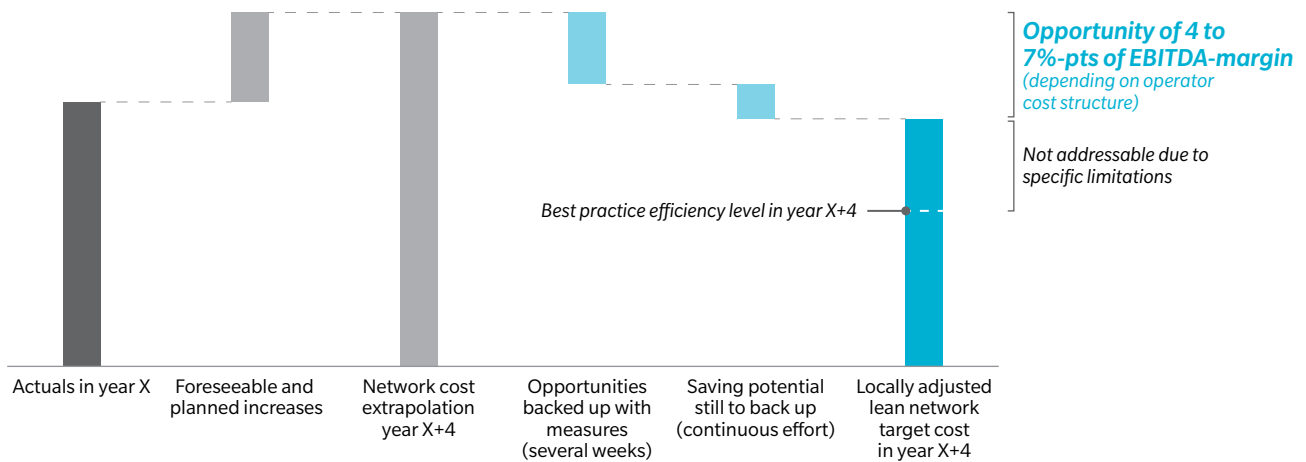
To achieve the remaining goals not yet supported with transformational measures, operators should follow a structured approach to derive operational measures for each network activity along the following four dimensions:

- Demand management and stop-doing
- Reduction of unnecessary activities and stop waste
- Process and organisational efficiencies
- Reduction of resource cost and unit prices

By following the seven core beliefs for measure development, and applying the mechanics outlined for transformational and operational efficiency-improvement levers, operators can typically back up 100 percent of their mid-terms ambition, with already 50 to 75 percent within a couple of weeks.

For sake of simplicity and consistency, we advise our clients to leverage the same cost-driver model for quantifying both transformational and operational measures. This makes it easy to map the impact of all relevant measures on the cost efficiency of a certain activity. And it reduces workload for functions and controlling, and facilitates the preparation of trade-off decisions.

Opportunity of 4 to 7%-pts of EBITDA-margin (depending on operator cost structure)

Not addressable due to specific limitations

Best practice efficiency level in year X+4 →

Actuals in year X | Foreseeable and planned increases | Network cost extrapolation year X+4 | Opportunities backed up with measures (several weeks) | Saving potential still to back up (continuous effort) | Locally adjusted lean network target cost in year X+4

6. ESTABLISH KPI-BASED EFFICIENCY STEERING TO SYSTEMATICALLY "HARVEST" BOTTOM-LINE IMPACT

The lean target-picture approach gives you the power to trace the impact of specific actions. Conventional cost-cutting programmes in network operations typically suffer one substantial shortcoming: planned and committed savings are (more than) eaten up by other effects, such as:

- Enhancement of network quality and/or closing of white spots in coverage;
- Rollout of new technologies like Vectoring or LTE, fuelling not only CapEx but also recurring OpEx;
- Modernisation of core, aggregation or transmission elements;
- Managed-services partners raising prices or requesting compensation for "extraordinary" effects.

The lean target-picture approach treats planned cost increases and efficiency-improvement measures in comparable logics. Since all planned cost increases and efficiency measures are broken down by volume and unit cost effects, each is fully controllable.

To "harvest" the efficiencies, operators should install a tracking toolkit and link it to operational KPIs and P&L statements. As outlined above, this toolkit needs to track efficiency measures as well as planned cost increases, alongside their respective KPI and volume changes. With such a toolkit, management is in full control of relevant costs and able to systematically steer operations towards the lean-network, target-picture.

CONCLUSION

The experience of leading operators shows that, if done with rigor and sustained commitment over a period of three to four years, the lean-network, target-picture approach typically delivers between 25 to 35 percent efficiency gains or 4 to 7 percentage points of EBITDA-margin improvement – a substantial competitive edge in ever tougher market environments. The approach allows operators to realise these efficiency and margin gains as they create new value in increasingly saturated markets.

ABOUT OLIVER WYMAN

Oliver Wyman is a global leader in management consulting. With offices in 50+ cities across 26 countries, Oliver Wyman combines deep industry knowledge with specialised expertise in strategy, operations, risk management, and organisation transformation. The firm's 3,700 professionals help clients optimise their business, improve their operations and risk profile, and accelerate their organisational performance to seize the most attractive opportunities. Oliver Wyman is a wholly owned subsidiary of Marsh & McLennan Companies [NYSE: MMC].

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