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Exploration Programmes:
Corporate Technology explores future telecommunications

Technology Inputs to Strategy and Business Planning

In the new era of liberalisation and increased competition, Swisscom has to deal with new challenges to sustain a steady growth desirable for a market leader. In this regard, CT's (Corporate Technology) systematic, business-oriented R&D activities play an important role in creating new competitive advantages for Swisscom and strengthening its market position. While CT's exploration findings are constantly communicated to relevant Product Houses, EP10's particular role is to provide inputs and support for Corporate Strategy and the planning units of Product Houses.

Exploration Programme 10 is responsible for building up knowledge and expertise in the areas of technological developments and market trends and for conducting strategic studies. An important aspect of the programme is its role as a gateway between Corporate Technology and Corporate Strategy, providing inputs to Swisscom management processes, i.e. strategic directions, business planning, and strategic controlling.

With its Exploration Programmes, Corporate Technology is exploring telecommunication technologies and new service possibilities with a long-term view of 2–5 years. Further, the expertise built up in the course of this activity enables active support of business innovation projects.

EP10 is the main contact point between CT and the management processes. The advantage of having a dedicated programme for playing this role is simply efficiency and effectiveness. All the exploration programmes within

ALEX JALALIAN, BERN

CT are constantly developing future scenarios in their specific technology domains. CT's outpost in the USA is part of EP10 and is tapped into the technology and market trends in Silicon Valley. It submits valuable information to selected business units. In addition to CT internal sources, EP10 is continuously processing external expert reports, and maintains a useful insight into the trends across the technology spectrum. Knowledge is accumulated and used by EP10 in its interaction with management processes and in the execution of strategic studies.

This article explains the role and the value propositions of EP10 for the Swisscom Corporate Strategy unit and the Product Houses. This value adding process is meant to be a systematic one. For this purpose, it is necessary to understand how EP10 – as a system – collects its inputs, what the input sources are, what activities EP10 has to perform to solidify its knowledge and expertise, and how it interacts with the internal clients.

Methodology

Exploration is the core activity of CT. The exploration programmes continuously navigate through their technology areas and identify key questions for Swisscom. The areas covered are from technologies in network and access layers to technologies in the service and application

layers. That is, each programme develops future scenarios in its respective domain, and shares its findings with the others, including EP10. This approach is the same for all the programmes. The 6-monthly review of the programmes by the main stakeholders is a means to keep the programmes on the right track.

The technology areas themselves are also subject to review on a yearly basis, as part of CT's own business planning process. In this regard, the global technological trends as well as the internal business units' requirements are used as input to this process.

Exploration Programmes

A variety of challenging topics are currently being explored within the programmes, such as:

- Innovative voice services, voice over IP, speech processing
- Access network and residential service technologies, home networking
- Internet and multimedia services, business to customer e-commerce
- Card and security services, network security, mobility
- Communication services for enterprises, business to business e-commerce
- Service and business management, agent technologies
- Backbone networks (IP/ATM/WDM), network and traffic management
- Bioelectromagnetics, Safety, and Electromagnetic Compatibility

Based on an analysis of the business environment in terms of political and regulatory, economical, social, technological, and environmental trends, different future scenarios are developed. Collaboration with academia and foreign partners allows the programmes to be involved in international projects, which in turn contributes to their scenario development. Once the scenarios are developed the probability of their occurrence and their impact on Swisscom's business is assessed.

EP10 continuously collects information about the emerging technologies and the scenarios associated with them, from internal exploration programmes, the US-outpost, and external sources, and generates annual technology forecasts. For every topic in the

forecast, the following issues are addressed:

- technical description
- life cycle
- suppliers
- acquisition costs
- relation to other technologies
- rival technologies and substitutes
- key drivers
- market potentials
- opportunities and threats
- outlook

The Swisscom unit Corporate Strategy and the Product

Programme Scenario

«What will be the impact of emerging technologies and market trends on Swisscom's corporate strategy?» – this is the lead question of EP10.

The objectives are to continuously evaluate the impact of new trends on Swisscom's strategy, communicate the findings with relevant business units and, if required, participate in the subsequent projects and studies.

Houses then use the forecast as an input to their planning processes. In addition, studies over special topics such as:

- mega-trends, effects from discontinuities, convergence, technological leapfrogs, risk associated with present businesses
- may also be conducted separately, i.e. outside the scope of the technology forecast.

US-Outpost

The US-outpost of CT in Silicon Valley is an integral part of EP10, which continuously collects competitively relevant information about the advanced telecommunication and IT market and technologies in the US. The information collection is made possible through media screening, exhibition visiting, seminar or con-

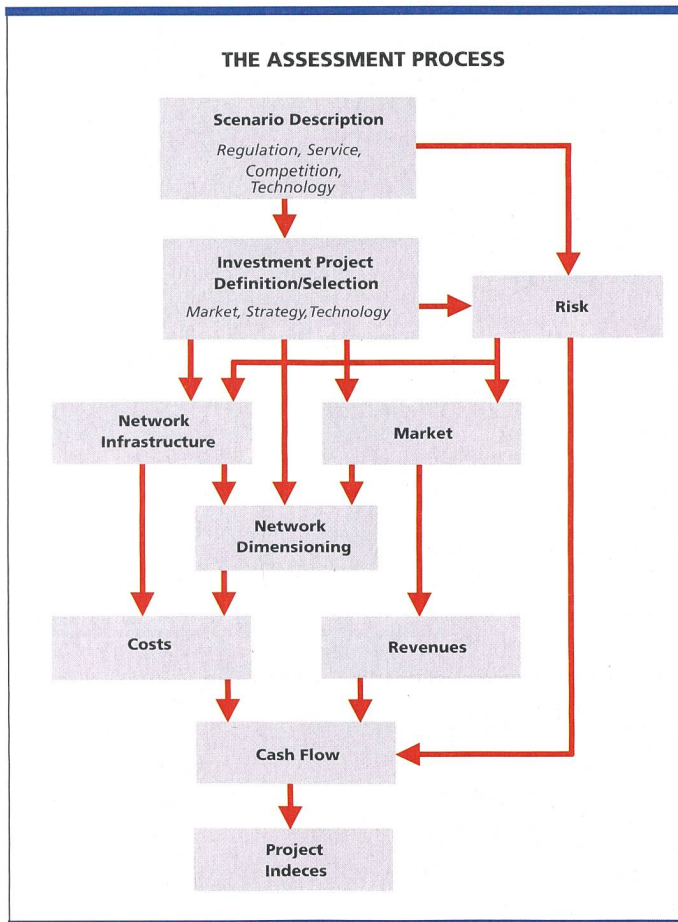


Fig. 1. The steps and information flow in the investment assessment procedure.

ciently produce its deliverables. This base would enable EP10 to systematically contribute to management processes in terms of technology input. The methodologies and concepts for the assessment of strategic network investments are clearly of use to the planning process of business units Mobile Com and Network Services and Operations (fig. 2).

EP10's role in Swisscom's and CT's own business planning process

EP10 provides input to Swisscom's business planning process. Such a collaboration between EP10 and the Product Houses enables EP10 to get closely acquainted with the requirements of the Product Houses. In addition, EP10's role within CT is to plan and master the execution of CT's own business planning process.

Outlook

EP10's role in Swisscom strategy and business planning processes

EP10 shall continue to play an important role in the management processes by providing primarily technology inputs. It will also keep on to act as a co-ordinator, for the allocation of CT resources to the strategic projects. Furthermore, EP10 shall build up limited resources for participation in the corporate strategic studies.

ference attending, and direct contacting. US-outpost distributes this information to CT and the business units of Swisscom to support technical as well as business innovation and to allow effective shortening of time-to-market for new products and services. It also establishes and maintains contacts with leading businesses in the US, to facilitate Swisscom projects and visits.

Development of Concepts, Methodologies and assessment Skills

EP10 is currently involved in a European project (Eurescom) where a methodology for the assessment of strategic investments is being developed. The project concentrates on quantitative analyses, relying on the establishment and use of a common assessment framework, including common models for costing, market assessment, competitor behaviour and external effects, and risk analysis (fig. 1).

The methodologies, including costing principles and data, to a large extent will constitute important inputs as the project participants design and form their respective business cases. Swisscom's Product House Mobile Com is acting as one of the reviewers of this project.

Conclusions

EP10 as a gateway between CT and management processes

The activities of EP10 are designed to provide a solid base for EP10 to effi-

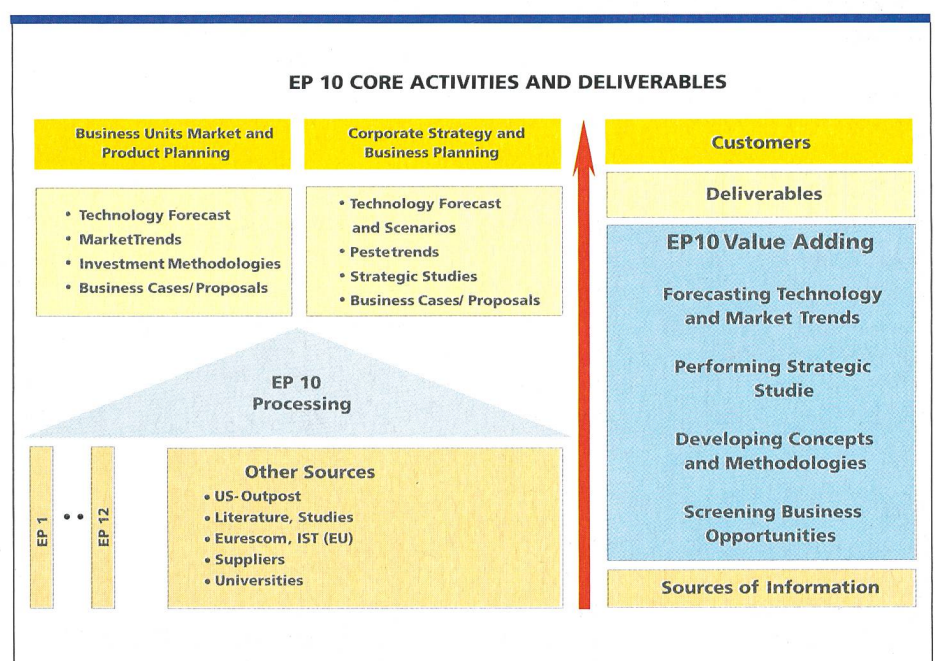


Fig. 2. The components of EP10: sources of information, core activities, deliverables and customers.

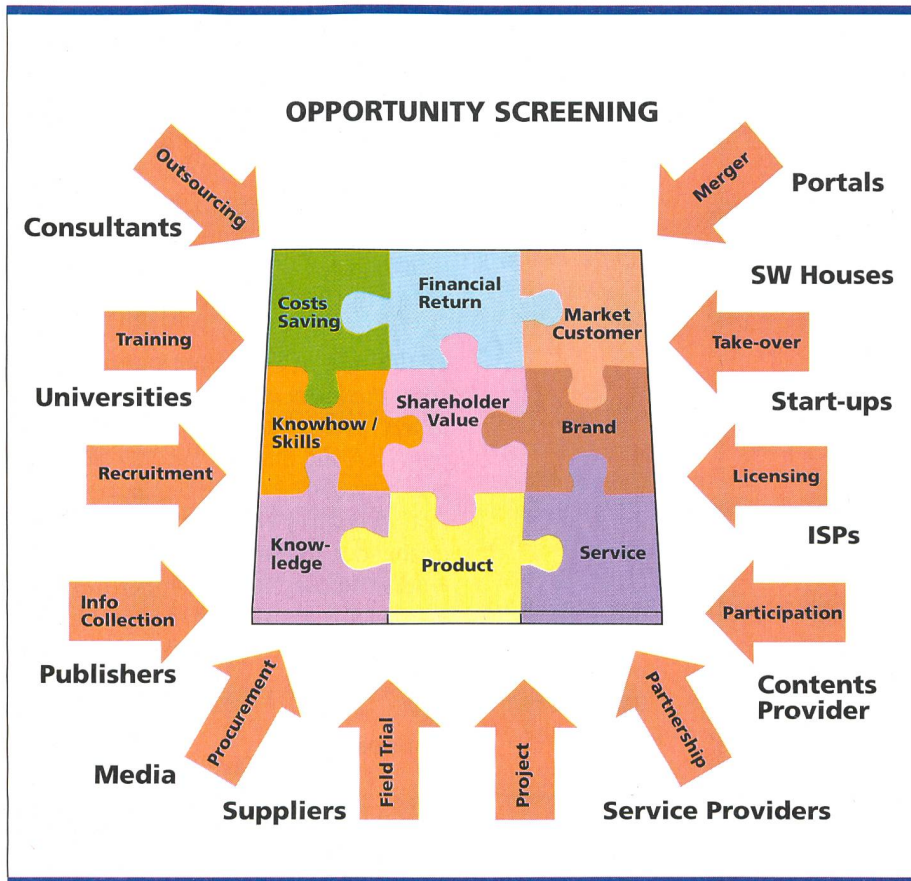


Fig. 3. The sources of opportunities (words in blue), the benefits (named on the puzzle pieces) and the ways the opportunities are addressed (marked on arrows).



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Technology Forecast

The technology trends and future scenarios shall continuously be monitored in EP10. The sources monitored shall be internal (CT exploration programmes and US-outpost) and external. The findings shall continually be incorporated in the Technology Forecast publication.

siderations and risks involved, synergies with existing businesses, organisation and resources requirements, realisation plan.

The results shall be communicated in the form of a recommendation or proposal to the relevant management and business units.

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US-Outpost and business opportunity screening

The current US-outpost activities shall be upgraded and become part of a new project called business opportunity screening (fig. 3).

The idea is to leverage CT's presence in Silicon Valley and benefit from addressing attractive opportunities, to increase Swisscom's shareholder value. The benefits of such opportunities could be tangible (e.g. financial, products and services) or intangible (e.g. know-how, knowledge, brand value).

The assessment is done in the form of a business case incorporating issues such as: competitive factors, impacts on market share and positioning, investment magnitude, implementation con-

Zusammenfassung

Swisscom und ihre Geschäftseinheiten verlangen für ihre Strategie- und Planungsprozesse in zunehmendem Masse Beiträge der Unit Corporate Technology. Diese Beiträge sind typischerweise technologische und andere Trends, welche das Swisscom Geschäftsumfeld beeinflussen. EP10 wurde deshalb auf das Erarbeiten von Technologievorhersagen und das Erbringen der geforderten Beiträge ausgerichtet. Zudem steuert EP10 CT's eigenen Planungsprozess.

Die Entwicklung von Konzepten und Methodologien für die Beurteilung strategischer Investitionen im Netzbereich wird EP10 beim Aufbau der Fähigkeiten helfen, die es braucht, um die Planungsprozesse in den verschiedenen Organisationseinheiten der Swisscom zu unterstützen.