Alcatel·Lucent

STRATEGIC WHITE PAPER

IP Transformation and Stakeholder Engagement – Managing Stakeholders During Complex Change Programs

IP Transformation programs introduce significant change into the business, technical, and service delivery environment. While most companies are struggling to address the challenge of complex change within the company, the impact of complicated change programs on their associated external stakeholders cannot be underestimated.

This white paper examines the impact large change programs have on working relations with external parties, and discusses what strategies telecom companies can employ to avoid the pitfalls associated with transformation and migration.

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Introduction

The majority of IP Transformation programs are funded and managed from within the technical network division, focusing primarily upon the technical design, deployment, and migration of millions of customers across vast network geographies. While this creates a very complex technical program to manage, it is ultimately the external customers (consumers, wholesale and enterprise customers) who will determine if the real business benefits of the program are realized. Additionally, other third parties (regulators, special services and manufacturers) will have a huge influence in determining the successful outcome of the program. It is ironic then, that many programs of change are focusing purely on technical delivery and ignore the very stakeholders that underpin the business drivers.

The purpose of this white paper is to identify the stakeholder communities, identify the management issues that they raise in complex programs of change, and discuss approaches to managing these groups during the transformation lifecycle.

Identifying External Stakeholders

An external stakeholder can be defined as any party that is not part of the telco and has a vested interest in the outcome – including the relative impact – of the IP Transformation program. This impact can include financial, operational, service, technical, and regulatory consequences, depending upon the party and the purpose of its relationship with the telco. Table 1 shows the key drivers for each party.

Table 1: Key Stakeholder Drivers

Driver \ Stakeholder	Wholesale Operator	Enterprise Customer	Consumer	Regulator	Manufacturer	Special Services
Financial	X	X	X			
Operational	X	X	X	X	X	X
Technical	X	X			X	
Service	X	X	X	X	X	X
Regulatory				X		X

External stakeholders comprise distinct groups, driven by different needs, and requiring tailored approaches in engagement. Typically these groups include:

- Wholesale operators
- Enterprise customers
- Consumers
- Regulators
- Manufacturers
- Special services

This white paper will deal with each group in turn, identifying the unique drivers, and discussing the engagement challenges for each.

Wholesale Operators – The Customer / Competitor Quandary

When undertaking a large program, telcos involve their wholesale customers in a shared, complex journey. Unless managed correctly, the impact on customer services, existing sales, and operations channels can significantly damage commercial and working relationships. Also, wholesale customers will seek financial recompense for any disruption of service. They want to be assured that current services will not be disrupted, migration will be controlled in a consistent manner, and future services will be launched within agreed timescales and operating parameters.

The exchange of information, consultation, change requests, and agreements requires significant effort from resources that are already involved in a complex, technical program of change.

From an operator perspective, the change program poses a number of problems including:

- A risk to their existing service provision
- A threat to their revenue streams
- A risk to their current delivery capability
- An overhead for their network and customer service support
- A potential IT headache
- A risk to their essential interconnects
- A cost overhead to management

Wholesale operators perceive themselves as significant stakeholders, because they are uniquely positioned as both a customer and a competitor to the telco. As a result, the telco is highly motivated to respond to their stakeholder concerns.

The top five concerns of operators are:

1. How much compensation will we receive for network interconnect disruption, or for the losses incurred in reconfiguring our network – e.g. to new points of interconnect?
2. What disruption will there be to my business processes (e.g. billing, assurance, fulfillment), and what is the associated cost?
3. Will my operations and IT interfaces change, and who will pay for these changes?
4. How many resources will I need to cope with the imposed transformation period, especially during the migration?
5. What is the impact on my contractual SLAs, and who will pay compensation for transformation-related issues?

As stakeholders, operators expect to be consulted with and informed, as well as having their concerns resolved in a timely, consistent, and professional manner

It is a high-risk strategy to assume that business as usual (BAU) functions that currently interface to the operators can handle the volume and complexity of required interactions. BAU functions that regularly interface to operators include account teams, service desks, product teams, supplier management, and legal teams. So where does the operator turn to address program level issues, and how do these teams know what information to share, how often, and where to validate the answers?

Relying upon BAU functions leads to a significant breakdown in communication, disruption to business operations, increased escalations and complaints within the program, and dissatisfied operators. In the worst cases, it leads to regulator intervention and halting of the program.

Government and Enterprise Customers – The SLA Headache

Enterprise customers typically have unique needs. Traditionally their requirements have been met by providing custom service levels, services, support, maintenance, and relationship management to each enterprise. In many cases, the return on investment is greater than the effort required to support the customer in a unique manner.

While this approach works for both the telcos and their enterprise customers, it has resulted in a number of issues that need to be addressed during large transformation programs.

First, and most significantly, enterprise customers generally have unique contracts, with customized SLAs, KPIs, and penalty agreements. These unique SLAs are embedded in a diverse range of contracts, which are in turn, stored within a variety of document stores, both physical and logical.

This means that to merely asses the risk exposure of breaking services (and incurring resulting SLA payments) during a period of migration from a legacy network to an NGN entails a complex, resource intensive, and time consuming review of the contract base. Very few transformation programs have the resources, time, or investment included in their business case to calculate this risk exposure – this is a significant problem.

So, before dealing with enterprise customers, the risk exposure per customer must be understood. However, even if this can be calculated, the channels to communicate this information to the customer must be managed. Unfortunately, the unique approaches to managing large enterprise customers creates sales and account management channels that are as diverse and varied as the customer base. The telco must harness these channels to communicate in a consistent manner with the customer. Again, this requires time, effort, and cost to resolve and manage.

The unique aspects of managing enterprise customers is also reflected in the business operations models of the telco. Generally, enterprises are managed through service desks that are categorized by sector, with the largest revenue generating customers or specialist government departments (for example, Department of Defense) having unique service desks. Often, these service desks have grown organically, and are separated both geographically by business process and technology. This means that engaging the whole customer base during transitional periods (such as migration) requires considerable effort to manage.

From an enterprise perspective, the top five concerns are:

1. How will the change affect the current services and SLAs?
2. What level of business disruption is planned and when?
3. How far in advance will the enterprise be informed about service breaks and how will this be communicated?
4. Our enterprise requirements are unique – what is the telco's process for managing migration around our business needs?
5. How can we claim compensation for business disruption?

Enterprises will expect the same level of consultation, expediency and attention during a change program to reduce risk as they customarily receive during their BAU dealings with the telco. This can add significant cost and delays into network change programs, where the driver is to migrate as quickly as possible, by switch site or area. Clearly the business drivers of the program are in direct opposition to those of the enterprise customers – this will lead to regulator escalations, program delay, and impaired customer relations if left unmanaged.

Consumers – Transformation for the Masses

In the early adopter programs, the impact on the consumer market has generally been passive – i.e. the program has affected a change through a forced migration approach, and the consumers have not been identified or treated as stakeholders.

Compared to the enterprise, individual consumers have less financial value and consequently a reduced capability to impact the program. However, the consumer market en mass is a stakeholder that directly impacts the direction and success of the program's outcome.

It is a mistake to assume that consumers are not informed, and migration (in a forced migration approach) will be seamless and have no visible impact. The telcos should acknowledge that technology change will have a measurable impact on service (due to outages during migration), and that consumers are aware of the change through media coverage and improved market awareness.

Also, in migration programs that are subscriber driven, it is essential to inform the consumers of the change program in order to engage the consumer market and drive service fulfillment to the new network. This enables closure of the legacy network as quickly as possible.

In addition, while from a technical and program management position engaging the consumers is costly and time consuming, from a marketing perspective, the program provides a golden opportunity to inform the consumers of new service offerings as well as the likely impact on service during the transition period. Keeping consumers informed encourages good customer relations and increases awareness and demand for NGN services.

Of course, while informing the consumers has benefits, it also has its disadvantages. Based upon the data provided, a percentage of the consumer base will demand further information.

The top five queries from consumers include:

1. What impact will this change have on my telephone service?
2. How will this change affect my broadband – e.g. will it get faster?
3. How does this change affect my television services?
4. What outages will I experience and when?
5. Will this affect the cost of my services?

Consumer questions, if not managed and resolved in a timely manner, will have a negative impact on customer relations and lead to unease in the consumer market. Consequently, while it is tempting from a migration management and technical perspective to dismiss the consumer market as a passive stakeholder, experience has shown that to do so will negatively impact new service uptake and increase the risk of service calls during the migration period. In both cases, these can jeopardize, and even halt the program.

Regulators – Managing the Managers

To understand the role of the regulator with regard to IP Transformation programs, it is necessary to understand regulator drivers. While most countries (and regulators) have a degree of exclusivity, regulators are generally driven by similar requirements.

Regulators wish to encourage innovation and growth in the market. At the same time, they are charged with battling inequalities in service offering and the competitive landscape.

The introduction of NGN networks, particularly by major incumbents, creates a contradiction for most regulators. The NGN network delivers new services and enhanced offerings to the customer base, but, at the same time, it brings new levels of inequality, especially in the instances where wholesale operators and ISP's are dependent upon the major incumbents for service provision.

Therefore, many regulators to date have taken a passive stance with regard to IP Transformation programs, often laying the legal framework to encourage innovation, but allowing market forces to drive the investment cases. However, in the early adopter programs, regulators have been drawn into the programs during delivery – they are consistently used by the other stakeholders (consumers, operators, enterprise customers, and government customers) as a single point of escalation when resolution between the telco and external stakeholders cannot be achieved. The regulator is increasingly acting as the "referee" between new networks providers and the external parties that rely on it.

For a regulator, the top five concerns regarding IP Transformation programs include:

1. Is the program equivalent within the competitive landscape?
2. Does the new technology infringe upon current service legislation?
3. How can we ensure the NGN and its associated delivery mechanism is applied in a fair and equitable manner?
4. What new legislation is required to control the future access and services provisioning?
5. What level of jurisdiction and sanction will apply if the delivery of an NGN changes the competitive landscape?

When external stakeholders are not managed, or if the program seeks to change the competitive landscape dramatically in favor of the provider, the regulator has the power to intervene and even halt the program. To avoid this, the telco must manage the regulator (as well as the other stakeholders) throughout the program to ensure a satisfactory conclusion.

Manufacturers – Building For the Future, Fixing the Past

The relationship between telephone operators and manufacturers is interesting. Manufacturers are dependent upon the telephone networks to create Customer Premises Equipment (CPE), while the telcos are dependent upon the manufacturers to deliver equipment that allows customers to use their service. In general though, other than at technical interface and service launch levels, there is little contact between the two groups. When a CPE fails, the telco blames the manufacturer, and when the network fails, the manufacturers blames the telco. The accountability between the two, just like their relationship, is defined at the technical interface.

There are two issues regarding changing an existing network in relation to the CPE. First, the existing CPE may have problems operating on the new network; second, the CPE that is being developed must adhere to new standards.

With regard to legacy CPE, when the telco is changing the network to an NGN, subtle differences may slightly alter the network interface. Such variance can be seen in technical attributes, such as voltage drops, or lag and delay increases. While the telco will develop within the bounds of published standards (against their legacy network), many manufacturers have developed CPE based on more than 20 years experience and the requirements of current networks. Consequently, most manufacturers will work to telco standards, but will also use additional functionality in the network (e.g. slightly higher voltages) if it is constantly available and stable.

Most legacy networks have been in situ for more than 20 years and have well known, stable tolerances. There are consequence with this design approach –if the technical network attributes changes slightly, even to within defined tolerances within published standards, an unknown amount of CPE will fail to function as designed.

The legal accountability for this problem generally lies with the manufacturers. The financial impact will be felt by the telco's customers, and complaints will generally be logged first with the telco. All three parties will suffer. Ultimately, the manufacturers can point to the telco, claiming that they changed the network, while the telco can point to standards and claim that that the CPE was designed outside of published guidelines. The customers may have financial damages that they are seeking to offset. From a financial perspective, the risk to both manufacturers and the telco are enormous, as damages from customer related claims could total into the billions.

From a marketing and brands perspective, the impact is difficult to quantify, but still provides significant risk exposure. For example, an ISDN-operated traffic control (e.g. road crossings and traffic lights) could provide serious health and safety risks in the event of a failure. Or, a failure in a widely used enterprise switch could have a detrimental impact on the operation of global trade markets. Brand damage could be irreparable.

With regard to new CPE, the change program is duty bound to inform the manufacturers of changes to standards and new service criteria before network launch or migration. This will normally break BAU timescales because change programs often progress faster than BAU expectation, and new services will require supporting CPE prior to first customer migration.

To compound the complexity, the scale and volume of CPE and associated manufacturers can be overwhelming. The UK alone has an estimated 34,000 different CPE variants supplied by several thousand manufacturers. The effort and associated costs incurred to test (and de-risk) the CPE in NGN environments and contact the appropriate manufacturers is huge.

From a manufacturer perspective, the change program is a risk to the current CPE portfolio, and a risk to the customer base. However, through the delivery of new services, the NGN offers potential growth for new portfolio items.

The top five manufacturer concerns relating to the program include:

1. How will the network affect my portfolio?
2. Who is liable for testing the CPE?
3. Who pays for testing, and where are the environments?
4. Who is liable for CPE that is deemed non-complaint in the NGN?
5. What new CPE is required to support NGN specific services?

Addressing these concerns is critical to managing the manufacturers and the installed legacy CPE base.

Special Services – Managing Emergency and Critical Numbers

While all customers are important, there are some customer groups that can be deemed "critical." These organizations provide vital services that literally mean the difference between life and death. They may also offer a critical service to society, such as the Samaritans and ChildLine in the U.K.

Special services can be categorized into two main groups:

- Emergency services such as police, fire service, ambulance service, and Coastguard. There are also subsets such as specialist search and rescue teams (e.g. mountain or cave) that are normally managed through the police.
- Charity-based services, caring services, and utility emergency lines that deal with a range of interactions with the public, ranging from counseling potential suicide victims to reporting a gas leak.

SERVICE EXPECTATIONS

The common bond between both groups is that they adhere to a high standard regarding the quality of service they provide to the community. They cannot maintain service quality if telecommunication services are disrupted.

Delivery of service for such organizations are bound by SLAs. Additionally, in the case of the emergency response organizations, there is a license or regulatory requirement to ensure a consistently high level of service and availability. Consequently, performance against the charters and regulatory KPI measures becomes a key success criterion in any IP Transformation program.

The risks of transforming a network are challenging enough. However, no telco wants to sustain the adverse brand impact that would ensue if a child were to die because the parent could not contact the emergency services as a result of an unmitigated disruption to service during transformation.

FUNDAMENTAL ISSUES

There are a number of fundamental issues that must be resolved before embarking on an emergency and critical service engagement program as part of a transformation.

They issues include the following:

- It is absolutely essential that a clear and unequivocal definition of an emergency and critical service is established and agreed upon. Failure to define the scope and support through governance leaves the program exposed and potentially may lead to closely monitoring services during migration that are deemed “critical” based on revenue rather than their relevance to the preservation of life.
- Appropriate, highly competent partners must be identified to manage the services. The most likely situation is that both the transforming telco and the wholesale operators provide the emergency services and other critical customers with service. Critical partners must be identified to enable management of the end-to-end services.
- Migration methods must accommodate the monitoring of emergency and critical calls in progress at the point of migration. This can involve complex checking during migration, using signaling monitoring probes, and loopback routing. Of course, this all adds to the cost of the program.
- Duration of any service outages that will be incurred during the migration must be understood to allow sufficient planning with the service customers to mitigate the risks.
- Both telco and service customers must agree on which organizations have responsibility for mitigating the different risk scenarios that occur during migrations – this assessment must be designed into the migration program management processes.

Clearly, transformation programs pose a significant risk to emergency and critical services. The top five concerns of these service customers include:

- What risk does the program present to services we provide?
- When will the service interruptions occur and are they predictable?
- What is the process ands timescales for planning to mitigate the risks?
- How can we continue to meet our regulatory / chartered obligations?
- What mitigation plans are in place to deal with service failure during the migration period and who manages these?

SPECIAL SERVICES – OTHER CONSIDERATIONS

One of the foundations of a well-structured engagement program is to avoid situations that could delay the program. Delays equate to increased cost, customer dissatisfaction, and increased risk. While the impact of migration on most customers is transient in nature in terms of service disruption, some customer groups need to be aware of the plans, designs, migration schedules, and technologies well in advance of the point of migration. This ensures that activities that extend beyond the usual status are not disrupted, can continue seamlessly, and are largely invisible to either the program or the customer.

Some departments, central government organizations, and other agencies will take a proactive interest in the transformation of a telco's network. Every opportunity should be extended to ensure that these communities are catered for within the overall engagement approach. While that dialogue is subject to the accepted, documented rules of engagement, every effort should be made to ensure that these engagements are well prepared and planned to avoid unexpected delays.

Managing the Stakeholders

Considering the diversity and complexity of the stakeholder groups, it is no surprise to find that many change programs choose to disengage from the stakeholders, and deal with the resulting escalations through the regulator. However, this approach assumes that the program will continue through stakeholder interjection, hides the true cost of escalation and resolution management, and assumes that the NGN can be operated without the consent and buy-in of the stakeholders. The truth is that the stakeholders are likely to escalate issues to such a point that the regulator has no option other than to halt the program until the engagement issues are resolved, a consequence that is reactive, costly, and negatively impacts the investment case.

An alternative approach is to establish an engagement program as part of the overall IP Transformation Program to manage various stakeholder groups through agreed channels. While this adds further resource and system costs to the investment case, the required investment can be offset by mitigating the risk of failure, anticipated program delays, and legal disputes.

The stakeholder program should consist of a number of projects, covering the stakeholder audiences. The projects are identified and summarized below.

Operator Engagement

The purpose of operator engagement is to manage the wholesale operators through the Transformation program. This includes managing both proactive communications programs (through seminar, web based and email FAQ, scheduled topic discussions, and status updates), and reactive communications (such as requests for information, escalation management, and arbitration services).

Ultimately, the objective is to keep the operators informed of technical and business interfaces, their impact on the operator and telco relationship, and to report program progress.

Enterprise Engagement

The purpose of enterprise engagement is to manage the enterprise customer base through the transformation period, and minimize the impact on both the customer SLAs and the cost to the program. Enterprise engagement entails:

- A full audit of the enterprise contract base
- Calculation of risk exposure during migration
- Negotiation regarding migration with the customer (through an agreed channel management policy)
- Either resolution to allow migration against current contract; or exception where migration to the NGN is managed separately from the BAU approach to accommodate special contractual conditions).

The project's clear objectives are to reduce the cost of exception management while reducing the risk of SLA failure, and to introduce enterprise customers to the NGN service portfolio.

Consumer Engagement

The purpose of consumer engagement is to keep consumers informed regarding the NGN rollout schedule, the likely impact of any breaks in service, and to provide a service, to manage reactive requests for information. This project establishes both mass market communications to consumers to: inform them of the change program and likely impacts); provide interactive data through an internet portal to inform them of migration dates; and a consumer call centre to manage requests for information.

When the migration policy is commercially driven, specialized, regional marketing and targeted advertising are created and channel managed to drive fulfillment towards the NGN portfolio in specified timescales. The objective is to ensure that the consumer base is both engaged, aware of the program, and offered the NGN service portfolio.

Regulator Engagement

The purpose of engaging regulators is to identify those touch points where the program will trigger negotiations between the telco and the regulator, and agree on working process, procedures, and rules of engagement prior to the event. Proactive planning in this area ensures that the regulator and telco are both prepared for escalations, have due process and policy in place to deal with the anticipated event, and have jointly agreed upon resolution paths. One example where this pays dividends is in operator interconnect negotiations, where reaching agreement regarding engagement rules, policy and payment methods with the regulator ahead of operator negotiation reduces legal and contractual timescales dramatically.

Adopting this approach reduces the number of regulator escalations, fosters a partnership approach rather than an arbitrational relationship, and reduces the duration of any negotiating delays.

Manufacturer Engagement

The purpose of manufacturer engagement is to communicate the program objectives –specifically the altered network characteristics that could impact CPE operation to manufacturers interested in successful CPE operation after the migration. Once audiences are aware of the program and associated network changes, and how these could affect CPE operation, the program managers work with manufacturers to identify equipment that could be affected and co-operatively define solutions. These solutions are designed to avoid unacceptable post migration issues and constrain overall volumes of issues to a reasonable level.

Another objective of external communication is to flush out as many currently unknown CPE issues as possible and identify mitigation strategies. Also this approach works with stakeholders to define solutions to, or action plans for, problems that could arise with CPE operation post-migration.

Special Services Engagement

The purpose of the emergency and critical engagement program is to proactively ensure that the organizations that provide emergency life and death services to society are fully informed about the wider transformation program, the planned interruptions to service, and mitigation of the associated risks and impacts.

Through collaborative efforts between the telco, operators, and the emergency and critical services, a focused program will significantly reduce the potential for incidents and escalations that could impact the transformation schedule or attract adverse publicity that could potentially undermine brand image and customer confidence.

The wider engagement of special interest groups within government and associated agencies further underpin a “no surprises” ethos – this is essential if effective business continuity planning is to be maintained throughout a complex program of change.

Common Interfaces, Channels, Systems and Methods

To minimize the cost of investment required to manage the stakeholders, it is important to leverage as much business collateral from the existing program as possible. In most cases, the document management systems, planning management systems, PMO (Program Management Office), change processes, and even the configuration management systems can be leveraged as part of the stakeholder management projects. Additionally, it is essential to the success of the projects to leverage where possible the existing channel management to external stakeholders, bringing together a team made up of representatives from the program, BAU legal, contract management, and marketing and sales.

The Cost of Stakeholder Management

Planning and executing a well-defined stakeholder program requires the allocation of additional budget in IP Transformation business cases. This should be recognized as necessary spend in the investment case, and where possible, planned for as an essential component of the program. To reduce costs, existing systems, processes and BAU resources should be leveraged. To ignore this component of the business case will only lead to greater expenditure in reacting to escalations and resolutions during the program.

What also has to be recognized is that the change program has an inherent management cost to the stakeholders themselves. Generally, stakeholder will need to dedicate at least one full time resource to managing the program interface, acting as a single point of contact for technical, system, operations, and legal discussions. In some instances, subject matter experts will be added during the program for a finite period. Clearly, the stakeholder absorbs this cost – the program should recognize this expense and have a policy in place to deal with stakeholder discussions or claims to recover such costs.

Conclusion

As telcos move from legacy networks to NGNs, the role of the stakeholder is critical in determining the speed of rollout, the cost of the program, the ease of delivery, and ultimately, the successful migration of the customer base and realization of program benefits. Therefore, when defining IP Transformation programs, the approach and associated cost of managing stakeholders should be a component of any investment case.

As NGN and IMS networks move stakeholders further up the value chain, enabling greater access to business processes once controlled by the telco (fulfillment, billing and assurance), stakeholder control grows. Consequently, the importance of managing stakeholders effectively increases beyond the point of migration, and continues to rise as the service portfolio becomes even more stakeholder-centric. Which leads to another question – "How will we manage the stakeholders *beyond* IP Transformation?"

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Alan Turner is a Principal Consultant with a lead role in development of key services within the IP Transformation Solution. With a background predominantly as a Business Continuity professional, Turner has wide experience in solution architecture, process design, and program and project management.

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