It strategy

IT Strategy White Paper Telecom Sector: Vodafone 2013 IT Strategy White Paper Telecom Sector: Vodafone 2013 Submitted by: Geetha Ranganathan 2011B41 Rosanne Mathias 2011B10 Augustus Simon 2011B31 Pranshu Sahni 2011B20 Sidharth Geddam 2011B04 Royston Vaz 2011C48 Aastha Dhawan 2011D36 Submitted by: Geetha Ranganathan 2011B41 Rosanne Mathias 2011B10 Augustus Simon 2011B31 Pranshu Sahni 2011B20 Sidharth Geddam 2011B04 Royston Vaz 2011C48 Aastha Dhawan 2011D36 Table of Contents INDIAN TELECOM SECTOR The Indian telecom market has been displaying sustained high growth rates. Riding on expectations of overall high economic growth and consequent rising income levels, it offers an unprecedented opportunity for foreign investment. A combination of factors is driving growth in the telecom market, promising rich returns on investments. * India is the fourth largest telecom market in Asia after China, Japan and South Korea. * The Indian telecom network is the eighth largest in the world and the second largest among emerging economies. * The Indian telecom market size of over US $ 8 billion has increased three fold by 2012. The expansion of the telecom industry in India has been fuelled by a massive growth in mobile phone users, which has reached a level of 10 million users in December 2002, an increase of nearly 100 per cent in 2002. * This exponential growth of mobile telephony can be attributed to the introduction of digital cellular technology and decrease in tariffs due to competitive pressures. For the first time in India, the growth of cellular subscriber base has exceeded the fixed line subscriber base. However, cellular penetration is still 1 per cent as compared to world average of around 16 per cent. Indian Telecom sector, like any other industrial sector in the country, has gone

through many phases of growth and diversification. Starting from telegraphic and telephonic systems in the19th century, the field of telephonic communication has now expanded to make use of advanced technologies like GSM, CDMA, and WLL to the great 3G Technology in mobile phones. Day by day, both the Public Players and the Private Players are putting in their resources and efforts to improve the telecommunication technology so as to give the maximum to their customers. * The Indian telecom sector can be broadly classified into Fixed Line Telephony and mobile telephony. The major players of the telecom sector are experiencing a fierce competition in both the segments. * The major players like BSNL, MTNL, VSNL in the fixed line and Airtel, Vodafone (Hutch), Idea, Tata, Reliance in the mobile segment are coming up with new tariffs and discount schemes to gain the competitive advantage. * The Public Players and the Private Players share the fixed line and the mobile segments. Currently the Public Players have more than 60% of the market share. Telecom and IT The vision of telecommunications in 2020 is a vision of information society built on an edifice where IT and telecommunications merge. Rapid technological convergence has already implied a symbiotic overlap between the development strategies of IT and telecommunications. Part of today's IT is ' telecom writ large', it flourishes on the telecom-network and in turn permits modern day telecommunications to use sophisticated IT-software. Hardware is a common platform for both IT and telecom. * First, it is to be appreciated that foreign exchange contribution of software export net of import of hardware is roughly fifty per cent. Net foreign exchange contribution will increase if India is able to develop a strong base of hardware. * Second, scrutiny of the structure of

India's software export vis-Ã -vis the emerging dynamics of the global market reveals that India has marginal presence in the fastest growing segment of the global IT market consisting of software packages and software products. There is, therefore, need for India to climb value chain with more innovative software products in the international market. This is possible when India is able to broad-base the development of IT with a strong and large domestic market supporting innovation and its diffusion along with the growth of component manufacturing base. * Finally, development of human resources through IT education, training and skill development is fundamental to the whole process. Two important indicators of IT penetration in Indian market are Internet use and availability of Personal Computers (PCs). There has been significant expansion in both during the last decade (Table 6). Table 6: Growth in availability of Personal Computers and estimated number of Internet users Year | Estimated number of Internet users | Availability of Personal Computers | 1992 | 1, 000 | 410, 000 | 1993 | 2, 000 | 560, 000 | 1994 | 10, 000 | 800, 000 | 1995 | 250, 000 | 1, 200, 000 | 1996 | 450, 000 | 1, 500, 000 | 1997 | 700, 000 | 2, 000, 000 | 1998 | 1, 400, 000 | 2, 700, 000 | 1999 | 2, 800, 000 | 3, 300, 000 | 2000 | 5, 00, 0000 | 4, 600, 000 | Note: Data for 1991 on Internet users is not available. The series start from 1992 because data on both is available from this year. Source: Yearbook of statistics, 1991-2000, ITU Despite impressive growth in the number of Internet users and availability of PCs, India remains on the wrong side of the divide (Table 7). Number of users of Internet is still a negligible fraction of India's total population. Per capita availability of PC is also very low. Table 7: Internet penetration and PC availability, 2001

Countries falling in different income categories | Internet users per 10, 000 inhabitants | PCs per 100 inhabitants | Low income countriesOf whichIndia | 62. 2168. 16 | 0. 590. 58 | Lower middle income countries | 264. 94 | 2. 45 | Upper middle income countries | 992. 66 | 8. 24 | High income countries | 3992. 87 | 37. 31 | Source: ITU, World Telecommunication Development Report 2002 Internet kiosks, telekiosks, telecottages and cybercafes have emerged in important roles in expanding community access to ICT popularizing IT among the masses and promoting domestic market. However, their expansion crucially hinges on the growth of telecommunications infrastructure. In India, a spectrum of technologies has been unleashed to connect remote villages, which includes Wireless in Local Loop (WLL), wireless cum wired technology developed by C-DOT, radio systems, switching systems of different capacities integrated with underground cables, CorDect and medium capacity satellite systems. Besides, a number of small-scale ICT initiatives is already at work in different parts of the country. --- Box 1: Harbingers of information society ---

--- SARI: Sustainable Access in Rural India (SARI) is a joint initiative between MIT Media Lab, Center for International Development at Harvard, IIT Chennai and the I-Gyan Foundation. The project is located in northern Madurai district of Chennai. It seeks to provide voice and Internet connections in 1000 villages with the use of CorDect system. Apart from provision of a kiosk in each village, connections will be provided in schools, colleges and primary health centers. The project also provides for interest free loans and easy installments for purchase of computers and

training support to technical personnel. Continuous evaluation of the socio economic impact of the project is a part of the initiative.

-- -- The Gyandoot Project: A joint initiative of the district collector of Dhar district of Madhya Pradesh and the District Rural Development Agency (DRDA). More than thirty Community Information Centers (known as ' Soochanalaya'), one for a group of villages, have been set up to provide information on market rates of agricultural products, land records, education, health, Panchayat related matters, governance issues, issue of certificates and registering complaints. E-mail facilities in Hindi are available. Majority of these Centers are own and run by the village communities with costs borne by the Panchayats. Others are privately run and bank financed.

-- -- Hole-in-the wall initiative: A pilot project launched by the NIIT, a software company in urban slums by providing unmanned computers. Through continuous video -- monitoring it was found that despite language difficulties boys and girls from the neighbourhood developed access skills in web surfing and graphic designs even without formal training. --

-- Source: Sood, 2001 and other sources. The government is consciously promoting the use of IT in activities within its domain of activities. To undertake development of IT as a thrust area a separate ' Ministry of Information Technology' was formed in October 1999. Recently, Ministry of Communications and Ministry of IT have been merged to form a single ' Ministry of Communications & IT'. Apart from encouraging

use of IT in research and scientific areas, the government has also taken major initiative to computerize work of various ministries and departments. Ministries and departments have come up with their websites with all the relevant details. Though computerization of many more areas within the government are under implementation, significant results have already been achieved in computerization of railway reservation, allocation of Permanent Account Number (PAN) for income tax payers, processing of passport application, conduct of public examination, custom clearance, etc. Different ministries have been advised to earmark 2 to 3 percent of the budget on IT. Legislative framework has been put in place with the enactment of the Information Technology Act 2000 recognizing digital signature as means of authentication of government certificates. The act imparts legitimacy to contract through electronic means unless otherwise agreed. Indian Copyright Act of 1957 and its amendment in 1994 outlaw software piracy. Growing legitimacy of IT based transactions in government has started catalyzing the use of IT in private market and expanding the domain of e-business and e-commerce reducing transaction costs significantly and increasing productivity. Vision 2020 is a vision of IT for the masses. All round development of digital literacy would put Indian society in complete command over the ICT tools. Available indications suggest that IT education is gaining popularity. Perceived utility of ICT as enabler of business processes would continue to enhance market for IT education. Education will spur innovation, productivity and entrepreneurship. A knowledge society will be formed with participation from the rich and the poor, men and women, young and old, organized and unorganized, government and the governed.

IT Governance As both business and public sector organisations are becoming increasingly dependent on IT, there is growing recognition that governance of IT is an essential part of broader corporate governance. Governance is about who makes the decisions, how they are made and who is accountable for them. Many C-level executives still consider IT to be too complex, technical and difficult to govern. IT governance still is perceived as a CIO issue. Alignment between IT and business strategy as well as between IT and business governance remains weak. The Four " Ares" of Governance [Get advice from those who are making decisions and discover innovative products or strategies in CIO's Leadership and Innovation newsletter] IT governance is about ensuring that the organisation's resources are used the right way to create value while managing IT risks. The Val-IT framework from the IT Governance Institute helps address these challenges. The four " Ares" are the core of Val-IT framework. This is a sound framework which helps organisations ensure IT efforts are aligned and IT continues to deliver value. 1. Are we doing the right things? To quote Peter Drucker: " There is nothing so useless as doing efficiently that which should not be done at all". This is the question about should we be doing something at all. It ensures strategic alignment between business and IT. Is what we are trying to do fit with the organisations vision and strategy? Is it consistent with the business principles? 2. Are we doing them the right way? This is the question about architecture and standards. Is what we are doing conform to the architecture and processes? 3. Are we getting it done well? This is the question about the execution. Do we have the disciplined delivery and change management processes? Do we have the right skilled re sources and are we managing

them well? How does our performance measure up to others? Are we effectively managing risks? 4. Are we getting the benefits? This is a question about realising value from investments in IT/projects. Are we clear about the benefits? Do we have metrics? Is the accountability for the benefits clearly defined? These four questions cover the core of governance, which are: Strategic Alignment, IT Value Delivery, IT Risk Management, Performance Management and IT Resource Management. When managers at all levels address these questions, IT governance will become part of the culture. IT Governance Models There is no one size fits all model for IT governance. Three common models are based on three decision-making styles within organisations. These are: centralised, federated or decentralised. * In the centralised model efficiency and cost control is emphasised over business unit responsiveness. There is greater focus on standards, synergies and economies of scale. * In a BU-centric, decentralised model there is greater business ownership and responsiveness but integration and synergies suffer, resulting in likely higher costs. * The federated model tries to combine the best features of these two. In the federated model common applications and infrastructure resources are pooled while business units control BU specific applications. Here are some commonly used IT governance forums. The above models influence the scope and membership of the IT governance forums. * Business Leadership Council/Executive Committee — This is the top-level committee that makes enterprise-wide decisions including approving IT strategic plan and controlling major investments (including projects). Sometimes Ex-co may delegate the IT decisions to an IT Council or IT Steering Committee. This usually consists of

key business executives, CFO and CIO. They would consider IT policy and investment decisions more deeply than the Ex-co. * IT Leadership Council — This group consists of most senior IT leaders across the enterprise. They focus on decisions such as IT policy, IT architectures and IT infrastructure. This is a critical forum in federated and decentralised models. * IT Architecture Council — Consists of key IT and some business leaders who would oversee development of architecture standards, recommend them for endorsement by the Leadership council. This group may also monitor compliance with the architecture standards. * Business-IT Relationship Managers — These managers bridge the gap between IT and business units and act as two-way communication channel to address and resolve any gaps. Characteristics of Good IT Governance * IT investments and decisions are assessed in a manner similar to business investments and IT is managed as a strategic asset. This means there is top management participation in key IT decisions. There is board oversight of IT investments and executives are held accountable for realising benefits. * IT is essential part of corporate planning and strategic planning. IT understands the business dynamics and contributes to the development of business strategy, which is interlinked to IT strategy. IT and business work together to identify opportunities. * Top IT risks are considered within the enterprise risk management framework. Risks such as data protection, IT security and business continuity receive periodic board oversight. * IT performance is regularly measured and compared with peers and best practice. * How decisions are made and why, is well understood and outcomes are clearly and formally communicated to the stakeholders. Formal exception processes are established and promote

transparency as well as allowing organisational learning. Role of IT Services in Telecom Sector: IT services in telecom sector include IT consulting, Network management, Server management etc. Many telecommunications services providers have their own internal IT support units and some outsource it by other companies. The technology organizations offer managed support services like network monitoring, server monitoring and Server Support , remote support, helpdesk services on a 24Ã—7 basis. There are many specialist providers also providing support services for business phones and data system, Voice over IP, wireless networking, full services maintenance programs, disaster recovery systems etc. Today most companies are following the cloud concept. The telecom service providers are also going towards cloud computing and they have a better idea of becoming the network providers if they mix it with the latest technologies. Advancements and innovations are being made in all sectors of telecommunications industry, wireless technology, Internet, and satellite communications being the forerunners. Satellites and optical fibres, among other technologies, contribute significantly to the globalization of telecommunications services. Standardization and interoperability of systems have become global issues, as have compatibility of regulatory measures that ensure free trade in telecommunication products and services. Telecommunications being an integral part of global communications network and critical for organizations as well as individuals has now become indispensable to socioeconomic activities. There is an increased focus on reliability and security of telecommunications and this has emerged as central and global issue. In current information age,

information retrieval is gaining importance, while we still face challenges in terms of integrity and authenticity of the information to be provided, as well as the protection of privacy. These diverse issues are important to the future of telecommunications industries. IT innovation in telecom industry: Telecom industry is investing heavily in technological innovation, and in the development of technology and innovation. The growth rate is continuing at a fast pace and new value added products and services are driving the consumer spending behaviour. At the same time, technological advance has dramatically changed the cast of players involved in the telecommunications infrastructure. It has grown from the original private and publicly owned telephone monopolies to include a host of new entrants such as competitive access providers, resellers, value-added carriers, new interexchange carriers, new local exchange carriers, cable companies, wireless carriers, direct broadcast satellites, media conglomerates, and specialized brokers. Many cellular providers are investing heavily to upgrade their infrastructure to 3G and 4G. Infrastructure demand in telecom sector is growing at a fast pace along with the volume of the traffic. Worldwide telecommunication revenues are predicted to grow to over $3. 7 trillion within the next few years at a combined annual CAGR, of 13. 8%. Remarkable progress in telecommunications technology has had, and will continue to have, an enormous impact on telecommunications manufacturing and service industries. Digital technology that integrates transmission, switching, processing, and retrieval of information provides opportunities to merge various service modes into an integrated whole. This digitalization, merging the communications and computation functions, has been made possible by

dramatic advances in device and material technology, including integrated circuits and optical fibres. As the role of digital processing increases, systems and services become more intelligent and labour-saving on the one hand, and more software-intensive on the other. In developed countries, future growth in the communications industry will depend on industrial and political capacity for institutional change, and consumer reaction to new value based services.   Finland, Japan, Korea, and Sweden are leading developments in different areas of broadband wire line services, wireless applications, and interactive TV. Players in telecommunication industry that want to emerge successful need to influence cutting-edge technological developments and should be operating where leading industry and technology developments are taking place. IT Evolution in telecom sector: The Telecom technology in India has transformed from primitive manual and electro — mechanical systems to the digital systems. We have stepped into the new millennium by having 100 % electronic switching system. The technological changes have made way for new services and economics in the provision of telecom services. Cellular Mobile Services Cellular Mobile services started in India, through licenses issued to private operators, by the end of 1995 in the four metro cities. Now the service is available in most part of the country, the customer base being about 14 lakh. Department of Telecom Services also have planned to provide these services. Personal Communication Service is an emerging concept in area of telecommunications. PCS has been conceived as a superset of fixed and mobile network services with wide access and coverage using hand portables with access number independent of terminals or geographic locations. Government of India decided in August

1998 to introduce Global Mobile Personal Communication by Satellite (GMPCS) services in the country. License was issued to one company and this service is operational from February 1999. Voice Mail Service It is a computer-based system and has the ability to record, send and process Voice, FAX-messages for telephone subscribers. Department has plans to introduce this service in the State capitals and other major cities and towns. Card Payphones   In order to improve the accessibility of telecom facilities, public Pay Phones, which can be operated, with Card are being introduced in the network. Through these pay phones local, STD and ISD calls will be possible. Internet Services   Internet is the new service, which has been introduced in the last couple of years. Today, we have got a customer base of about 5 lakh. in India. Globally, the Internet is experiencing explosive growth for the last few years. To take advantage of this technology, the government has already decided to provide Internet services through private operators in India. It is expected that there will be about three million Internet subscribers by the end of 2002. A large number of technological changes are taking take place in Internet also. Today, Internet telephony is not being permitted but in future its quality and cost structure will force this technology to be adopted by everyone. Intelligence Network (IN) Services Intelligence Network services, such as free phone, account card calling, premium rate or information service, etc. have already been introduced in several cities and towns. Use of telephone for distant education and telematics will be introduced in the coming years. Other applications, such as Electronic Commerce, tele-shopping, commercial banking etc. on Internet are round the corner. Multi-media is another application which is going to

see larger applications in the coming years. Video-conferencing on ISDN has already started in the country. Satellite mobile communication using lower earth orbit Satellites and medium earth orbits satellites have been provided. Government of India took a policy decision in August 1998 to introduce the Global Mobile Personal Communication by Satellite (GMPCS) services in the country. This service is also operational with effect from February 1999. New Technologies: Asynchronous Transfer Mode (ATM)   ATM is the transport technique for providing efficient support of voice, video and data in the same network. It is also considered to provide high capacity pipe lines for Internet infrastructure. Department has decided to introduce this technology in the network with, initially, five nodes at Delhi, Mumbai, Calcutta, Chennai and Bangalore. These nodes are expected to be commissioned by March 2000. Managed Leased Data Network (MLDN)   MLDN has various elements such as leased lines, multiplexers, cross connects etc. with a central Network Management System (NMS) for the management of various components. This system will provide more efficient and versatile services to the leased line customers. Delhi and Mumbai have the systems and it has been planned to introduce this system in a few more cities. Customer Access Network Introduction of new technologies such as High bit rate Digital Subscriber Line (HDSL) and Assynchronous Digital subsriber Line (ADSL) has been planned in the existing copper based customer access, to enhance its bandwidth. In addition new technologies using Optical Fibre such as Digital Loop Carrier (DLC), Fibre to the Curb etc along with massive induction of Wireless in Local Loop (WLL) are also being planned. Already Indegenously developed (IIT, Chennai) WLL systems of 56, 000 lines in 800 MHz and 25, 000 lines 1800

MHz are planned to be tried out. Satellite Based Systems for Village Public Telephones.   For some of the remote far-flung areas, for the provision of Village Public Telephones Satellite based technology is the only solution. For this INMARSAT Mini-M terminals will be used. A few terminals of this type are already operational. Future Scope of IT in telecom sector: Mobile data and networks * Mobile data traffic is driving revenue growth. * Network speeds are increasing dramatically because of improving technology. * The pace of product innovation remains high. In 2006 data accounted for 3% of industry revenue, in 2010 it reached 13% and by 2014 it is expected to be 21%. Demand is being driven by the widening range of smart connected devices, such as mobile broadband sticks, smartphones and tablets, greater network speeds and an increased range of applications with greater functionality. Smartphone sales grew by 66% in the 2010 calendar year, compared to a 16% increase in the 2009 calendar year, and are expected to continue to grow due to lower entry prices, device innovation and attractive applications. Today's 3G networks offer typically achieved data download speeds of up to 4 Mbps which is around 100 times faster than that delivered by 2G networks ten years ago. The industry has recently begun to deploy 4G/LTE networks which will provide typically achieved rates of up to 12 Mbps, depending on the capability of the devices and the network. Device innovation is a key feature of our industry. Recent developments include femtocells which enhance customers' indoor 3G signals via a fixed line broadband connection and mobile Wi-Fi devices which allow customers to share their mobile broadband connection with others. Mobile data demand is being accelerated by devices and network improvements | 2006 | 2012 | Smartphone share of

industry handset shipments (%) | 8 | 28 | Typically achieved data download speeds (Mbps) | 2. 2 | 8 | IT INVESTMENTS One of the many challenges of developing effective IT strategy is the fact that technology can be used in so many different ways. The opportunities are practically limitless. Unfortunately, the available resources are not. Thus, a key element of IT strategy is determining how best to allocate the IT budget. This issue is complicated by the fact that most businesses today require significant IT services just to operate. Utility and basic support costs eat up between 30 to 70% of the focus group members' budgets. That's just the cost of " keeping the lights on" — running existing applications, fixing problems, and dealing with mandatory changes (e. g., new legislation). IT strategy therefore must consider two important components: (1) how to do more with less, i. e., driving down fixed costs; and how to allocate the remaining budget towards those IT investment opportunities that will support and further the organization's business strategy. In order to do more with little budget, with occasional exceptions, CIOs and their teams are mostly left alone to determine the most cost-effective way of providing the IT utility to their organizations. This has led to a variety of IT focused initiatives to save money including outsourcing, shared services, use of ASPs, and most recently, grid computing. However, it is the way that IT allocates the rest of its budget that has captured the attention of business strategists. " It used to be that every line of business had an IT budget and that we would work with each one to determine the most effective way to spend it, " said a focus group manager. " Now, there is much more recognition that the big opportunities are at the enterprise level and cut across lines of business. "

Focus group members explained they usually face five types of IT investment opportunities to further business strategy. Determining the balance between the opportunities is a significant component of how IT strategy delivers business value. In a way, organizations have to adopt a portfolio approach to IT investments Too much or too little focus on one type of investment can mean a failure to derive maximum value from a particular strategic business theme. The five investment opportunities (i. e., business improvement, business-enabling, business opportunities, opportunity leverage, and infrastructure) are described below: Business Improvement. These are the reengineering initiatives to help organizations to streamline their processes and save substantial amounts of money by eliminating unnecessary or duplicate activities or empowering customers/suppliers to self-manage transactions with a company. Business-Enabling. The investment in business enabling initiatives can be considered informational investments . The business enabling IT initiatives extend or transform how a company does business. As a result, they are more focused on the top-line or revenue-growing aspects of an enterprise. Business Opportunities. These are small scale, experimental initiatives designed to test the viability of new and emerging IT to support business. Given the rate at which IT evolves, it often makes currently available IT outdated, thus experimenting with new IT is extremely critical. Opportunity Leverage. A neglected, but important type of IT investment is one that operationalizes, scales up, or leverages successful strategic experiments or prototypes. Coming up with a new strategic or technological idea needs a different set of skills than is required to take full advantage of it in the marketplace. Infrastructure. This final type of IT

investment is one that often falls between the cracks when IT and business strategies are developed. However, it is clear that the hardware, software, middleware, communications and data available will affect an organization's capacity to build new capabilities and respond to change. A recent study found that most companies feel their legacy infrastructure can be an impediment to what they want to do. Maturation of IT investment is done in five stages and their critical processes provide a good picture of the minimum amount of work hat an organzation must do in order to concretly determine and manage IT investments and their contribution to business goals. Vodafone and its IT Strategy: Vodafone is a multi-national company with operations in 30+ countries and partnerships with 40 more. It has a customer base of ~347 million and a market cap. of ~£71. 2B. Technically, Vodafone increasingly looks-and-feels like a single Global entity — addressing multi-national corporates, world-wide services, developer programmes and Global B2B partnerships * It has a Global service architecture that accommodates local and Global markets, achieved by a specific multi-national programme („ Mondrianâ€Ÿ) that presents key enablers in a consistent way across in-country operators * It now looks forward to build on this and make such interaction a natural consequence of consistent SOA governance Vodafone Global Information Systems and IT governance Vodafone, a globally-operated mobile communications company, is a significant market player in Europe, the Middle East, Africa, Asia Pacific and the US. Continuous growth, spurred by the company's success, has resulted in new challenges for Vodafone's IT architecture and related processes, such as reporting. Governance: The Group Executive Committee

(ExCo) is responsible for the sustainability performance and receives a formal update on sustainability at least once a year as well as a monthly written update. A report is also made annually to the Vodafone Group Plc Board. The Group Sustainability Director reports to the Group Director External Affairs (an ExCo member) and heads a team of experts who provide guidance and coordination to our managers and issue owners who implement sustainability initiatives. Vodafone markets align their strategy to the Group, but have the flexibility to focus on issues that are important to local stakeholders. The focus is on developing transformational products and services as a key part of the sustainability strategy, where Group teams are working with lead markets to trial solutions before scaling up to other markets. Our Group Sustainability team runs monthly teleconferences and annual global workshops for sustainability managers and issue owners from the local markets to share best practices, ensure consistency across the business and drive progress towards our vision. Vodafone Global Information Services (VGIS), a subsidiary of Vodafone, strives to ensure governance and smooth IT processes for optimal productivity. The group's mission includes achieving a clear reduction of costs for hardware, software and operations across all Vodafone companies. VGIS turns to SAS for IT management to achieve this governance, reducing cost per server by 50 percent while decreasing needed resources. " Today — three years after project launch — there is already more than twice as much data. And yet, we have been able to increase processing speed by 50 percent, while decreasing our use of internal resources by half," says Stefan Pannen, Service Reporting Specialist. Calling all systems to be integrated Vodafone's rapid growth and global

acquisitions of mobile communications providers have led to a very diverse software structure. VGIS needed to integrate systems to allow for uniform and real-time IT reporting. User-specific access had to be easy and uncomplicated, independent of the user's location. Starting with the Milan and Ratingen sites, data from more than 20 internal customers — ranging from national companies to additional group subsidiaries — had to be integrated into the reporting structure. VGIS pursued a comprehensive strategy of group wide standards to ensure effective IT governance, including a consolidation of existing and new IT services. " We are confident that SAS is the right solution for handling data from various sources and for building strong data warehouses," says Michele Casalena, Head of Service Reporting. " SAS' reporting and analysis solutions are, in concert with the portal, simply much better than the Oracle BI Suite we used before." Saving time and resources With SAS, VGIS collects data automatically from all critical system management applications and integrate them in a uniform database. In addition, SAS helps to create interfaces with various data sources and databases so that Vodafone can make analytical evaluations quickly and easily. On the reporting side, SAS standardized existing IT tools under a common architecture, providing users access to consistent reports with comprehensive parameters. This allows VGIS to manage large volumes of data and integrate many more users — while reducing manual effort required to make sense of all the data. The automation also reduces the cost per server by 50 percent. With SAS, VGIS now realizes how their IT resources were being used and thus how to better allocate those resources to improve data processing speed. Overall, the group has abandoned homemade

solutions in favor of uniform high-performance architecture with a high level of availability. " What is particularly good about this is the fact that we can now get an actual big picture at the push of a button. And being able to look at all aggregate processes at the same time is exactly the situation we wanted to create. SAS has been a great help in achieving this," adds Casalena. Global standardization goals mirrored by SAS VGIS rolled out the project to Milan, Italy; Ratingen, Germany; and numerous national companies. SAS mirrored this global approach, with both SAS Italy and SAS Germany being actively integrated into the implementation. This collaboration provided VGIS with consistent local SAS contacts at both sites. Periodic video conferences, as well as the ongoing direct cooperation at the sites, resulted in true teamwork between the two companies. " We work globally with the long-term goal of truly international IT and service standards. SAS fulfilled the requisite demands for a software partner at all times in the most reliable manner, and proved itself competent for project work across countries," says Pannen. Developments in Vodafone: Business Architecture: Enterprise Architecture Management: Business planning: * to manage all business demands of the marketing, sales & delivery departments of the business unit Enterprise * to ensure an appropriate business planning phase that is aligned to business goals before setting up projects * to align Business strategy and —roadmap with IT Strategy and roadmap * to ensure that Business Artefacts are accurately documented and can be shared with and understood by IT Planning process for optimal IT investment control Business Architecture Approach: Through this we understand : * All the IT capabilities need to run the business - The stated

business goals and their value for the business - Business priorities and their place on the roadmap - The projects in which they are being worked on and their implementation status - Business gets the most value out of the investment in IT IT Governance: * Vodafone Global Information Services (VGIS), a subsidiary of Vodafone, strives to ensure governance and smooth IT processes for optimal productivity. * The group's mission includes achieving a clear reduction of costs for hardware, software and operations across all Vodafone companies. * VGIS turns to SAS for IT Management to achieve this governance, reducing cost per server by 50 percent while decreasing needed resources. * VGIS pursued a comprehensive strategy of group wide standards to ensure effective IT governance, including a consolidation of existing and new IT services. * With SAS, VGIS collects data automatically from all critical system management applications and integrate them in a uniform database. * In addition, SAS helps to create interfaces with various data sources and databases so that Vodafone can make analytical evaluations quickly and easily. * On the reporting side, SAS standardized existing IT tools under a common architecture, providing users access to consistent reports with comprehensive parameters. Challenges in Business Strategy: As often happens in organizations, recognition of a need precedes the ability to put it into place. IT leaders are now making significant strides in articulating IT strategy and linking it more effectively with business strategy. Business leaders are also more open to a more integrated process. Nevertheless, there are still important organizational barriers remaining that often inhibit strategy development. First, a supportive governance structure is frequently lacking. " Now that so many strategies are enterprise-wide, we

need a better way to manage them, " explained a focus group manager. Often there are no formal structures to identify and manage interdependencies among different business processes. " It used to be that everything was aligned around organizational boundaries, but strategy is now more complex since we're working on programs with broader organizational scope, " said another. Similarly, current managerial control systems and incentives are often designed to reward thinking that is aligned to a line of Second, enterprise-wide funding models are also lacking. " Everything we do now requires negotiation for funding between the lines of business that control the resources, " one manager stated. Even within IT, the focus group suggested, it is not always clear who in the organization is responsible for taking IT strategies and turning them into detailed IT plans. Third, traditional planning and budgetary practices are a further challenge. This is an often-neglected element of IT strategy. " Our business and IT strategies are not always done in parallel or even around the same time, " said a focus group participant. As a result, it is not easy to stay aligned or to integrate the two sets of plans. Another commented, " Our business plans change constantly. It is therefore common for IT strategy to grow farther and father apart over time. " Similarly, an annual budgeting process tends to lock an organization into fixed expenditures which may not be practical in a rapidly changing environment. Today's IT organizations therefore need both a longer term view of their resourcing practices and the opportunity to make changes to it more frequently. While rolling budgets are becoming more acceptable, they are by no means common in either IT or the business world today. Fourth, both business and IT leaders need to develop better skills in

strategizing. " We've gotten really good at implementing projects, " said an IT manager. " Strategy and innovation are our least developed capabilities. " In recent years, IT has tended to push business towards better articulation of their goals. " Right now, in many areas of our business, strategy is not well thought = through, " said another manger. " IT has to play the devil's advocate and get them to think beyond generalities such as, ' we are going to grow the business by 20% this year'". With more attention to the process, it is almost certain to get better, but at present, managers' rudimentary skills in this area limit the quality of strategy development. Finally, over and over, the focus group stressed that IT strategy is mainly about getting the right balance between conflicting strategic imperatives. " It's always a balancing act between our tactical and operational commitments and the work that builds our long term capabilities, " said a participant. Deciding how to make the trade-offs between the different types of IT work is the essence of effective strategy. Unfortunately, few businesses do this very well. According to the focus group, traditional business thinking tends to favor short term profitability while IT leaders tend to take a longer-term view. Making sure some types of IT work (e. g., infrastructure, new business opportunities) are not underfunded while others (e. g., utility, business improvement) are not over-funded is a continual challenge for all IT and business leaders these days solutions are likely to win big in today's rapidly-evolving business environment References: 1. http://www. vodafone. com/content/index/about/sustainability/managing_sustainability/governance. html 2. Book on Accountability: An Economic Based Business Focus for IT 3. Journal of IT Management; Developing Information Technology Strategy for

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