1st May 2009

VESTAS GROUP IT: Going Borderless For A Green Mission

VESTAS GROUP IT: GOING BORDERLESS FOR A GREEN MISSION[1]

Torben Bonde, Chief Information Officer (CIO) and head of Vestas Group IT, was sketching his plan for the next fiscal year while watching a Forbes video report "Winds of Change" featuring Vestas CEO, Ditlev Engel[2]. Group IT is the in-sourced global corporate IT division of Vestas with a mission to provide world-class IT solutions to the Vestas organization. Following the rapid global expansion of Vestas, Group IT now has staff in more than 41 global offices. Group IT had grown phenomenally in the recent years from about 200 people in 2006 to 600 employees today, and is projected to grow further to 800 employees by 2012 (Exhibit 1). While Bonde was satisfied that Group IT was rapidly ramping up capacity to match the global expansion of Vestas, he was aware that the road ahead had several challenges. The battle for world wind energy market share was expected to intensify, and Bonde wanted to prepare Group IT in the best possible way to assist Vestas in its ambition to be "No.1 in Modern Energy"[3].

Background – Vestas

From producing household appliances, rubber tractors, ploughshares, crop sprayers, tankers, and other agricultural vehicles, Vestas diversified in to the alternative energy sector during the oil crises of the 1970s. Vestas built its first large, three blade wind turbine factory on the outskirts of Lem, Denmark in 1979, and delivered its first wind turbines to customers the same year. Fuelled by new legislation in the United States and Denmark that gave tax incentives for companies embracing alternative energy solutions, Vestas began serial production and distribution of its 55 Kilo Watt wind turbines. Vestas also set up its subsidiary Vestas North America Ltd to oversee its operations in USA. By 1983, Vestas had sold more than 2500 wind turbines, and was well known as an innovative Danish firm in the alternative energy sector.

[1] The case was prepared by Narayan Ramasubbu with abundant assistance from Niels Nielsen, Henriette Gabel, Jason Woodard, Steve Miller, Wei Zheng Toh, and many others for use in the SMU APEX Global 2009 case competition. Some details presented in the case are altered or disguised. This case is not intended to serve as endorsement, source of primary data, or illustration of effective or ineffective management.

[2] http://video.forbes.com/fvn/ceo/as_vestis021709

[3] http://www.vestas.com/en/about-vestas/strategy/goals.aspx

Turbulent 80s

The later part of the eighties marked the end of government tax incentives for alternate energy solutions in many parts of the western world, and pressures of the oil crises had well relaxed. This was a turbulent period for Vestas. Dwindling demand for its turbines saw the company revenues quickly dry up, and large portions of the non-core businesses of the Vestas Group had to be sold out. Even during these turbulent times, Vestas continued its pioneering innovation in the wind energy segment, and started investing in wind farms – a group of interconnected wind turbines situated in the same location. By the end of 1986, Vestas had shed all of its non-core businesses, and transformed itself in to Vestas Wind Systems A/S solely focusing on wind energy technology. Vestas further consolidated its position in the wind energy industry through its merger with other early players in the Danish wind energy market such as the Danish Wind Technology company (DWT).

90s Decade of Growth

In the 1990s Vestas underwent a period of solid sales growth and innovation. During this period Vestas made several technological breakthroughs such as its lightweight blades (with weight reduced from 3800 kg to 1100 kg for a 500 Kilo Watt turbine), OptiTip®, OptiSlip®, and OptiSpeed® technologies. OptiTip® minimizes the stress on the turbine blades; OptiSlip® provides an even electrical output to the electrical network; OptiSpeed ®was specially designed for areas with low wind speeds. Throughout the 1990s, utilizing these technological breakthroughs, Vestas completed several key projects including the erection of 342 225-KiloWatt turbines erected northeast of Los Angeles, California, 89 modern wind turbines with a total capacity of 30Mega Watts in England, and the largest wind turbine project in Denmark which supplied electricity to about 10,000 households. Buoyed by a successful decade of innovation, Vestas held a significant market share with established footprint in North America and Europe.

New Millennium Challenges

The new millennium saw further consolidation and growth of business for Vestas. Vestas continued to expand its business in Europe and Americas with large deals, and started imprinting its footprint in Japan and other parts of Asia. Worldwide interest in wind energy continued to grow at a steady pace fuelled by increased awareness of global climate change and friendly policies of governments (Exhibit 2). Large multinational utility companies started to show interest in acquiring wind energy capabilities. This was in sharp contrast to past decades where small, independent consumers constituted much of the wind energy consumer base.

Further, the global supply base for wind energy was increasing with many new producers entering the industry, especially from emerging markets such as China and India (Exhibits 3-8).

While Vestas was the world leader in terms of the total installed production capacity, it held the No.1 supplier position only in the Italian market, and was behind its competitors in other top 10 individual country markets (Exhibit 5). To ward off stiff challenges from other global competitors, Vestas management planned to improve cost effectiveness of Vestas' operations. As a first move towards this end, in December 2004, Vestas extended a buyout offer for its closest Danish competitor NEG Micon. The buyout was accepted, and the companies merged to form the largest publicly traded wind energy firm in the world.

"Will to Win" Strategy

In May 2005 Ditlev Engel[4], a veteran manager with deep multinational experience, but an outsider to the wind energy industry, took charge as the CEO of the merged Vestas company, and launched the "Will to Win" strategy. His vision aimed at establishing wind as a competitive energy source on par with oil and gas. Announcing the "Will to Win" strategy to Vestas shareholders, Engel noted that Vestas had to develop the capabilities to execute increasingly large projects for increasingly larger and more professional customers:

> "*Many people still regard wind power and thereby Vestas as a 'romantic flirt' with alternative energy sources. It is not. Vestas and wind power is a real and very competitive alternative to oil and gas. My initiative is to establish Vestas in three years time from now as the world's leading manufacturer of wind power systems – both technologically and market wise. We must prepare for the future customers of our wind power systems being international energy companies. They have high demands for us and for our products. During the coming three years, we will primarily focus on the improvement of the profit margin – no doubt about that. This does not imply that we have rejected growth – it just has to be profitable. If the growth is profitable, we certainly wish to grow on an ongoing basis*" [5]

As part of the "Will to Win" strategy, Engel set the following goals and plans for his business units:

- The direct production costs must be reduced by improving the production processes, production organization, and supplier structure.
- The indirect production costs and capacity costs must be reduced by enhancing the efficiency and simplification of the Group's organization, by delegation of decision competence, and by a clarification of the business responsibility.

[4] http://www.vestas.com/en/investor/corporate-governance/executive-management/ditlev-engel.aspx
[5] Report to share holders:
http://www.vestas.com/Admin/Public/DWSDownload.aspx?File=Files%2fFiler%2fEN%2fInvestor%2fFinancial_reports%2f2005%2fStrategicPlan-2005-050526MFKUK16.pdf

- The sales unit's competences within sale and delivery of large wind power projects must be strengthened, thus leading to a more even distribution of sales during the year.
- Vestas' products and services must be able to command higher prices and customer loyalty in the market.
- Business units must have the capability to identify and reject wind power projects that are deemed not to contribute sufficiently to the Group's overall target for profitability.
- The dialogue with the group's stake holders must be improved via strengthened communication activities.

The prioritization of these goals reflected that profitability was swiftly becoming the most important criteria to Vestas. The goals of "The Will to Win" strategy for 2008 were further tightly specified to achieve an EBIT margin of 10-12%, a net working capital of a maximum 20%, and a market share of at least 35%. Engel's strategy aimed to best position Vestas for the battles in the forthcoming years: 1) the ability to serve large multinational customers such as the utility companies[6], and 2) conquer the obstacles in emerging markets such as China and India, and be able to compete with the local suppliers in these markets. With global competitors quickly catching up, and the currently dampening global economic climate, winning the battle for being No.1 in modern energy is not going to be easy.

Vestas Group IT

Vestas recognized that Information Technology played a critical part of its business success. As a result, the Vestas corporate IT division, Group IT, was in-sourced by limited partnering with external suppliers like Microsoft and SAP. In-house Group IT teams were in charge of all important infrastructure and applications that supported key Vestas business processes. This helped Vestas to control its IT resources effectively, and ensure that operational capacity could be ramped-up fast enough to match growing business needs. Vestas Group IT was a centrally funded corporate function headed by the Vestas Chief Information Officer, Torben Bonde, who in turn reported to the Vestas Chief Financial Officer, Henrik Noerremark. Apart from the staff functions, Group IT had two major departments, viz., Business Applications and IT Operations (See Exhibits 9-11). The mission of Group IT was to –

- Enable the execution of Vestas' strategy, and create real business value for the business units who are our customers and stakeholders.
- Proactively adjust to match the dynamic challenges of the business.

[6] Recommended reading materials for an overview of the utilities industry sector:
PWC briefings on the utilities industry sector:
http://www.pwc.com/Extweb/industry.nsf/docid/F93976FECD481A7A85256D1A00147F51
McKinsey publications on electric power: http://www.mckinsey.com/clientservice/electricpowernaturalgas/

- Deliver global, cost-efficient solutions, and provide users globally with local and centralised support. Protect Vestas' electronic assets against loss or unauthorised access.
- Develop the competences of Group IT employees to enable them to add further value to the overall Vestas business.

IT Operations

IT operations department of Group IT, headed by Finn Poulsen, supported the day-to-day functioning of all global offices and field sites of Vestas. Group IT also manages the onsite support, network and system infrastructure. IT on the production shop floors is handled by other units in Vestas. IT operations department was responsible for providing desktop, telephony (IP-phones and mobile phones), video conferencing, internet, data backups, and IT security services to all Vestas business divisions and global offices. IT operations department was also in charge of procuring the relevant hardware and software to run these services.

IT operations department was internally organized by seven broad geographies – the Americas, Asia Pacific, Mediterranean, Central Europe, UK, India and Nordic countries. The server, network, and client teams had a matrix reporting structure with team members reporting to both the centralized IT operations head, Finn Poulsen, and their respective regional managers. The matrix reporting structure was primarily for administrative purposes; it was not intended to restrict team members belonging to one region from working on projects spearheaded by other geographies. With the aim to enable cross-border collaborations and to maximize cost effectiveness, the use of desktop computers, laptops, mobile phones, networking switches and servers were being standardized across all Vestas global offices.

Business Applications

The Business Applications department, headed by Peter Falden Jensen, focused on responding to business requirements with application software support, and took lead in IT enabled business process improvement initiatives. A key part of the application infrastructure was the investment in enterprise SAP[7] applications that formed the backbone of human resources, financial control and accounting, sales, and customer service functions of the Vestas organization. Manufacturing and plant related services such as engineering order management, quality management, plant maintenance, and supplier relations were supported by a separate ERP product suit, Infor XA[8]. Group IT business applications department was also responsible for providing development, customization, and support services for business requirements that

[7] http://www.sap.com/solutions/business-suite/index.epx
[8] http://www.infor.com/solutions/erp/

needed integration between the sales and production business units (integration between SAP business-suite and Infor XA).

Personal productivity and email communication tools were standardized based on Microsoft Office suite on the Windows Vista operating system. Apart from these, the business applications department also supported more than 130 stand alone applications residing in desktops and servers; used by various business divisions. The history of many of these legacy applications dated back to the merger of Vestas-NEG Micon companies, and the resulting consolidation of IT infrastructure and applications.

To enable timely and continuous improvement of the Vestas IT applications (Exhibit 12), the business applications department typically had 3 or 4 major software releases in a year through which major upgrades and modifications were released to the production environment. The department did not support adhoc change requests from business units because all changes to the production environment had to be cross-tested to ensure system stability and reliability.

Business Liaison

Group IT maintained effective relationships with various Vestas business units through its business liaison department headed by Ellen Andersen. A key goal of the business liaison group was to ensure strategic fit between the activities of Group IT and those of the Vestas business units. The team ensured that Group IT was fully aligned with the needs of the business in terms of delivery, cost, agility, level of support and quality. Also, business liaison members provided Group IT management with inputs on the strategic and operational directions of each business unit in Vestas, and enabled Group IT to make decisions proactively rather than reactively.

IT Project Management and Governance

IT projects at Vestas were governed by three governing bodies, viz., pipeline approval board, project portfolio approval board, and project steering group (Exhibit 13). What constituted as an IT project was also well defined in the IT project management policies set out by Group IT. A business case that had at least 10% costs related to IT; did not relate to current day-to-day business operations; required at least 20 man days of work; had total projected costs exceeding 100,000 DKK (approximately USD 18,000 or EUR 13,000) could be a potential IT project, and could be considered by the IT governance boards.

All new IT project ideas, including those related to setting up of new sites and factories, were first evaluated by the project pipeline approval board. The pipeline approval board

consisted of the production and sales business unit managers, and was chaired by the director of Group IT project management department, Erna Pedersen. The pipeline approval board considered the feasibility and benefits of project ideas. Once a project gains the approval of the pipeline board, the project portfolio approval board considered its business case. The portfolio approval board consisted of the CFO's from the Business Units, Group IT managers, and was chaired by the corporate Chief Financial Officer. Once a project is approved by the portfolio board, a project steering group was formed consisting of the Group IT project management staff, business unit managers, and the responsible person in the affected business unit with the mandate to make decisions affecting the project results.

Group IT Funding Model

Group IT was operated as a centrally funded cost center. The budget for Group IT was annually approved by the Vestas CFO which was then distributed to the individual business units according to employee headcount. The project costs were however allocated directly to the Business Unit(s) that requested the project. The headcount-based cost model was simple to use, and avoided internal wrangling for funds. However, it did little to encourage individual business divisions to own their IT processes, and invest in "super-users" or business personnel who can champion IT projects. Without championing from such super-users, Group IT at times faced an uphill task of achieving good user acceptance of IT products and services, and a reduction in service calls to its support centers when changes were rolled-out to the production environment.

Group IT Workforce

As of March 2009, 50% of the total Group IT workforce had been with Vestas for less than 12 months; 70% for less than 24 months. With negligible attrition rates in the group, the new hires were predominantly made for ramping up capacity – to match the 25% annual growth rate of Vestas in the past five years. Group IT was constantly in a situation to simultaneously 'deliver' and 'ramp-up', making group-wide change initiatives more challenging; the processes to fully integrate new employees in the organization for fostering a 'Group IT culture' were also still evolving. The mission to proactively add business value to stake holders demanded Group IT employees to possess deep business knowledge, and be able to work closely with business units. While new employees of Group IT were naturally tech-savvy, being 'business and Vestas savvy' was a challenge for new employees. Moreover, 53 of the 74 managers in Group IT are from Denmark; hence there is a need to develop more multinational leadership to sustain the global expansion of Group IT.

Preparing Group IT for the Ambition to be No.1 in Modern Energy

Bonde was just a month away from his annual planning discussion with the Vestas top management and the IT governance board. Bonde aimed to position Group IT to play a significant, business-value creating role in the Vestas "No.1 in modern Energy" strategy. Bonde was aware that his business unit stake holders faced increasingly sophisticated customers who demanded professional, innovative, and localized services in their region of operations. Moreover, increased competition, especially from low cost suppliers in emerging markets, inevitably drives the need of a more effective cost management, and better responsiveness to rapid market changes. Bonde needed to address how Group IT will respond to these conditions, and play a business-value creating role.

Bonde wanted to make recommendations to Vestas top management and IT governance board identifying the appropriate organization, funding, and service management models to help Group IT proactively adjust to the needs of the business stake holders. The rapidly growing, multinational, multicultural Group IT workforce needed to quickly develop deep business knowledge, and be well aligned with the Vestas business units (the internal value chain). Bonde wondered how the heavily matrixed, yet mostly centrally-managed, Group IT organization could prepare itself to be able to deliver global solutions with localized support for end users as demanded by the business needs.

While there was a constant effort to adopt industry best practices (such as ITIL[9] recommendations) in Group IT, processes and policies governing IT service partnership with business divisions were still evolving. Bonde wanted to layout his plans on how services and solution delivery cycle times could be shortened to enable business divisions to quickly address market needs. Bonde envisioned a lean and effective IT service organization that can provide a transparent cost and reliable services structure that Vestas business divisions could rely on.

Bonde also recognized the need to streamline the Vestas IT infrastructure and business application landscape to realize his vision for a lean and effective Group IT. Streamlining the business applications landscape would ensure that business divisions across the globe utilize reliable, consistent, and accurate data for their decisions. Consolidating diverse business applications, and standardizing the Vestas IT infrastructure would enable Group IT realize longer term benefits of lower maintenance costs, shorter product deployment cycle times, being able to leverage scale economies in procurement and upgrading efforts, and the ability to transfer more resources to value-adding, innovation-focused projects. At the same time, Bonde worried about the immediate challenges of streamlining the IT landscape; how could Group IT

[9] http://www.best-management-practice.com/

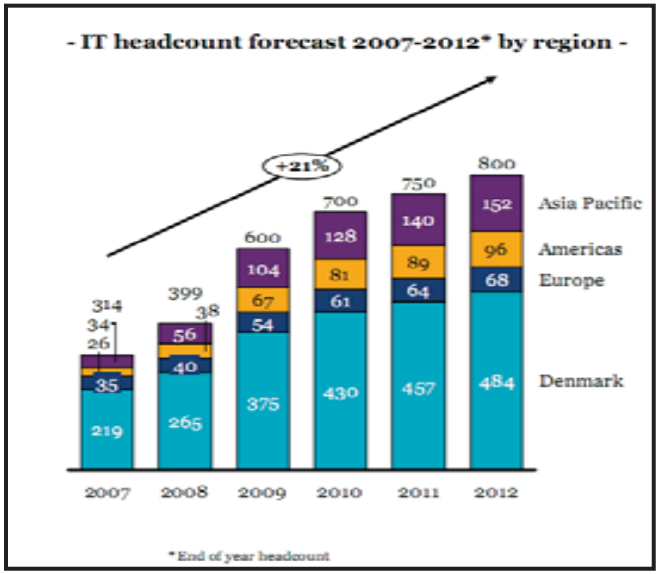
handle changes to the infrastructure and business applications without being overwhelmed with service calls from the business divisions?

Finally, Bonde needed to convince the planning group participants that his plans would help Group IT rigorously contain, and manage the costs of globally delivering corporate IT services, and would meet the requirements for Vestas corporate profitability. Bonde realized the importance of managing change prudently, and did not want the Vestas top management to get worried about 'rocking the boat' while it is on full steam. Bonde's plans, thus, needed to carefully prioritize any changes and convey the corresponding business benefits to convince top management.

Bonde has hired your consulting team to help him prepare for his annual planning discussion with the Vestas top management. Can you assist him?

All the Best!

Exhibit 1: Group IT Expansion



Source: Company documents

Exhibit 2: Wind Power Market Growth

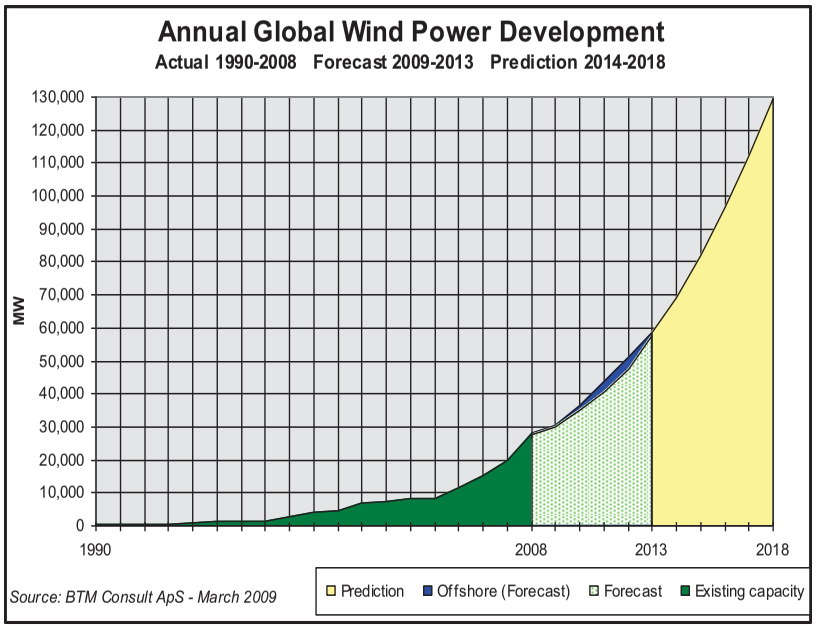


Exhibit 3: Top-10 Suppliers in 2008

	Accu. MW 2007	Supplied MW 2008	Share 2008 %	Accu. MW 2008	Share accu. %
VESTAS (DK)	29,508	5,581	19.8%	35,089	28.7%
GE WIND (US)	12,979	5,239	18.6%	18,218	14.9%
GAMESA (ES)	13,306	3,373	12.0%	16,679	13.7%
ENERCON (GE)	13,770	2,806	10.0%	16,577	13.6%
SUZLON (IND)	4,724	2,526	9.0%	7,250	5.9%
SIEMENS (DK)	7,002	1,947	6.9%	8,949	7.3%
SINOVEL (PRC)	746	1,403	5.0%	2,148	1.8%
ACCIONA (ES)	1,671	1,290	4.6%	2,961	2.4%
GOLDWIND (PRC)	1,457	1,132	4.0%	2,589	2.1%
NORDEX (GE)	3,886	1,075	3.8%	4,960	4.1%
Others	11,269	4,955	17.6%	16,225	13.3%
Total	**100,317**	**31,326**	**111%**	**131,644**	**108%**

Source: BTM Consult ApS - March 2009

Exhibit 4: Market Shares 2006-2008

	Supplied MW 2006	Share 2006 %	Supplied MW 2007	Share 2007 %	Supplied MW 2008	Share 2008 %
VESTAS (DK)	4,239	28.2%	4,503	22.8%	5,581	19.8%
GE WIND (US)	2,326	15.5%	3,283	16.6%	5,239	18.6%
GAMESA (ES)	2,346	15.6%	3,047	15.4%	3,373	12.0%
ENERCON (GE)	2,316	15.4%	2,769	14.0%	2,806	10.0%
SUZLON (Ind)	1,157	7.7%	2,082	10.5%	2,526	9.0%
SIEMENS (DK)	1,103	7.3%	1,397	7.1%	1,947	6.9%
SINOVEL (PRC)	75	0.5%	671	3.4%	1,403	5.0%
ACCIONA (ES)	426	2.8%	873	4.4%	1,290	4.6%
GOLDWIND (PRC)	416	2.8%	830	4.2%	1,132	4.0%
NORDEX (GE)	505	3.4%	676	3.4%	1,075	3.8%
Others	1,094	7.3%	2,076	10.5%	4,955	17.6%
Total	**16,003**	**107%**	**22,207**	**112%**	**31,326**	**111%**

Source: BTM Consult ApS - March 2009

Exhibit 5

Positions in the Top-Ten markets / Market/Country	Suppliers in the leading markets			
	Total MW 2008	No. 1	No. 2	No. 3
1. USA	8,358	GE Wind	Vestas	Gamesa
2. P.R. China	6,246	Sinovel	Goldwind	Dongfang
3. India	1,810	Suzlon	Vestas	Vestas RRB
4. Spain	1,739	Gamesa	Vestas	Acciona
5. Germany	1,665	Enercon	Vestas	REpower
6. France	1,200	Vestas	Enercon	Nordex
7. Italy	1,010	Enercon	Vestas	REpower
8. UK	869	Siemens	Nordex	Vestas
9. Portugal	679	Enercon	Gamesa	REpower
10. Australia	615	Suzlon	Vestas	Acciona
Total MW in Top-Ten	24,191	*The Top-Ten markets counts for 86% of the total world market in 2008*		

Source: BTM Consult ApS - March 2009

Exhibit 6

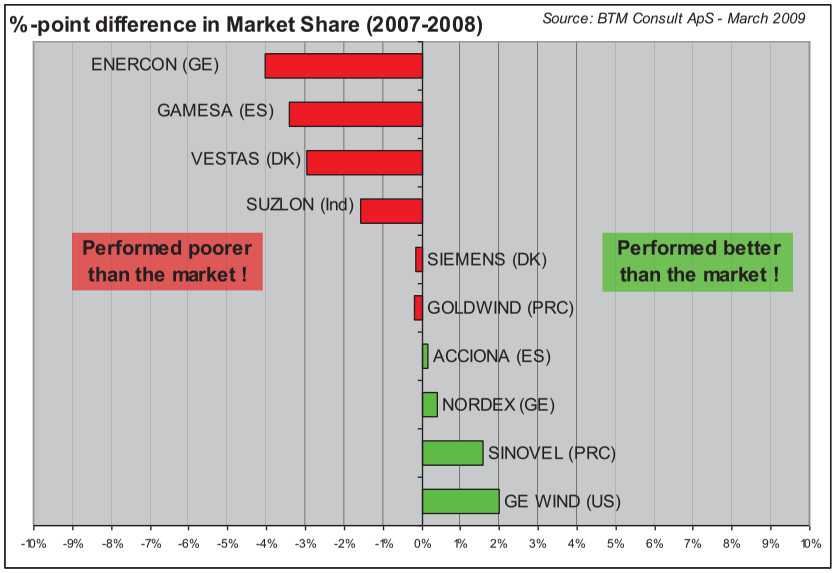


Exhibit 7

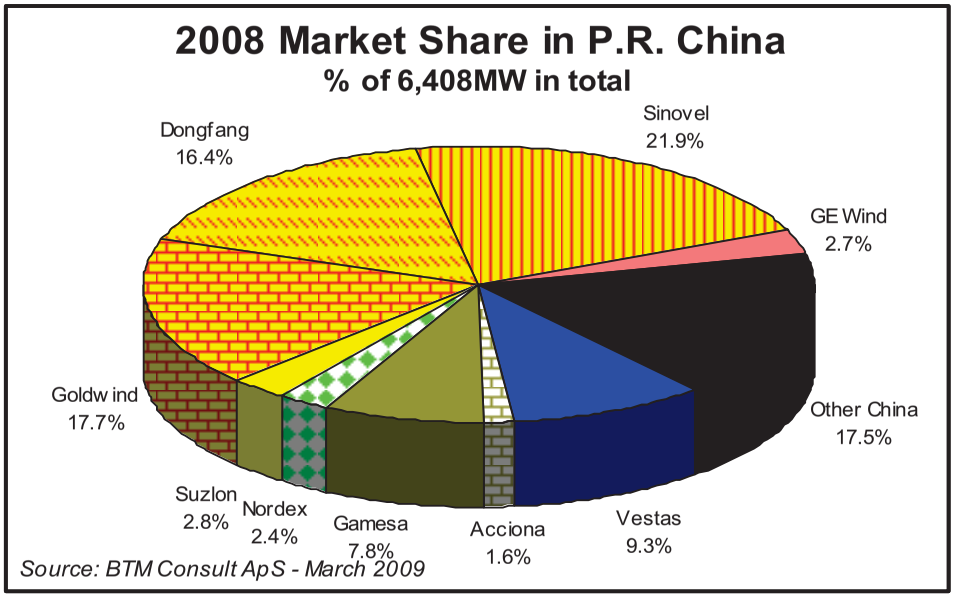


Exhibit 8

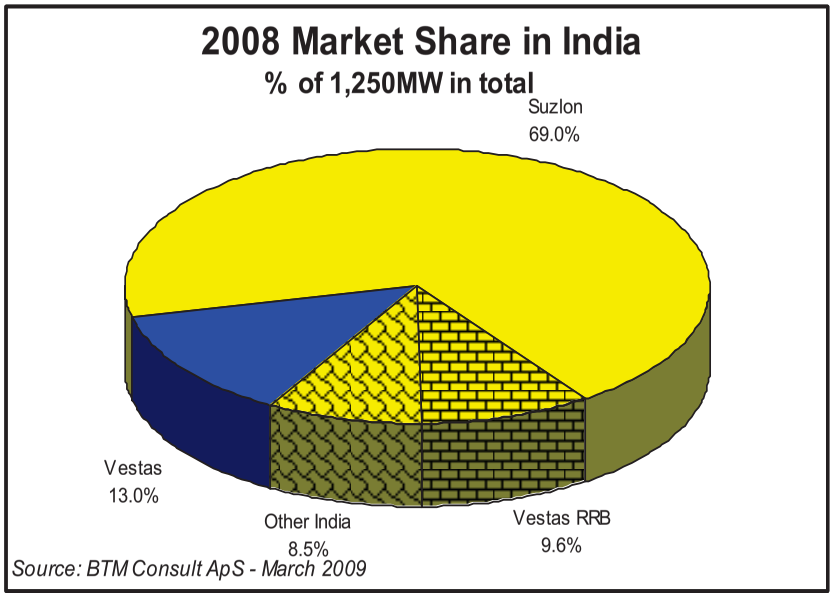
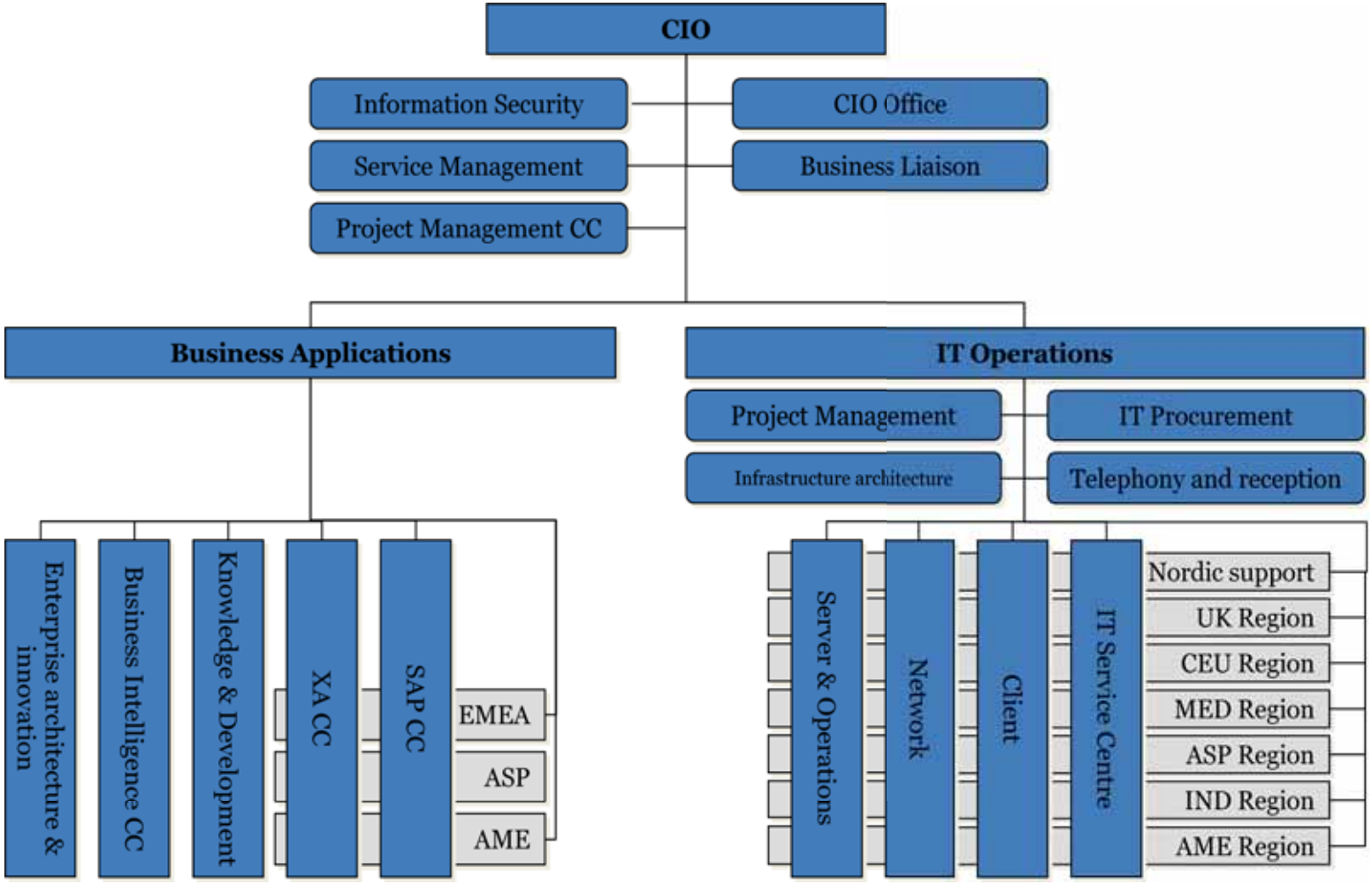
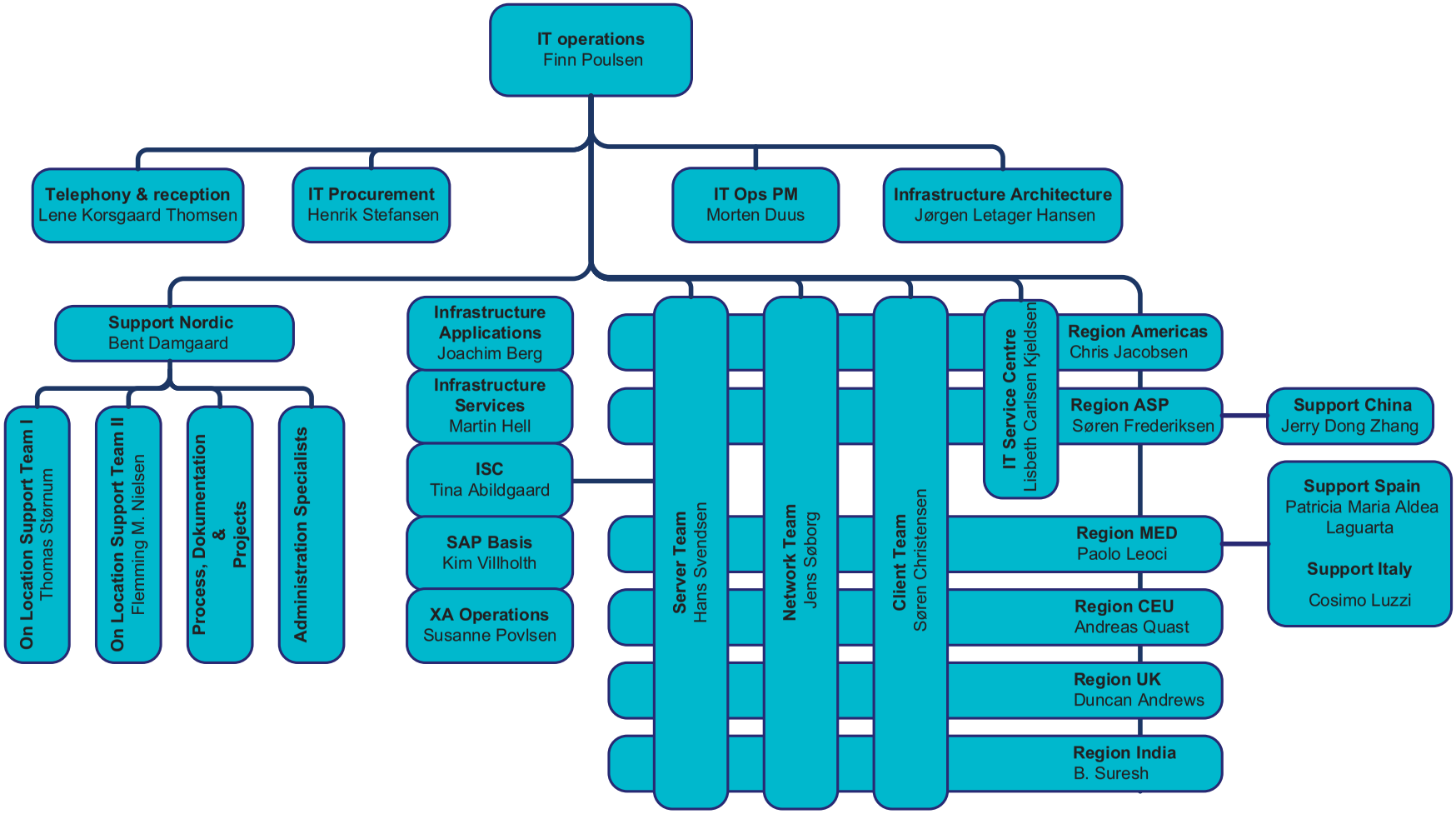


Exhibit 9: Group IT Organization Structure



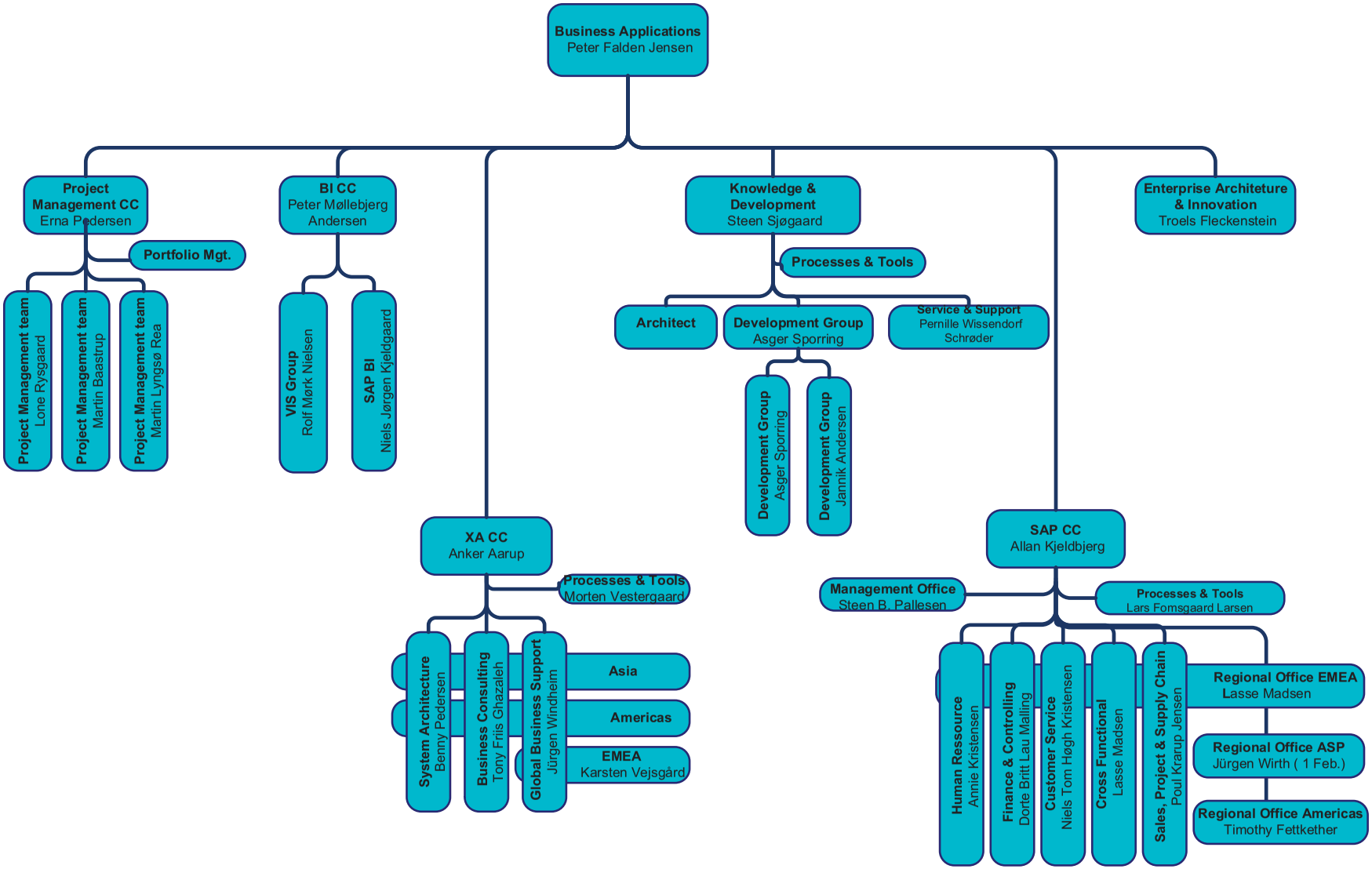
Source: Company documents

Exhibit 10: Group IT IT-Operations Department



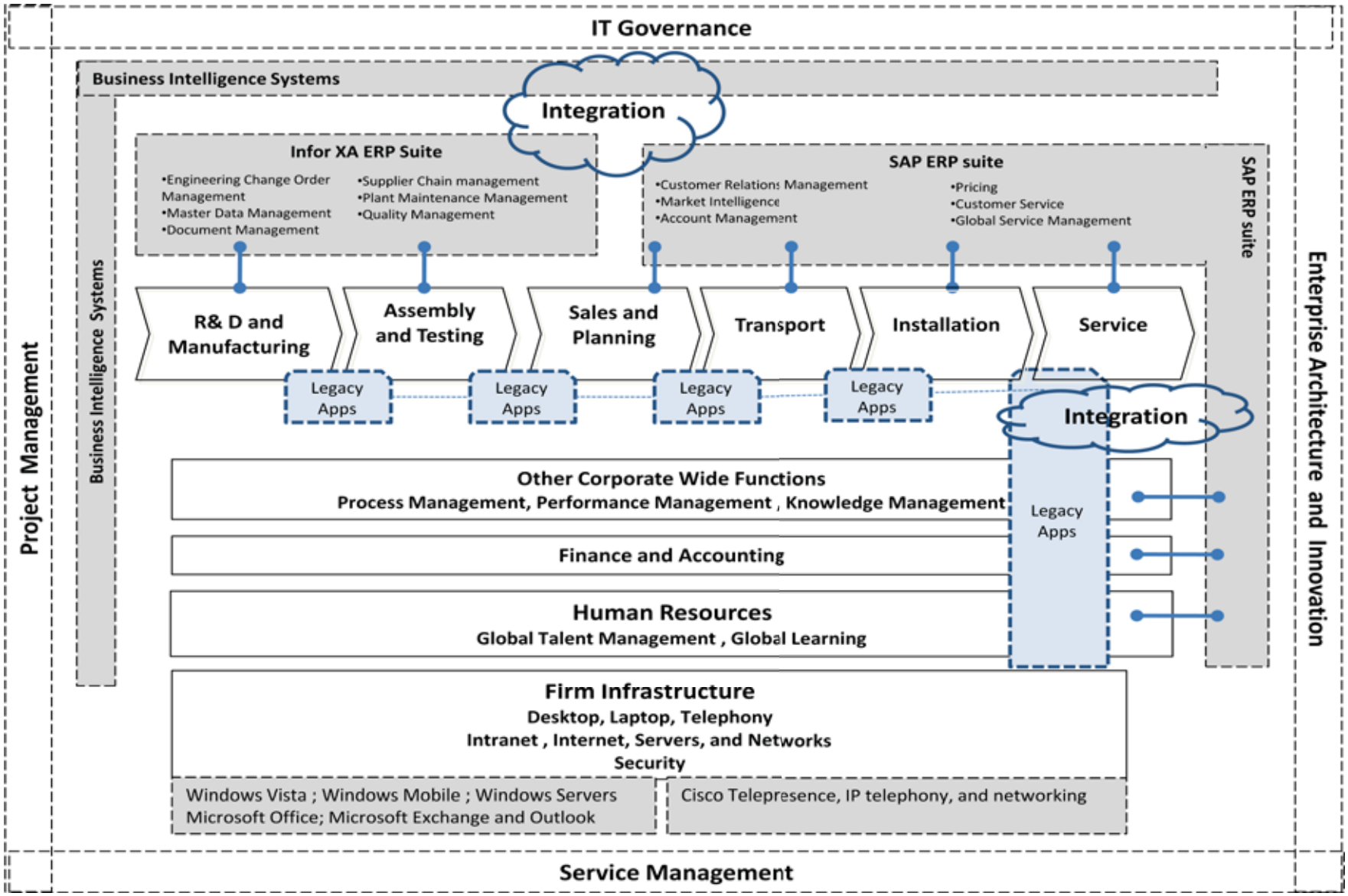
Source: Company documents

Exhibit 11: Group IT Business Applications Department



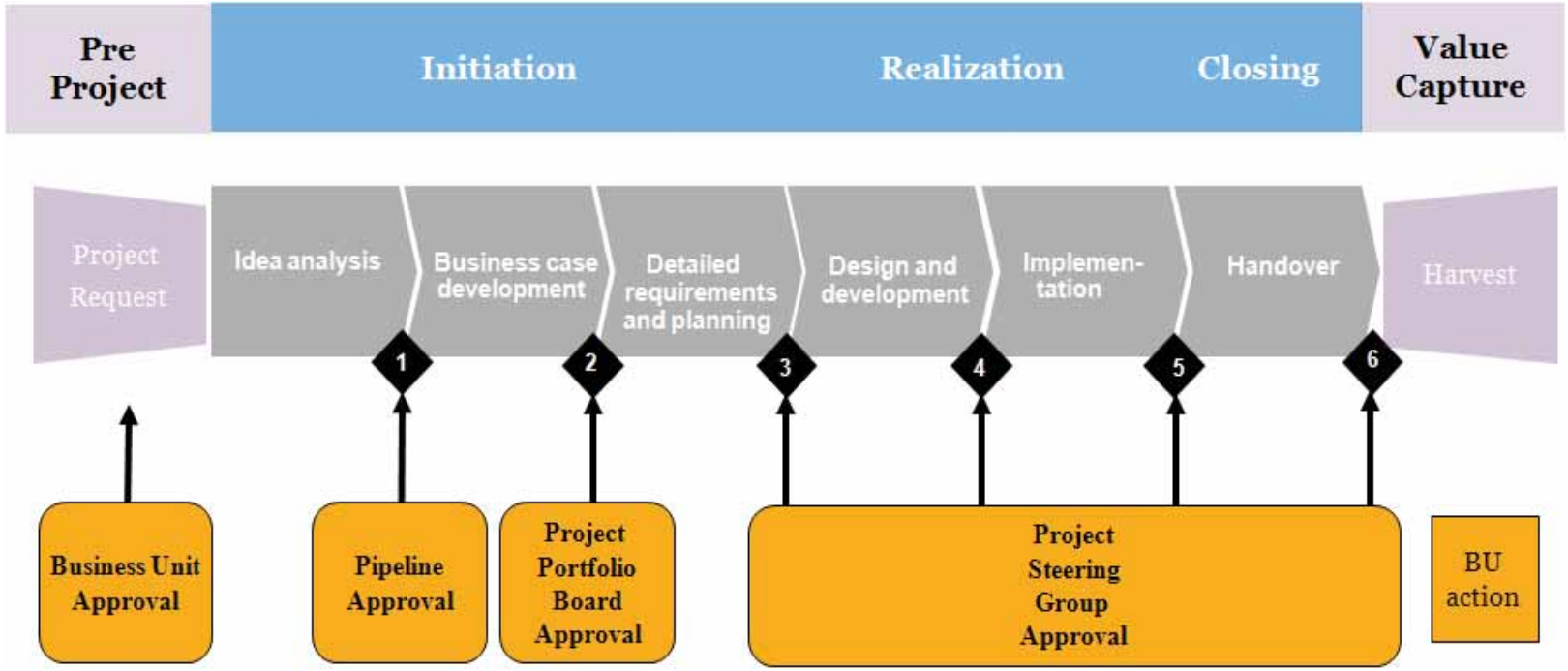
Source: Company documents

Exhibit 12: Vestas Group IT Services and Systems Landscape



Source: Case writer interpretation based on interview

Exhibit 13: IT Governance at Vestas



Source: Company documents

Exhibit 14: Vestas Value Chain

A 100% focused value chain

Producing turbines that use wind energy to generate electricity

Vestas' principal activities are the development, manufacturing, marketing, sales and maintenance of systems that use wind energy to generate electricity.

As a strong, independent partner, Vestas can supply guidance to customers in connection with the development, financing and ownership of wind turbine projects. However, Vestas never participates directly in these activities. On the contrary, Vestas is the independent system supplier.

In a growing market, Vestas is distinguished by a high degree of vertical integration. By manufacturing the principal parts of the turbine by itself, Vestas increases the flexibility of its product development, reduces its dependence on suppliers, and maintains its high level of manufacturing know-how. At the same time, production and sourcing are carried out as closely to the market as possible, which will reduce dependency on different currencies.

Exhibit 15: Additional Resources*

1. Vestas financial statements : http://www.vestas.com/en/investor.aspx

2. Material on Wind power and alternative energy:

    a. Guided Tour on Wind Energy: http://www.windpower.org/en/tour.htm
    b. Quantifying world's wind power potential: http://www.stanford.edu/group/efmh/winds/global_winds.html
    c. The Economics of Wind Energy: http://www.bwea.com/ref/econ.html
    d. Global Wind Energy Outlook: http://www.gwec.net/index.php?id=92
    e. Wind Energy Fact Sheet: http://www.berr.gov.uk/files/file20249.pdf
    f. FAQ on wind energy: http://windeis.anl.gov/faq/index.cfm
    g. Fact Sheet on America's Wind Energy: http://www.awea.org/pubs/factsheets.html
    h. Wind Energy Program in India: http://www.inwea.org/aboutwindenergy.htm
    i. Reducing a Nation's Dependence on Oil: http://www.pickensplan.com/theplan/
    j. United Nations Climate Change Conference: http://en.cop15.dk/frontpage
    k. BTM Consult Aps: http://www.btm.dk/

** Recommendations from case writer*