

# MEETING THE BILLING CHALLENGE

FOR THE TELECOM INDUSTRY

WHITE PAPER



# Executive summary

Telco billing systems must constantly adapt to deal with the impact of technological advances in telecommunication services, new approaches to marketing and changes to the way the industry operates.

Yet the economic downturn of the last few years has resulted in investment in billing systems being neglected – and that underinvestment now threatens the long-term viability of many Telcos.



There are some factors which Telcos must respond to if they are to survive. For instance, the move to business models based around revenue sharing within the value chain means telcos need billing systems which can handle revenue sharing billing more effectively. Telcos must also press vendors of billing systems to develop and help them deploy solutions which can cope with significant increases in the volumes of data they must process as a result of several factors: the move to packet-based technologies; the wider range of products now being offered; and the need to store and process more data on customers to allow ever more sophisticated marketing strategies to be pursued.

In addition, Telcos will find that mediation and rating engines will have to operate in near real time to be able to notify customers of charges for more advanced services such as downloads before they access them. On top of that, billing systems will have to be adapted to deal with the fact that “prepaid” and “postpaid” are no longer products in their own right but simply different ways of paying for a range of services – and that customers may want to take advantage of both modes.

However, if Telcos want to do more than merely survive, they need to deploy billing systems that can give them competitive advantage. Flexibility to support the rapid launch of new services dreamt up by marketers will be essential. So will improvements to the layout and design of bills: support for electronic bill presentation and payment; true multi-service billing; and the ability to partner with other brands.

Telcos have a number of options for creating the billing systems they need to tackle future requirements: upgrade, rip and replace, integrate, or turn to an application service provider or business process outsourcer. Each option has its advantages and disadvantages and it is impossible to be prescriptive. Based on a customer's specific business requirements, existing systems, available budget and timescales, Atos Origin is committed to helping each customer draft the right strategy, implement appropriate solutions and operate effectively over the long term. Our extensive experience in designing, building and operating a range of Telco systems and, in particular billing systems, means we are well placed to contribute to the success of any Telco's billing strategy.

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### Introduction – short-term neglect means long-term ruin

Telco billing systems must constantly adapt to deal with:

- > new Telco products and services dreamt up by technologists and marketers – whether that's different ways to bundle inclusive minutes, text messages and picture messages or the ability to download new forms of content such as ringtones - or other services we haven't even begun to consider yet
- > changes to the data sources and formats needed to construct bills, which is fed from the network infrastructure and from applications and databases
- > structural changes to the way the value chain operates, which affect which elements of the total service are delivered by which companies.

Yet the economic downturn of the last few years has seen some smaller operators cancel billing projects entirely, while most tier 1 operators have postponed implementations. Vendors of billing solutions have coped with decreasing demand and limited customer budgets by offering bolt-on modules which allow Telcos to address immediate demands incrementally.

This short-term approach may have kept Telcos afloat but the result, according to some market analysts, is that Telcos are losing a total of US\$30 billion – and, in some cases, as much 15 per cent of their revenues - each year through poor billing practices. Telcos cannot ignore the impact their billing systems have on their business. This paper will look at the factors influencing the shape of billing systems in the future and discuss the strategies for Telcos embarking on billing projects today.

### Use a better billing system or die: market factors telcos can't ignore

The market is moving away from geographically based and vertically integrated Telcos to a horizontally layered model where companies focus on delivering just a few elements of the technologies or services used by customers, to the highest standards. This focus on core business and becoming just part of the broader value web results in a business model based around revenue sharing - and requires billing systems that are able to handle these needs.

We are committed to finding the most appropriate solutions for our clients rather than prescribing a particular course.



In addition, interconnect billing between Telcos has become increasingly important and, in some cases, can now represent up to 60 per cent or more of an operator's costs. Many Telcos have taken the easy route of relying on data coming from partners' billing systems and their invoices. Yet a small miscalculation by the billing party can make a difference of millions of Euros. Operators must look to install their own interconnect billing systems to get control over their outgoing costs.

Existing billing systems are also creaking under the weight of supporting the greatly increased volumes of data coming from packet-based services. Rather than simply creating a single record showing the times and places between which the circuit was active, billing systems now need to track each of the many packets that make up an IP-based session. This data flows from a variety of sources, ranging from network elements such as switches and routers to applications and databases. The data must be collated and converted into a uniform and understandable format for the rating engine in (near) real time if customers of pre-paid services are to be debited immediately. This places a much greater emphasis on the mediation function in billing systems, as well as having significant consequences for billing system hardware and storage.

Moreover, despite the advent of new technologies, the Telco markets in the US, Western Europe and some Asian countries have become saturated, with penetration of mobile phones having reached 60 to 80 per cent. In Luxembourg, Taiwan, Aruba and Netherlands Antilles, penetration has actually reached more than 100 per cent. Survival – let alone revenue growth – no longer depends on acquiring new customers but on reducing churn and keeping existing customers at the lowest possible costs, cross-selling new products and services such as downloads and video clips to existing customers, and increasing usage of older services such as SMS and basic voice calls.

In the case of mobile operators however, this task is complicated by the fact that they have only weak relationships with customers of pre-paid services. They need to be able to capture customer details for these currently elusive service users so that they can develop the kind of ongoing marketing relationships they have with postpaid customers. Yet pre-paid customers will not want to give up the control and flexibility they enjoy as a result of not being tied to a contract unless it brings them real benefits.

In fact, Telcos need to go a step further and recognise that, with telecoms moving beyond selling just voice and SMS, "prepaid" and "postpaid" are no longer products in their own right. They will become just different ways of paying for a range of services, from text messaging to ringtone downloads. It is likely customers may want to pay for some services – most likely value-added services such as downloads, ring tones and so on - through a prepaid balance, while they will want to be charged for more predictable costs - such as their monthly contract, voice calls and text messages - by direct debits or through some other form of postpaid contract. This means billing systems need to be able to support pre-paid and post-paid convergence: offering all customers the whole range of services, but billing each customer for each service in the way the customer chooses.

In addition, customers for new content-based services such as downloads, MMS and video clips, may require the billing system to notify them of charges in advance, before they begin accessing the service. This will apply particularly to customers taking services on a pre-paid basis, so they can be sure they have sufficient credit to purchase particular content – but all customers will want to be reassured that they only will be charged for services once they have been delivered successfully.

Telcos must deploy billing systems that can address these challenges if they are to survive – but they can use projects forced on them by necessity as a chance to implement billing solutions that will deliver competitive advantage. The next section will outline some of these opportunities.

Atos Origin has applied its design-build-operate philosophy to create a proven methodology that provides a practical approach to billing issues.



### Better billing systems for competitive advantage

The most innovative Telcos are launching new services not only off the back of technical developments but also by packaging new and existing services in ways which will appeal to specific customer segments, differentiated on the basis of lifestyle, ethnic background, leisure interests such as sports or other factors. A billing project should therefore be looking to implement solutions which are flexible enough to support whatever the imaginations of marketers throw at them – and adaptable enough to rapidly respond to shifts in the marketplace.

Telcos should also look into ways to improve the layout and overall design of bills, to make bills easier for customers to understand. This will reduce the number of calls made to customer care centres and cut the cost of servicing existing customers. Flexibility in design should also permit Telcos to include promotional messages, either for the Telco itself or for third parties, on bills, providing opportunities for cross-selling of the Telcos own products or a new revenue stream from advertising services from other companies.

Any billing project undertaken today must also consider the value to the Telco of Electronic Bill Presentation and Payment (EBPP). Allowing customers to access bill data and pay bills online has been shown to increase customer satisfaction, while it reduces printing and mailing costs – by up to 40 per cent, according to early adopters in the US - and can contribute to the “green” credentials of the brand. In addition, e-billing portals provide excellent enhanced opportunities for cross-promotion of the Telcos’ own products or for promotion of affiliates’ offerings.

We provide solutions covering all aspects of the telecom market and can support business at every stage in the process, from early-stage consulting through solution selection to implementation and integration projects.





Our approach makes Atos Origin a one-stop shop for all elements of a Telco billing solution.

In fact, with communication increasingly seen as part of a wider spectrum of utilities or as one component of a broader lifestyle choice, Telcos should be looking to create multi-utility brands, market their services under affiliates' lifestyle brands or use their trusted utility brands to market non-Telco services. While existing billing systems will support multi-service billing on a single bill relatively easily through "electronic stapling" of bills generated by different systems, Telcos should look to billing solutions that provide much earlier and tighter integration between billing systems for different services if they want to deliver real cross-service discounts and other true multi-utility offerings.

Moreover, even within the Telco market, customers increasingly want to be charged for several numbers on a single bill as the number of phones in a household grows. For instance, a family may want a single bill covering all the phones used by parents and children - and each number may have its own specific payment method (post-paid contracts for the parents, limited pre-paid credit for the children) and services.

Even if a Telco decides that it is not ready to implement some of these functions just yet, it needs a strategy for revamping its billing systems which will keep open as many options as possible. This paper will now look at the various strategies Telcos might adopt and discuss how Atos Origin can help them deliver billing platforms that will underpin their future success.

#### Implementation strategies for new billing systems

There are three main strategies that Telcos can adopt to create the billing systems needed to tackle future requirements. The first is to **upgrade** existing applications to new versions. It will be relatively straightforward to transfer data and retain existing functions, but this approach depends on your current vendor (or your in-house team, if you have developed your own solutions). However, this is not a future-proof solution and, depending on the age of the existing billing system, often means building on top of old concepts and foundations which are already creaky.

A second approach is to **rip and replace** multiple systems with an entirely new billing system. This may be a good way to obtain the functions you need to run your business in the future and reduce operational costs, but it can be a costly, risky and lengthy process. Tighter IT budgets following the downturn in the Telco market have certainly contributed to the fact that only a very few Telcos have chosen this option, but this approach may become more attractive during the next few years as the demand for more features increases and the financial situation of Telcos improves.

The third approach is to **integrate** add-on functions from third parties or new modules from existing suppliers. Some vendors also offer additional continuous development to keep billing systems up to date. While this approach provides some flexibility and relatively quick results, it will increase the complexity of the system - particularly the integration challenge - and can add considerable processing overhead. On top of that, legacy systems may struggle to deliver data in an appropriate and timely fashion to new components.

However, developing and running systems in house (whether bespoke or packaged) is only one of the ways Telcos can meet their need for new billing functionality. Other alternatives are to make use of billing functionality delivered through an Application Service Provisioning (ASP) model or to outsource IT operations or even

We not only help Telcos deliver the IT infrastructure changes needed to implement their billing solutions but also focus on helping them identify and make the organisational changes required to fully benefit from the new features.



the whole billing process to an external billing provider. Outsourcing some or all of the billing functions or processes is a popular strategy for start-ups who need to get systems in place quickly and for virtual Telcos, who do not have their own network but concentrate on customer relationships and who frequently lack the in-house technical expertise to run billing systems themselves.

Each Telco will need to assess its own position in terms of existing systems, budgets, timescales and so on and at Atos Origin, we are committed to finding the most appropriate solutions for our clients rather than prescribing a particular course. Whatever route a Telco chooses, it will need to grapple with the following issues:

- > ensuring solutions meet their business requirements both tactically and strategically
- > ensuring any solution is backed by a sound business plan: with budgets under heavy pressure recently, any new investment needs to be able to demonstrate a quick return on investment as well as long term benefits. Projects will also typically need to be completed in just three to twelve months.
- > ensuring solutions are flexible and can support rapid introduction of new products and service packages by marketers. This is essential if Telcos are to hold on to customers either by being a service innovator or by being able to respond quickly to demand generated by moves by innovators.
- > making maximum reuse of expertise and solutions developed elsewhere, to avoid reinventing the wheel in house.

- > implementing core technologies which are highly scalable, not just to support data generated from new services sold to existing customers or from growth in overall customer numbers, but also to support the explosion of data generated by existing services sold to existing customers as a result of the move to IP-based services.
- > acknowledging and addressing in a strategic fashion the complex integration needed to link billing systems to other operational and business support systems, especially CRM, and to add-on products modules supporting areas like e-billing.
- > adhering to international standards - such as those developed by the TeleManagement Forum - since this will simplify development, especially when tackling integration between various business and operational support systems. Telcos should actively seek to work with the increasing number of software vendors who are incorporating these international standards in their products.

Balancing all these issues is no easy task – but Atos Origin can help. Based on our extensive experience in designing, building and operating Telco operational and business support systems and, particularly, billing solutions, we are well positioned to contribute to the success of any Telco's billing implementation, whether we are developing a billing strategy, helping with the vendor selection process, building and customizing a solution, or running the whole billing system. Our approach ensures our clients' billing systems enable them to compete successfully in a complex, fast-paced marketplace.

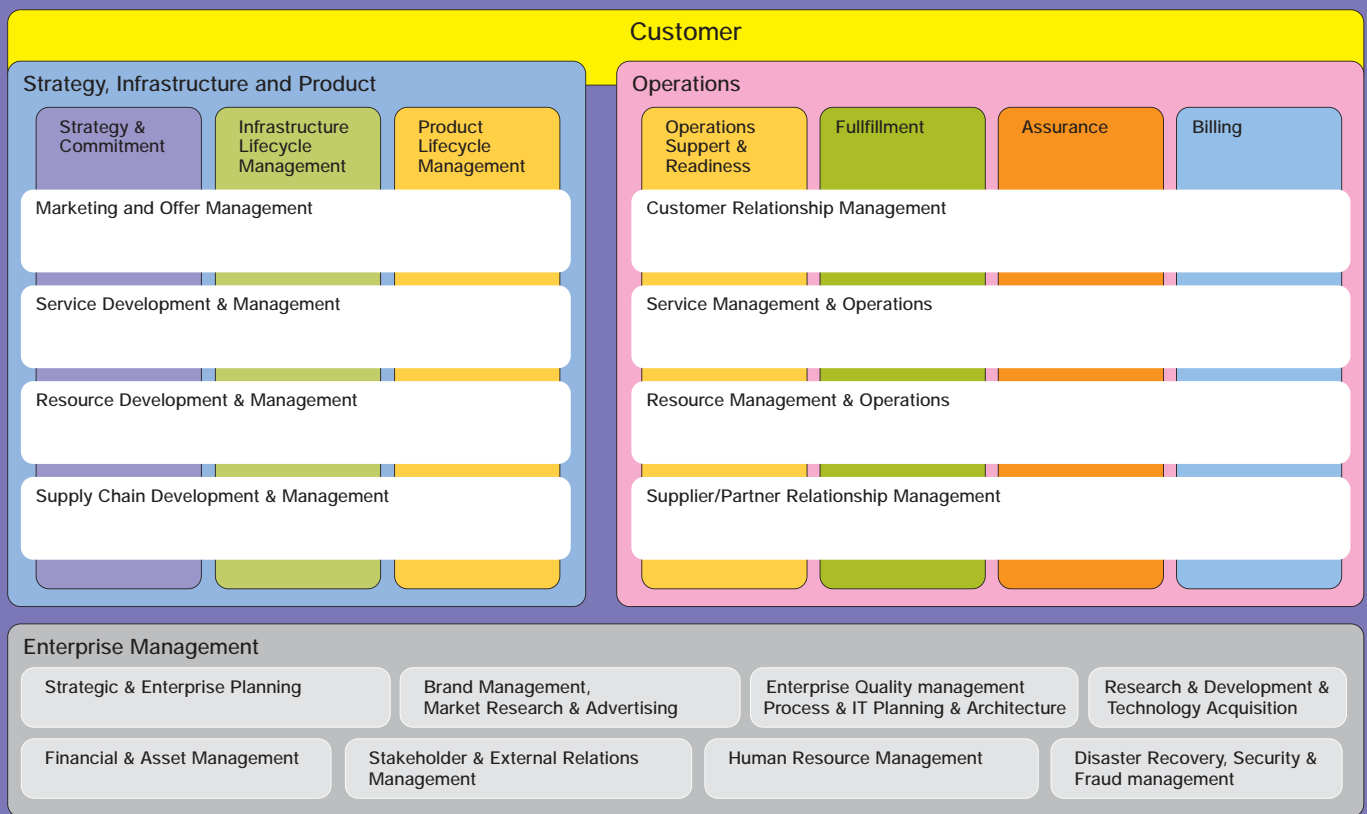
#### **Atos Origin's approach to billing systems**

Atos Origin has applied its design-build-operate philosophy to create a proven methodology that provides a practical approach to billing issues. We provide solutions covering all aspects of the telecom market and can support business at every stage in the process, from early-stage consulting through solution selection to implementation and integration projects. We can then go on to provide post-implementation support, including outsourcing infrastructure and business process outsourcing.

We have helped many Telcos handle the fierce competition in the Telecoms market by working with them to deliver compelling and innovative services through the introduction of new and enabling technologies.



# eTOM Model



Atos Origin does not look to develop billing software itself, but works as a systems integrator, bringing together best-of-breed applications from a range of vendors. While we have partnerships with leading billing application vendors – and experience in many other products – our strategy is to remain independent, so that we can help our customers develop the solution that best meets their specific needs. However, where appropriate, we can offer some specialized billing solutions from our MARBEN product range or prepaid payment solutions that are part of our Poseidon product range.

Atos Origin is a member of the TeleManagement Forum (TMF) and our services are delivered within the framework of the TMF's enhanced Telecom Operations Map (eTOM), which covers all aspects of the operations processes of a Telco. The continuous development

of the eTOM model by the TMF and its members (Telcos, vendors, systems integrators and others) is supporting further standardization and simplifying the integration challenges involved in developing solutions to support Telco operations, resulting in faster implementations and lower total cost of ownership (TCO).

Moreover, we not only help Telcos deliver the IT infrastructure changes needed to implement their billing solutions but also focus on helping them identify and make the organisational changes required to fully benefit from the new features, whether it being billing upgrades, new modules or even complete new billing systems. All these services are underpinned by our capacity to help Telcos create a cost-effective infrastructure that offers the scalability and flexibility to support rapidly changing needs.

These services for Telcos are delivered through a network of national Telco competency centres, which apply innovations and best practice - in consultancy, customization or managed operations - to the specifics of each national Telco market and regulatory environment.

Together, this approach makes Atos Origin a one-stop shop for all elements of a Telco billing solution.

So, whether a Telco is an incumbent or competitive operator, or delivering voice or data services over fixed or 2.5 or 3G mobile networks, our services can help it improve its internal processes, reduce its operating costs and become more profitable. We have helped many Telcos handle the fierce competition in the Telecoms market by working with them to deliver compelling and innovative services through the introduction of new and enabling technologies.

For more information visit the company website at [www.atosorigin.com](http://www.atosorigin.com), email: [more-info@atosorigin.com](mailto:more-info@atosorigin.com) or contact:

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