

Innovation Practices and Their Measurements in Telecom Industry

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Innovation metrics are an important tool for managers, Metrics help managers make informed decisions based on Objective data, which is valuable given the long term nature and risk associated with innovation projects. Secondly, metrics help affect behaviour by helping align goals and actions with the objective of the company.

However most use R&D and product- development metrics only, such as annual R&D budget as a percentage of sales, number of patents filed in a year, percentage of sales from products introduced in last one year, number of ideas submitted by employees and so on. However, these metrics offer a limited view of a company's innovativeness. They don't measure business concept innovation capability. Besides, their focus on R & D and Products makes them less suitable for service companies / functions. This study is intended to focus on ways to measure innovation with focus on "service" function in Telecom Industry.

Research Findings

The research is conducted using telephonic as well as personnel interviews with various stakeholders in the telecom industry.

Based on our experience we have observed that many telecom companies in India have similar organization structure and the sales processes for both service and product related R&D projects, as a result though there are different practices adopted to encourage service innovation, metrics used to measure innovation are similar for both product and service projects. This observation cannot be generalized as our sample size was more focused on companies dealing with Value added services.

For projects that have long yield time many of these companies have defined stages where they would pursue an appraisal exercise, In the current paper we have used appraisal exercises based on a generic process identification.

Most of the companies use around 5-6 metrics and there is no order of preference amongst these 5-6 metrics. These metrics can generally be classified as Primary Metrics (the Top 5 Metrics defined in each category belongs to this category).

1. How is Innovation Benchmarked in the telecom Industry?

Most of the companies do in-depth research for benchmarking their offerings against their competitors. This is made possible through various workshops which includes clients, vendors, new employees from different companies. Some companies even gather this information through job interviews and other mechanisms.

At the Top Management Level most metrics may be classified as financial and Organizational.

| 1.Return on Investment Metrics | |
|---|---|
| Inputs | Output |
| % of capital Invested in innovation activities such as submitting ideas and reviewing ideas for new product | Actual vs Target Breakeven time |
| No of new products/ services and business launched in the new markets in the Past year | % of revenue/ profit from products and services introduced in the past x years |
| % of outside vs inside inputs to the innovation process | Royalty and licensing income from patent/ intellectual property |
| 2.Organizational Capability Metrics | |
| Inputs | Output |
| % of employees who have received training on tools and methods for Innovation | No of Innovations that significantly advanced existing businesses |
| Existing of formal structure and processes that support innovation | No of managers that become leader of new category of Businesses (Based on employees balance score cards) |
| No of new customers and opportunity in new markets | |
| Number of new competencies | |
| % of time spent by top executives on strategic innovation vs day to day operations | |
| % of manager with training in the concept and tool of innovation | |

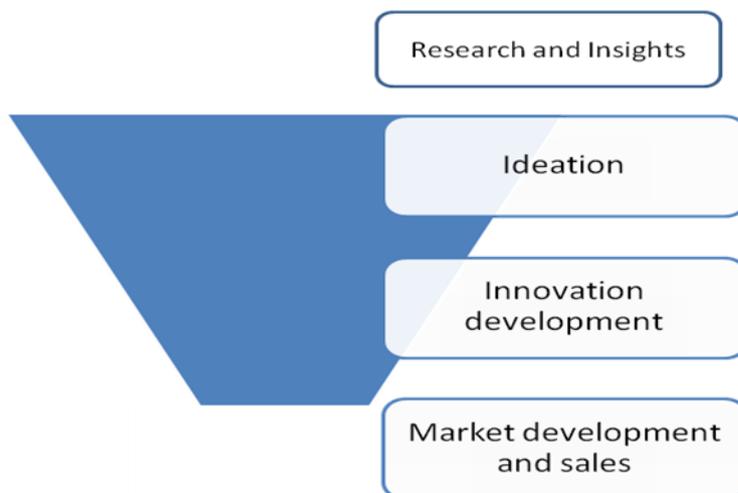
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|--|--|
| % of services with assigned executive sponsors | |
|--|--|

The other method of benchmarking is to compare various practices and process followed to encourage innovation within the company in comparison to industry and processes are defined based on stage of the project. For our convenience we have defined it as Innovation Funnel.

The Innovation funnel:

Innovation process can be considered as a funnel: lots of ideas come in the end on the left, and a few finished ideas comes out of the narrow on the right, ready to go to markets, provide exceptional value, and earn substantial revenue and profit.

Based on inputs from various sources we have considered our funnel to be composed of 4 stages:



2. **Practices for innovation, with focus on “Services Innovation” in Telco’s. This can also include the processes followed for encouraging innovation; generating capture and processing of Ideas?**
3. **Metrics prevalent in industry with regards to Service Innovation, What other metrics can be used for service Innovation?**

Based on Innovation funnel we have identified the best practices and metrics used at each stage.

Research and Insights:

Case In Point: Ericsson Consumer Lab (ECL)

ECL is a unit within the Ericsson group that gathers in processes and data on end consumer needs. Their job is to understand the context in which end consumer use telecom on everyday basis. The important thing is being able to point the company in the right direction to get the balance right between what they need today and then being able to translate this into what they will need in the future.

Ericsson consumer labs uses different types of market surveys via questionnaire, focus group, in depth interview with individual in their homes or workplace, observational studies etc.

Data are collected at three platform level

1. **Fundamental:** A regular and broad monitoring of the world market that looks at consumption patterns for say telecom, cars, cosmetics, etc
2. **Infocom:** looks at attitudes and relations to the consumption of telecom, IT and media at the individual level
3. **In-depth:** study of a specific area within telecom, IT or media or a specific group of users

Ericsson also works with a segment model made up of eight different archetypes. Each archetypes represents a so-called customer types characterized by certain values and attitudes. The market reality monitor is a tool that analyzes these in terms of two dimensions:

- Individual attitude to stability Vs Change and new experience
- How an individual views long term benefits Vs the immediate meeting of a need

The eight archetypes are

- Careerists
- Experiencers
- Pioneer youth
- Mainstream youth
- Mainstream materialists
- Basic phoners
- Family phoner
- In-touch organizers

***Sources: Ericsson Customer care magazine, Presentation at South-Asia Telecom Conference.**

Metrics Used

Quantitative:

- Number of customer examined
- Application of research result in new products services, processes
- Breadth of participation from throughout our organization in the research process
- Time invested
- Money Invested

Qualitative:

- How well do we understand the tacit dimension of our customer's experiences?
- How well do we understand the implication and application of new technologies?
- How well we understand the emerging future?
- How good have our past prediction been at anticipating change?
- Is our research helping to target the right innovation opportunities?

***Sources: Based on our Interaction with various stakeholders in the industry**

Ideation:

“Here we explore all the knowledge and discoveries that our research has exposed, thinking about what it might mean for existing and future products, services, processes and business models. Here we engage with customers, specialists and non customers to get their feedback on specific concepts, to help us model possible business structure, supply chain models, risk assessments, financial projections etc

Here we welcome ideas submitted from insiders and outsiders. People participate through idea capturing website”- Statements from one of the Interviewer

Case in Point: Alcatel- Lucent Venture Funds

Combining the strength of a flexible venture capital firm with the technology expertise of Bell labs and global leadership of Alcatel-Lucent, the venture fund investment strategy has three key aspects

- Incubation and commercialization of internal ventures
- Strategic venture capital investment
- Joint ventures

By fostering an open innovation model, Alcatel-Lucent Ventures partner with universities, entrepreneurs and innovative companies to identify investment new business opportunities and engage in joint initiative that allow Alcatel-Lucent to enter new markets, build new revenue streams and profitable grow in business.

Sources: www.alcatel-lucent.com/ventures

Case In Point: Playground, Telenor in Norway

Telenor as a group includes 12 operating companies in Europe and Asia serving more than 175 million customers. Telenor envisaged a new and open innovation models including partnership with external developers in order to develop a portfolio of future mobile services and solution for international markets.

Playground is created as a virtual meeting place and a collaboration network of Telenor mobile operators and partners. It facilitates an environment for future growth through demonstration and testing mobile services from 3rd party partners together with operators controlled services build on Telenor enablers. All associates are encouraged to give their views.

Result: Telenor had 160 new services ideas through Playground after six months of Launch

*Sources: Based on the experience of working with Telenor as Strategic Account Manager TCS

Metrics Used:

Quantitative

- Number of ideas developed
- Number of ideas contributed by the staff
- % of ideas from outside
- % of people from inside the organization who have participated
- Number of ideas collected that were implemented
- Number of ideas that were developed further

Qualitative

- Are we encouraging people sufficiently to share their ideas?

*Sources: Primary Research based on interview

Innovation Development:

This is the stage where rapid prototyping leads to complete innovation. Here companies engage in extensive engineering and lab testing, build prototypes, test assumptions, talk to customer again, this time with specific products, processes and service in mind. This stage includes all the stuff that everyone knows you have to do to turn an idea into a saleable Product.

Case In Point: Ericsson Labs

Ericsson labs simplify the creation of applications for experimental developers. It also enables developers to reach telecom operators. Simplify the implementations of basic telecom functions and enables access to advanced facilities.

The Ericsson Labs can be divided further into following processes:

- Enterprise Mobility Development Program: Here they provide software development toolkits for commercial Ericsson products in Networks
- An Open Web Interface: These are commercial interfaces that represent several powerful enablers such as messaging, micropayments via operator invoice and user information.
- Labs and Test Beds: Here they provide continuous flow of beta version of applications. It also facilitates the advancement from beta version to commercial operations. The lab test bed is a virtualized network that gives Ericsson a fast and flexible way of setting up and modifying networks and servers to optimize the performance and service level for developer and their uses.

*sources: Internal

Metrics Used:

Quantitative

- Prototyping speed
- Number of prototypes per new product
- Average time it takes to get from stage1 to stage3
- Number of patent applied for
- Number of patent granted

- % of ideas that are funded for development
- % of ideas that are killed

Qualitative

- Are the right people involved in the innovation process?
- Do we have enough failures to assure that we're pushing the envelope sufficiently?

***Sources: Primary Research Based on Interview**

Market Development and Selling:

This involves generating Business, revenue. Here company also needs to decide whether it really wanted to market the product itself or trade through Patents and Trademark

When you are talking of a business Enterprise, the concept of profitability comes in and how you should position yourself on the market and in relation to competitors, current and future. It is a matter of managing your innovation in such a way that you incorporate profitability in it. Here you can also elect not to develop innovation yourself and choose to do business through the use of patents and protection. As you know, we do sell some of our patent rights, just as we buy from other companies. Trading in innovation is a business in its own right, which in our case funds a large part of our research activities- Head Innovation from one of the interviewer.

Metrics Used:

Qualitative

- How well are we balancing our attempts to reach existing versus new customers?
- How well do we really understand our customers?
- Are we positioned properly for change in the attitudes, beliefs, ideas, etc. of our customers?
- How well does our sales process match our customers' needs?

Qualitative

- Return on marketing Investment
- Number of new customer added
- Growth rate of customer base.
- ROI on total innovation portfolios, yield appropriate results in terms of sales growth, profit growth, and overall ROI
- Gross sales revenue.
- Gross sales margin.
- Expected result compared with actual results.
- % of projects terminated at each stage
- Successful results per type of Innovation
- Cost saving achieved in the organization due to innovation effect.
- Number of new customers
- Percentage of sales from new products/ services?
- Average age of products and services?
- Number of new products and services launched?
- % of revenue in core categories from new products and services
- % of profits from new products and services
- % of new customers from new products and services
- Time to market from research through to sales
- Customer satisfaction with new products and sales

***Sources: Primary Research based on Interview**

Other Processes Adopted to Encourage Innovation:

Some companies such as Telenor recruits students from university through an idea contest. Many other companies do not incentives people based on the success of their Innovation in terms of revenue matrices (as these may lead to short term gain since people involved in the process might not stay to realize the benefits or wanted early promotions). Some companies have even started incentivising their employees based on the market research or feedback from customers based on concept selling.

Moreover many companies have taken pain to build IT systems so that organizational knowledge and technology can be mined by the network outside of its original purposes. Also such knowledge and technology is presented in such a form that people knowledgeable of market needs and technology demands can identify. Many steps are also taken to make such knowledge visible to sales and marketing teams. Further in order to allow innovation to co-involve there are workshops/ conferences seminars which involve both technical team, sales team (some companies even invite their customers and suppliers) organized from time to time.

Moving further some companies have even designed portals which allow people to know where the other people in the company sitting are and what are they working on or specializing in. This allows mentoring and aggregation of best of the resources.

4. How is ROI for Innovation measured?

Elements of an ROI calculation (A case from Enterprise VAS solutions)

Tangible Benefit:

The tangible benefits of a solution measures the cost of implementation, against possible saving and gains, to calculate the quantifiable financial benefits of the solution.

The costs of the tangible benefits equation measure all of the up-front and ongoing costs for implementing a service. These includes

Capital Expenses: the investment in system, software, networks, peripherals, supplies and equipment to deploy and maintain the service level

On-going Management and Support: - the staff and labor to manage and support the solution after it is deployed

Operations and Contracts: the recurring fees, leases, ongoing maintenance and support contracts

The savings portion of the tangible benefits is typically grouped into four categories:

- **Labor Saving:** the saving due to expected headcount reduction from deploying the planned services
- **Capital Expense Reductions:** The saving in expenses such as office supplies, printing costs, dower or facilities expenses from implementing the planned services
- **Productivity benefits:** the gains in users productivity from implementing the services, including reduction -in system downtime or efficiency gains in performing specific user tasks.
- **Business Benefits:** the gains in profit resulting from revenue gains such as those from increased sales, customer acquisition and conversion percentage, and increased customer retention.

The measure of tangible benefits ultimately pits the projects costs against the total benefits, culminating in the derivation of four key tangible measures of project viability:

- **ROI:** the ratio of the net gain from a proposed service, divided by its total costs
- **Risk Adjusted ROI:** The ratio of the net present Value gain from a proposed project, divided by the NPV of total costs
- **TCO:** the life Cycle ownership costs comparison and benefits
- **IRR:** the discounted rate necessary to drive the NPV to zero

Intangible benefits represents benefits that are difficult, or impossible, to accurately predict and measure in financial terms. Often these intangible can be quantified into KPI such as % market share, or industry ranking.

Some intangible benefits that are considered when evaluating and measuring the performance of a project include:

- **Brand Advantage:** reinforcing, advancing or changing a company's brand
- **Strategic Advantage:** working towards or meeting overall corporate objectives
- **Competitive Advantage:** releasing services faster, developing services less expensive, better addressing customer needs, meeting changing market demand, scaling easily and more cost effectively and gaining market share
- **Intellectual Capital:** increase in relevant knowledge gained by the staff, and the perceived market value from those gains
- **Organizational Advantage:** enabling an organization to function more effectively, or reinforcing or recreating a corporate culture

Conclusions:

1. Today Companies are looking open service innovations of both kinds :

- a. **Outside- In:** Searching outside the company for ideas and inputs from other companies as well as from customers, vendors, universities and third parties is favourable compared to holding R&D closely within firms boundaries. Access to new research, technology and products opening new market segments, lowering development and product cost by leveraging R&D developed on someone else's budget, increasing the competitiveness of the company together with risk reduction by lowering the failure rates of new products and increase the number and variety of new ideas are major benefits from this approach.
- b. **Inside –out:** Capturing value from an innovation by using the technology inside the existing company or launching a new venture that uses that technology. Hence licensing the technology to other companies resulting in that the technology may be commercialised and applied through partners operating in different markets that the company in question traditionally has served. Accelerating time to market, buying or licensing or spinning off the company's underutilized “ on the shelf” ideas are major benefits from this approach.

2. While Defining Metrics for Innovation process following parameters are generally considered

- a. Managers and employees are considered to be more short term than the firm therefore companies today look for metrics that can be measured today but which impact future outcome.
- b. Managers and employees would be much more risk averse than the firm and therefore companies are identifying metrics that are not associated with uncertainties or have a risk cost associated with them.
- c. Employees and Managers focus on the matrices that results in their benefits hence companies are today trying to align metrics with Customer needs and requirements so that the company does not lose sight of the goal.

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