



Identifying and Minimizing Network Deployment Challenges

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Carriers around the world have been deploying wireless networks for more than two decades - many are on their fourth or fifth major network modification. It could be assumed that after billions of dollars and countless man-hours, network deployment would have evolved into a science; unfortunately, the reality is that it continues to be plagued by delays, quality issues, and cost overruns.

Executing large-scale deployments across variable and complex environments will never be completely free of issues. The moving parts that need to be streamlined, coordinated and integrated are massive and intricate, from technology, geography and competitive landscape, to the OEMs, LECS, construction companies, corporate cultures, tools, and workforce talent. Carriers, however, should do a better job of capitalizing on lessons learned to minimize the impact of the ever-changing nature of deployments.

There are best practices that can be implemented to minimize the challenges from the ever-changing variables in deployment environments. Implementing simple and tangible actions can significantly minimize delays and create environments conducive to successfully achieving deployment objectives on time and within budget. When not managed well, these same principles will become self-induced failures.

DEFINING AND UNDERSTANDING THE BUSINESS OBJECTIVES... MORE OF THE SAME??

Launching a particular service by a target date is frequently the center of the discussion between the business units and network organizations, but in doing so, experience suggests that more often than not some key principles are not entirely followed.



Carriers often do not invest enough time up front to clearly define the what, where, when, and how of a network deployment for all stakeholders.

Key goals need to be defined, understood, and agreed so engineering planning and design can take place. The goals should be articulated in a business case covering:

- Clearly defined deliverables and expectations from Marketing/Sales
- Detailed “must have versus nice-to-have” expectations
- Prioritization of coverage, QoS levels, feature readiness, and marketability by area (e.g., 80% in location “x” is marketable whereas 90% in location “y” is required)

Setting a target launch date of a particular service is an important part of the prelaunch process, but to be meaningful, the target needs to be tied to the engineering milestones necessary to achieve the business case objectives.

It is vital for all key contributors to evaluate and validate their abilities to meet and/or exceed their specific deliverables. Often many of the schedule drivers, such as Telco and OEM contracts, are not sufficiently vetted and mitigated, leaving a significant gap in the credibility achievability of the deployment plan.

This, in turn, can drive wrong behaviors and quickly create a “backs against the wall” mentality with a lot of finger pointing by key participants (including the carrier’s organization, OEMs, and sub-contractors) when deployment objectives are not met. In the scramble to rectify such a situation, more wrong behaviors often surface that exacerbate the problem even further, such as going for hitting volume targets with insufficient management of quality and cost.

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Stretch targets and aggressive goals can be effective in motivating and gaining a competitive edge, but they need to be supported with demonstrated enhancements in process, workforce, and systems. For example, if a vendor has a historical benchmark of performing 100 site installations at peak monthly production and now claims to be able to perform 250, the onus is on the carrier to request and analyze how the expanded capabilities to deliver the increased commitment are substantiated by the vendor.

It is entirely normal and healthy for stakeholders to have an element of skepticism about milestone achievement. A thorough, in-depth gap analysis

and mitigation plan should diminish the skepticism, delays and cost overruns.

PROMOTING A TRUE SENSE OF PARTNERSHIP WITH VENDORS... DEFINE PARTNERSHIP!

It is an unfortunate reality that often customers perceive taking back ownership of a task from a failing vendor as the logical mitigation step.

A healthy and productive relationship with vendors is key to a successful deployment and this can only be accomplished through a true partnership attitude reflected in the contract language.



This can only happen when contracts are defined with the input of the teams that are tasked with the responsibility and accountability of the day-to-day deployment – these are the people who really understand what is needed to make it work.

Often the first reaction to a failing vendor is to take back ownership of its tasks. This can be a logical mitigation step, but may not resolve the cause of the contracting failure. It is imperative to understand the drivers that caused the vendor failures and what steps the vendor took to attempt mitigation of the problems. The primary reason contracting and re-scoping fails is no analysis done on how the processes will be executed differently. There are instances when re-allocating makes total sense and should be executed,

but this option needs to be based on a diligent review of the drivers.

Contracts must have the following attributes:

- A win-win with incentive language for both carrier and vendor (e.g., market rate and/or better than market rate pricing based upon volume - vendor makes money and is motivated to exceed targets)
- Defined, attainable, and realistic deliverables (setting unrealistic and unattainable goals is planning for failure)
- Pre-identified major risks, and risk management/governance model (without it vendors and carriers are in a constant fire-fighting mode)



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There are always ideological differences among organizations that need to be balanced. All contract attributes need to be defined and prioritized to meet the business objectives, operational environment requirements, and have the flexibility necessary to mitigate the realities of the deployment process.

As an example, supply chain management often defines success as achieving the lowest price point. While best price is an important factor, if the network cannot be deployed and operated in an efficient and high quality manner, the associated costs for delays

and workarounds will dramatically increase the overall costs of the deployment and negate the perceived cost savings of the initial contract. So the priority in contractual negotiations should be focused on the end result, from a deployment perspective.

Time invested up front in contracts will pay for itself many times over. While it can delay project start, good contracts can materially accelerate project completion.

PROVIDING THE RIGHT DEPLOYMENT ORGANIZATION AND GOVERNANCE STRUCTURE... WHAT'S MISSING?

All key stakeholders need to assign dedicated resources to the deployment organization. This enables departments outside of engineering and operations to truly understand and better support the deployment process. "Dedicated" means that their primary role is in support of deployment, with other responsibilities at a lower level of priority. The cross pollination among these groups builds a higher level of teamwork, shared objectives and alignment, based on a broader understanding of tasks and challenges outside of the scopes of their immediate responsibilities.

Establishing an experienced and empowered program management team is a critical first step, tasked with ensuring that key enabling principles are applied:

- Implementing standardized tools and systems
- Defining standard deployment milestones
- Implementing periodic reviews and performance reporting standards
- Defining the deployment organization, roles and responsibilities
- Positioning strong and professionally aggressive leaders
- Implementing an effective senior management governance structure



Organizational stability is another key attribute of a successful deployment team. A significant change of priorities and ownership can often impact the team's focus and result in an inability to hold teams and individuals accountable. This inevitably leads to varying degrees of disorder, a common characteristic of delayed deployments.

The deployment leads, whether regional or functional, must be empowered to quickly make decisions. An environment of 100% accountability and culture of "aggressive accountability" is a must. Understanding and collectively mitigating challenges as a team within the deployment organization is vital.

THERE ARE NO "OFF-THE-SHELF" DEPLOYMENT SOLUTIONS

No two network deployments will ever be the same. The changing nature and quantity of factors that characterize deployment environments can produce hundreds of unique challenging scenarios. Dealing with the complexities presented by each of these scenarios in a structured and repeatable way is an art and challenge to be mastered.

While there is no single recipe that can guarantee a deployment free of issues, carriers can significantly improve their chances of success by addressing basic business, vendor contracting, and governance requirements upfront, and aligning them with the unique aspects of the program, supported by key learnings from previous deployments.

The probability of success is greatly increased by implementing a well-defined and experienced deployment program management team that takes into account and mitigates the requirements and challenges normally part of deployment. Early engagement is key to promoting the necessary behaviors, preventing teams from making decisions in silos, and will ultimately lead to business objectives that are attainable, vendors who can deliver, and an organization focused on a fine-tuned deployment rather than putting out fires.

Clean process hand-offs between groups minimizes finger pointing. Each defined entity should own and have accountability for as many of the tasks within a process as is possible. This enables a faster implementation of changes to enhance the process as well as simplifying the transition of a process in its entirety to another group.

The most important attribute of a successful deployment team is effective communication. It is completely within the carrier's control to create open and honest communication channels among all of the project stakeholders. This can be accomplished by openly defining realistic and achievable targets, proactively identifying and mitigating challenges as a team, and maintaining a culture of "it's our problem" and not one of "it's your fault."

The success of the deployment plan and adherence to this type of culture should be the sole purposes of a dedicated and objective program management structure. This is a strong hedge in keeping the teams focused and senior management well informed.

ABOUT THE AUTHOR

Tony Mistretta is a managing Partner and co-founder of Vertex Consulting. He has over twenty five years of wireless industry and systems experience. Previously he was a regional Vice President of Engineering and Operations with Nextel Communications, Vice President of Engineering and Operations with Sprint, and Chief Technology Officer with Digicel. Tony has built and led organizations to successfully deploy and operate nationwide cellular networks from the ground up, both nationally and internationally.

ABOUT VERTIX CONSULTING

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