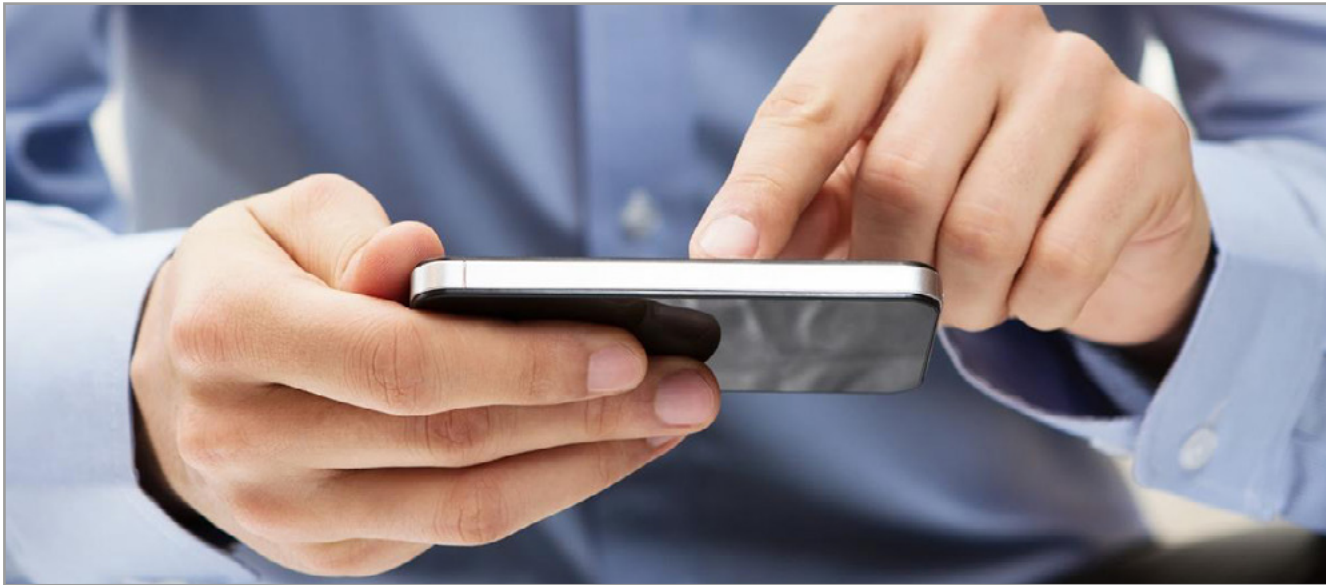


Outsourced NOC – white paper

Part 1 by Graham Hillman

Original article August 2007 — Revised version December 2014



Introduction to the revised version

When I originally wrote this piece over 7 years ago, the world of telecommunications was very different from the landscape today. Traditional service providers were very tribal with director-led power centres and associated budgets to protect – building up massive internal legacy systems with the associated team infrastructure and knowledge base to support it; which worked fine without real competition on the horizon.

Now we have a vibrant global telecommunications environment with new players - both Communications Service Provider (CSP) and Mobile Virtual Network Operations (MVNO) alike - more interested in building a committed customer base through clear USP and high levels of service than in building massive infrastructures internally. These agile companies are quite prepared to

be flexible and dynamic in how they deliver their service, understanding that the “refresh period” (the period between generations of technology) has reduced and continues to reduce substantially. Our recent blog and infographic on the demise of the analogue telephone to be replaced by technologies such as VoIP and WebRTC is one such example; the rise, commodification and decline of 3g/3.5g/4g and soon to be 5g is another.

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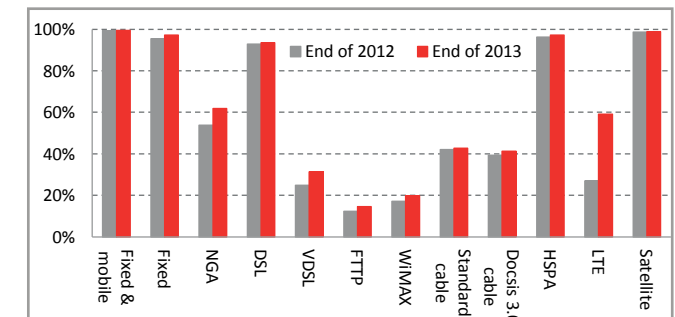
It remains true that larger traditional players continue to need to support legacy systems and there are still incumbents more interested in maintaining internal powerhouses where they can control all elements of the service; ironically making it harder for them to be agile and respond to the needs of their clients.

NOC activities have become commoditised and are now expected to provide a high quality Return On Investment (ROI) against specific defined KPI based upon customer satisfaction & response, versus their original cross-silo, unmeasured presence, that there is now a very clear case for outsourcing NOC services fully, in line with the new technical-lead, customer-first focus.

My argument, is that the outsourcing of Network Operation Centres (NOC) is even more relevant than ever as a viable solution for Service Providers looking to meet the demand for divergent service driven by the continuing consumerisation of both the IT and Telecoms sections.

Graham Hillman
1st December 2014, London

Total coverage by technology at EU level, 2012-2013



Source: <http://ec.europa.eu/digital-agenda/en/news/scoreboard-2014-trends-european-broadband-markets-2014>

The aims of this white paper

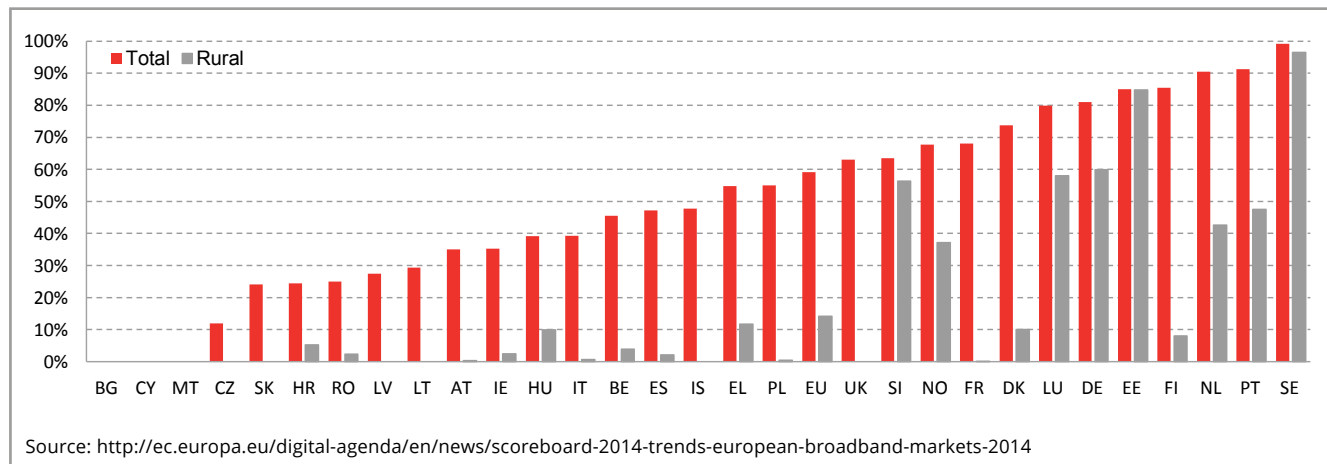
In this paper, I argue that in today's environment of accelerated technological changes, triggered by the gradual consolidation of the IT and the Telecoms sectors, the outsourcing of the NOC is a viable alternative practice worth considering by the Service Providers (SP).

Currently within the UK geographical boundaries there are in excess of fifty NOC's, dealing exclusively with surveillance and monitoring activities for bespoke SP and Internet Service Providers (ISP). This situation has largely evolved as a result of the de-regulation of the UK Telecommunications market in the mid-1980s and is mirrored across the world.

NOC outsourcing is an emerging trend as part of Next Generation Network (NGN) evolution and management of infrastructure, driven primarily by the economies underpinning ownership of resources and network costs. Certain NOC activities, such as level 1&2 alarm and triage activity, will become "Business as Usual" as outsourced NOC become a standard offering in the near future.

In this white paper, I will attempt to provide an answer to the question 'why outsource the NOC?'

4G (LTE) coverage, 2013

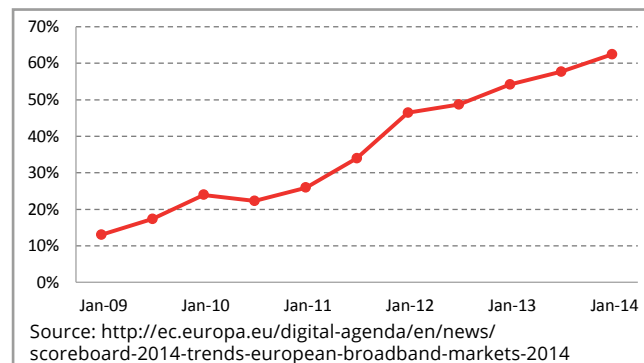


The case for outsourcing

One of the key questions for the SP to answer is to determine the optimal model to follow for maximum growth for consumer engagement and profit in an increasingly competitive and technology led market. When faced with continuing market competition and rapid technological innovation should they invest in their own networks, including NOC facilities, in order to meet these challenges, or should they outsource some, or even all of their network capabilities and focus on consumer engagement and intimacy?

Prior to any outsource decisions there are factors that need careful consideration, one of which is of paramount importance are the costs involved with such an exercise. Thus, I will address first the cost of ownership.

Mobile broadband penetration at EU level

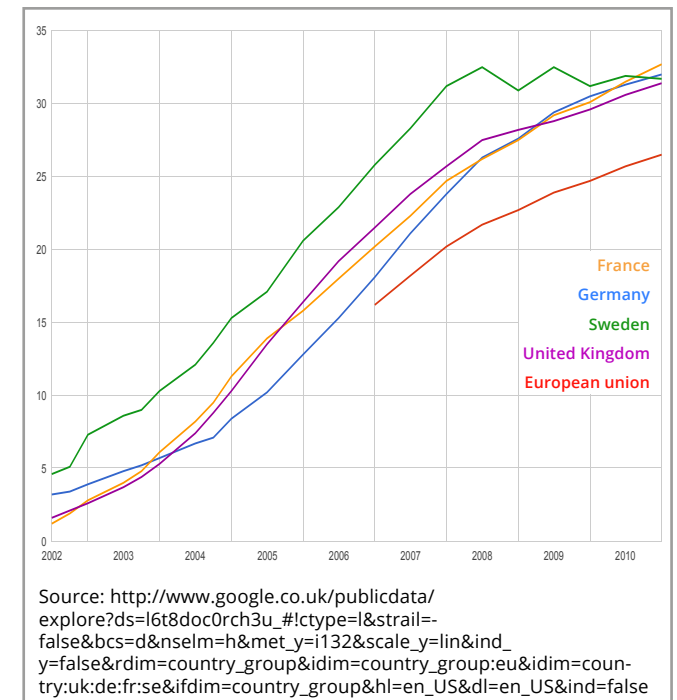


Responsiveness & flexibility

Since the recovery from the tech bubble burst in 2001-2, the ownership of resources, networks and particularly of space has risen considerably, whilst the profit margins on services has steadily decreased. This is driven in some instances by regulatory rulings (as in the case of the cross-network and roaming mobile charges) and in other instances by new technologies, such as VoIP, IPX and IP voice initiatives such as HD Voice & Video, along with the emphasis on Quality of Service (QoS) as a differentiator in this commoditised market space.

Both voice and bandwidth pricing have become commoditized, partly due to the increase in broadband penetration across mature markets (see diagram), allowing specialist, very agile, technology players such as Skype to spring up, further eroding the margins on traditionally lucrative voice markets.

Broadband penetration rate - Number of high-speed internet connections (capacity equal or higher than 144 kbit/s) per 100 inhabitants.



Nowadays, NOC services have become fundamentally simplistic in their nature: fault reporting, alarm management, performance monitoring, planned outages and other activities. These disciplines have matured in their evolution and are no longer a mystery. The metrics underpinning the measurement and the performance of the network elements are now well understood and established.

Cost of ownership

Improved financial performance is the primary reason for companies undertaking Outsourcing activities. In today's rapidly changing Telecom universe, complex Convergence and bundling of services are marketed with ease. In this new Business Model, the network and NOC are simply seen as conduits for delivering 'the services,' and thus, are no longer pre-eminent as an entity within a SP environment.

Some of the most innovative SP have realized that NOC services do not require the high octane staff to carry out mundane surveillance activities such as alarm surveillance and tier 1 & 2 triage. Further to keep those staff up to date with rapid changes in technology and delivery has a cost.

Staff/knowledge retention

Owning staff today has taken on a new meaning and rationale: key resources are better deployed to deliver competitive differentiation — a vital component in the global market. Today's consolidation actors are marketing orientated organizations. These types of company rely on innovation and smart applications to secure strategic market positioning.



Staff motivation and training is highly important for a successful NOC, with familiarity and knowledge key to the performance of the NOC as a whole. Skilled staff always come at a premium and must be continually upskilled whilst keeping them customer focused. Maintaining a skilled team and retaining knowledge of systems/customers alike is difficult to do in a high pressure environment. Motivating teams, creating loyalty and retaining staff is challenging in its own right, but even more so in the "always on" environment of the NOC, where the overhead cost of high staff turnover will directly affect the bottom line and customer satisfaction levels alike. Creating loyalty and retaining staff is vital and if not perceived as a core internal service, unlikely to be given the attention that is deserved, whereas an external specialist will be much more focus on this element of the deliverable.

In conclusion

It is evident that in the new realities the old methods are no longer competitive and economically viable. We are witnessing the appearance of new models, dealing specifically with the issue of NOC and the Network Operations ownership. Every day there are new, competitive, technology-led business models entering the market from all across the world; the idea that a single SP can maintain a flexible, skilled NOC infrastructure in-house to meet all their requirements now and in the future is quite ludicrous against the backdrop of continued innovation, ever diminishing technology refresh periods and merging technology sets. Large embedded Operations structures are very hard to reconfigure and adapt to rapid change, why would you want own the management of this ongoing issue?

In part 2 of this blog, we will look at cultural barriers to outsourcing and arguments commonly made against it, look further at the new operational models that support NOC outsourcing and answer why NOC outsourcing is more feasible now than ever.

About SmartIPX

SmartIPX provide Network Surveillance and outsourced NOC services in our 24*365 service desk, based around Diagnostic Activity & Problem Resolution, Fraud Management, L1/L2 triage and L3 engineer based activity, with QoS on ticket & call handling.

Further Reading

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or you're welcome to visit us at the Docklands Business Centre, Tiller Road, London E14 8PX**