SBCC 2013
Assignment

Your team represents a new Singapore-based consulting firm that covers the IT sector in the Asia-Pacific region. You are working for the firm's first major client.

The client has asked you to assist in developing a plan to guide his firm's entry into key Asia Pacific markets, and also to address strategic financial, social, and environmental sustainability issues. The client requests the following deliverables:

1. *A concise (one-page maximum- with no appendices or attachments) executive summary that presents the essence of your proposed plan, to include a scenario analysis explaining how your strategy will adapt to external forces or threats that may emerge over its implementation cycle.*

2. *A Powerpoint file for presenting this plan to the firm's key stakeholders, containing detailed speaker's notes for use in preparing for the upcoming meeting. As the CEO will have no more than 20 minutes to present this plan, you must limit the slides so that they tell the story within that time.*

All details regarding required formats for deliverables, deadlines for submission, and the address to which your team must submit these deliverables are to be found in the body of the email in which you received this assignment and case.

Good luck!

Prof A Lee Gilbert
Advisor to Business Solutions

IPSoft: Autonomic Computing in Asia

Jeya Kumar stood by the large windows at his sleek new office in Singapore's prime business district in December of 2011. Kumar had much to think about: this was the first week into his new job heading up one of the world's most promising IT services companies. Gazing into the busy Singapore cityscape, Kumar saw strong growth potential and beyond, the larger Asia Pacific region, teeming with opportunities IPsoft might exploit.

As CEO of its Asia Pacific operations, Kumar now faced the task of bringing IPsoft to the regional market. Twenty-five years in the industry told Kumar not to worry about the firm's growth potential. The regional ICT[1] industry had strong momentum, and analysts predicted continuing growth as more organisations, seeking greater business agility and lower costs, sourced IT services from third party providers.

What concerned him, however, was exactly how to break into the region. Already, Kumar could foresee a number of challenges that IPsoft must overcome. Addressing these challenges could make or break IPsoft's regional success. Furthermore, his focus was not simply to penetrate this rapidly developing new market– he would also have to guide IPsoft in developing its capacity for sustainable growth.

Jeya Kumar now needed to formulate a compelling strategy to ensure IPsoft's success in the Asia Pacific. He didn't have time to spare. At the end of December, Kumar was to meet in New York with Chetan Dube, IPsoft's founder and overall CEO.

With one last sip of cappuccino, Kumar returned to his desk to schedule a series of meetings with his team over the next few weeks.

About IPSoft[2]

Headquartered in New York, IPsoft had ten offices in December 2011: in the U.S., Europe and Asia. IPsoft manages and maintains computer systems for large corporations, a service known as IT infrastructure management.[3] Competitors such as IBM and HP, IPsoft provides a range of service offerings to clients, including remote infrastructure management, IT optimisation, and cloud computing.

Unlike its competitors, IPsoft leverages its proprietary engines to provide IT services. These are essentially expert systems designed to mimic an engineer's thought processes. Through process automation, these systems are capable of self-healing, self-learning and autonomously solving a majority of the problems that arise on computer networks. This up-front investment in technology means that IPsoft requires little human intervention to deliver its IT services.[4]

[1] Information and Communications Technology

[2] IPsoft website, www.ipsoft.com, accessed March 1, 2012.

[3] Office of Government Commerce, "ICT Infrastructure Management", *Stationery Office*, May 2002.

[4] About 56 percent of all client problems are resolved without human intervention (refer to **Exhibit 1**).

IPsoft is able to serve companies from a broad range of industries ranging from finance and healthcare, to telecommunications and retail. Today, one in twenty Fortune100 companies is an IPsoft client, including household names such as Cisco and AT&T.

With the rapid growth in the global market for managing computer servers, desktops and communication networks, industry analysts estimated that IPSoft could increase its market share to grow seven-fold by 2020.[5] Of course, multinational competitors sought to develop similar platforms. Yet, according to analysts, none made progress as significant as IPSoft's in deploying automation and intelligence capable of shifting the service delivery model from people-based support systems to machines.[6]

History of IPSoft – From a bold vision to reality

The IT infrastructure of tomorrow will be managed not by people but by expert systems.
Chetan Dube, IPSoft's President and CEO

In 1998, during the global panic over the supposedly imminent Y2K problem, Chetan Dube, then a professor at New York University, had an epiphany. Many organisations at that time were devoting valuable time and incurring huge costs to switch to new systems that could transition from 1999 to 2000. If systems support were automated, Dube thought, a press of the right button would resolve the problem and reduce resource allocation to mundane chores.

Dube was also concerned about the poor utilization of IT industry talent. An electrical engineering graduate from Indian Institute of Technology Delhi, Dube knew that students complete three to four years of engineering training in universities, only to end up doing mundane work when they graduate. Only 10 percent of the work done by IT engineers was engineering – another 10 percent involved interacting with customers, with the remaining 80 percent devoted to collecting data to formulate a problem resolution. Automating these latter chores would free engineers and technologists to focus on more productive and creative work.

With these ideas in mind, Dube gathered a group of team comprising of some New York University staff members to start IPsoft in 1998.IPsoft's first office opened the same year in Manhattan. It was not an easy start – IPsoft was a new kid in the neighbourhood amidst IT giants such as IBM, and many people in the industry dubbed IPSoft "IPwho?" for selling technology they thought had not yet arrived.

Despite these initial challenges, IPsoft grew quickly on the back of its unique proposition to save labour cost, time and improve efficiency by automating IT support tasks. Within a few years, IPsoft established an information technology park in India, and then opened its first European Network Operating Centre (NOC) in London. As growth accelerated, expansion followed - San Jose California, then Amsterdam and beyond. In2009, in the midst of the financial crisis, IPSoft expanded its presence in

[5] Pankaj Mishra, "Using humanoids, IPsoft making the low-cost business model of Infosys, Wipro and IBM look like relics of the past", *The Economic Times*, September 23, 2011.

[6] Ibid.

Frankfurt, Austin, Chicago and Stockholm, and expanded its New York and Bangalore offices.

For 13 years following its formation, IPsoft focused on the U.S. and European markets. From late 2011, the firm began to expand its footprint in the Asia Pacific region. IPSoft opened its first office in downtown Singapore in November 2011, appointing Jeya Kumar, former CEO of India's sixth largest IT services company Patni Computer Systems, as its CEO for the Asia Pacific region.

The IT Infrastructure Management Industry

When companies first explore outsourcing and offshoring, they usually begin with selected non-strategic functions, such as payroll, facilities management, and call-centre operations, and retain control over core IT operations, such as end-user desktop services, storage, and security. With increasing confidence in remote management and wider availability of high-speed networks, they may then seek to outsource their critical operations and IT infrastructure management to further improve operational performance. Buoyed by these global trends, the IT infrastructure management industry grew at an 80 percent compound annual growth rate (CAGR).[7] The current global market for managing IT infrastructures approaches $25 billion, and will grow to $45billion in the next four years, according to research firm Gartner.[8] Much of this revenue flows to companies based in Asia, especially India and China.

The benefits of outsourcing IT infrastructure management can be considerable – Fortune 50 companies, with IT infrastructure budgets of $2 billion, can save up to $500million in their IT budgets, mostly through labour savings.[9] The potential savings increase as costs for non-labour components – hardware, software, maintenance, and facilities – decline with competitive pressures, innovation, scale, and tough negotiations with vendors. Between 2000 and 2010, total IT costs fell by nearly half, largely due to a 54 percent decrease in non-labour costs.[10]

To outsource IT infrastructure and support, most client firms begin by fitting an outsourcing approach to their business operations. The first step is to assess the specific business processes needed to manage operations, and to identify functions (such as those with access to confidential client data) that must for regulatory or security reasons remain within the home country. Clear definition of functions and roles at this stage significantly simplifies the outsourcing process and expands the savings potential. Next, clients must examine alternative off shoring arrangements – a captive model, in which the client owns the offshore entity, versus a third party model, in which the client partners with local entities. The captive model is suitable for the largest clients, who are

[7] Vivek Pandit & Rajesh Srinivasaraghavan, "A fresh wind for offshoring infrastructure management", *The McKinsey Quarterly*, October 2008.

[8] Pankaj Mishra & Jayadevan PK, "The basic notion of IT services in India is to flatten the pyramid: Jeya Kumar, IPsoft", *The Economic Times*, January 19, 2012

[9] Vivek Pandit & Rajesh Srinivasaraghavan, ibid.

[10] Ibid.

able to meet capital and other resource requirements, while the latter is preferred by all but the largest firms, who primarily seek cost advantages. Finally, clients must agree on staffing and service provisions. Implementation can take three months to a year and generally involves major changes in a company's IT architectures and employees' roles.

The traditional IT outsourcing model is structurally similar to an in-house IT department – except that it does not contribute to the company's headcount or payroll expenses. Instead, the company pays an IT service provider to manage specific functions of its IT infrastructure, under a pre-agreed formula, such as a specific number of staff and work hours. Most such service providers base their operations in a limited number of geographic locations, such as India, China or the Philippines, seeking the availability of highly skilled and low-cost labour.[11] Currently, this traditional model relies on fixed-price negotiation and replacement of in-house staff by cheaper offshore workers to help clients achieve cost reduction and operational efficiency, and delivers mainly "commodity" services including call-centre and infrastructure support.

Tata Consultancy Services Ltd (TCS) offered traditional outsourcing services. Headquartered in Mumbai, India, with over 140 offices worldwide and a workforce of more than 160,000 employees, TCS' services cover the entire IT value chain, from infrastructure support to consulting and performance management services, serving abroad range of clients from several industries.[12] Another major player is Bangalore-based Infosys Limited. Infosys offers a range of IT and IT-related advisory services.[13]

While the traditional outsourcing model remains attractive, new challenges emerge. Disruptions in core IT systems brought on by the transition to an outsourcing vendor, or during on-going operations, have real financial and security costs, including possible data loss and the interruption of operations.[14] Other issues include regulatory problems, such as national legislation prohibiting transfer of client data across borders, the potential for inadvertent third party access to confidential records, and of financial fraud or intellectual property theft, especially if vendors have full access to mission-critical systems.[15] Furthermore, given the geometric growth in the demand for IT management services over the last few years, traditional outsourcing may no longer be sustainable– especially if talent pools for IT services become shallow and limited.

The underlying volatility of today's markets makes planning more difficult, particularly in the cost-sensitive, traditional IT outsourcing model. With increasing pressure on margins, companies need to better anticipate changes in costs and to effectively avoid sharp movements in local market conditions, such as higher wages, attrition and labour shortages. Recently, such swings have been apparent in preferred

[11] Matthias Daub, Barnik Maitra & Tor Mesoy, "Rethinking the model for offshoring services", *The McKinsey Quarterly*, November 16, 2009.

[12] TCS website,www.tcs.com/homepage/Pages/default.aspx, accessed March 1, 2012.

[13] Infosys website, www.infosys.com/pages/index.aspx, accessed March 1, 2012.

[14] Gianluca Tramacere, Rob Addy & Christine Tenneson, "Agenda for Infrastructure Services, 2012", *Gartner*, January 16, 2012.

[15] Ibid.

outsourcing destinations, causing tremendous difficulty in cost projections and planning. In India, the U.S. dollar appreciated more than 30 percent against the rupee while employee turnover declined by more than 15 percent over the past three years.[16]

IPSoft's Business and Operations

IPsoft manages all aspects of the client's IT infrastructure and offers remote infrastructure management, Platform as a Service (PaaS) and cloud infrastructure management services through its automated IT support systems**.**

Leveraging Information Technology through Run Book Automation

Automation to reduce both costs and errors is the hallmark of IPSoft's service delivery model (refer to Exhibits 1 and 2), which applies expert systems to automate many routine functions of an IT service desk. Thus, IPsoft software resolves at least 90 percent of Level 1 issues and 56 percent of Level 2 IT support issues without human intervention, freeing IPsoft's engineering team to deal with the more complex Level 2and all Level 3 issues (refer to Exhibit 3).

IPSoft builds its expert systems by observing the issues occurring in the operating environment of a client, classifying them, and translating them into model solutions for use by a "virtual engineer" designed to resolve problems. To diagnose each problem as it appears, correlation engines within a virtual engineer simultaneously analyse multiple pieces of information, thus exceeding human mental capacity.

The virtual engineer emulates a Level 1 systems administrator that can intercept every incident the moment it occurs, troubleshoot it, and provide a remedy. It is equipped to handle security, application business logic, middleware, database, Operating Systems, virtualisation, storage and network infrastructure issues.[17] The technology allows IPsoft staff to focus on higher value tasks. For example, the virtual engineer can resolve a run book triage that might take a human engineer half an hour to two hours.[18]After removing mundane tasks from the desktops of managers in server environments, IPsoft then proceeds to other Level 1 and 2 problems autonomously. It typically takes two to three minutes for an incident resolution autonomically.

Typically, a run book contains procedures for starting, stopping, and monitoring the system or network; handling special requests such as mounting a storage device containing archived material; and handling problems as they arise. IPSoft automates a run book by monitoring the workflows supporting the system and network operational processes, then using the results to automate a large part of those processes. An automated run book process can cross all management disciplines and interact with all types of infrastructure elements, such as applications, databases and hardware.

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[16] Matthias Daub, Barnik Maitra & Tor Mesoy, "Rethinking the model for offshoring services", *The McKinsey Quarterly*, November 16, 2009.

[17] David Williams, "IT Operations Run Book Automation", *Gartner*, May 4, 2007.

[18] IPSoft website,www.ipsoft.com, accessed March 1, 2012.

According to Gartner, the emergence of Run Book Automation (RBA) helps IT operations executives deliver higher efficiencies, by reducing mean time to repair (MTTR), increasing mean time between failures (MTBF) and automating the provision of IT support resources.[19]

Key Benefits

The use of autonomics shrinks 30 to 35 percent of operational support costs for a client and improves responsiveness in managing information management platforms. This is best exhibited by IPsoft's 60 percent reduction in mean time to resolution, a key metric used to evaluate managed services providers. Typically, call volumes drop by 50 to 60 percent (Exhibit 1 and Exhibit 2). Many of the employees that autonomics makes redundant are entry-level engineers and support staff, whose turnover rates are high.

Table 1 Comparison of Value-Added Per Employee

Service Delivery Model	Value-Added Per Employee (US$)
IPSoft	500,000
Traditional Indian IT Services	50,000

Source: Adapted from IPSoft's IT Decision Maker Research (*proprietary*)

Table 1 compares the estimated value-added per employee. Through its self-healing, self-learning and self-managing IT ecosystem, IPsoft is able to deliver technology-based arbitrage, versus the labour arbitrage that characterises most BPO[20] firms.[21] (See **Exhibits 4a and 4b** for how automation transforms the traditional IT support stack.) IPSoft employed only 1,400 people to earn its 2011 revenues of $700million. In contrast, a traditional Indian IT services firm employs up to 20,000 people to earn each $1 billion in revenue. Thus, an IPsoft's employee adds ten times more top-line value than does an employee of a traditional Indian IT services firm.

IPSoft's Enabling Technology: Expert Systems

The model underlying IPsoft's enabling technology is to clone processes that would normally be carried out by an experienced support engineer, and integrate these into an expert system that can do them automatically, faster and more accurately.

An expert system, structured uniquely and differently from traditional programs, has three main components: the inference engine representing its problem-solving logic, the knowledge base specific to the task, and the user interface. To solve a problem, the engine responds to emerging issues by tapping its knowledge base and attempting to

[19] Donna Scott & Will Cappelli, "Automation: A Taxonomy", *Gartner*, August 14, 2009.

[20] Business Process Outsourcing.

[21] Martin Banks, "Service, heal thyself", *BusinessCloud9*, April 27, 2011. Retrieved February 12, 2012, fromwww.businesscloud9.com/content/service-heal-thyself/5112

reason like an engineer. After diagnosing the problem, it automatically executes the solution based on its virtual library of pre-developed engineering protocols.[22]

We have some very clever technology that provides management of clients' infrastructures irrespective of where it is located, and a library of automation knowledge that has been built up over the life of our organisation.

— Terry Walby, IPSoft's UK Managing Director

IPsoft's expert systems mimic the responses of an engineer to solve a problem with algorithms, built into its run book systems by their engineers. The algorithms provide IPsoft's the baseline knowledge to handle Network, Unix, Windows and database issues. They are stored centrally in IPsoft's run book and solutions library.[23] Built over the past thirteen years, the library is now a source of competitive advantage - it would take an extended period of time for a competitor to develop such a repository.

Apart from leveraging its automation library, IPSoft works closely with clients to tailor its expert systems to serve their organisations. This requires understanding organization specific IT operating procedures, then writing new algorithms and virtual engineering files to comply with them. These new virtual engineering files are then added into IPsoft's central automation library, and may be applied as a template to generate solutions for another client with similar operating procedures. This approach generates increasing returns to use, thus reducing the investment required for growth.

Manual processes are prone to human error; even reasonably redundant manual tasks generate an error rate of about 10 percent. The error rate from automated expert systems approaches zero. Thus, the use of expert systems allows IPsoft to systemically ensure quality and ensures consistency in its client's operating procedures.

Because expert systems are continuously monitoring what is going on, they can often intervene even before IT problems arise. Today's technology is so advanced that the expert system that we have developed in-house is already capable of handling more than 60% of all the incidents that occur fully autonomously. In many cases, without users even noticing. They no longer need to call a helpdesk as the problem will have already been detected and solved straight away. And what is more, machines are able to do that on average around a thousand times faster than is humanly possible using the best-trained engineers. That is why the research bureau Gartner estimates that by the end of 2014, around 90% of all US companies will be using expert systems to manage their ICT infrastructure.

– Hans ten Hove, Managing Director of IPSoft Benelux

[22] IPSoft website,www.ipsoft.com/content/intelligent-robots-could-help-facility-management, accessed March 1, 2012.

[23] Daniel Robinson, "IPsoft offers cloud management as a managed service", *IT News fromV3.co.uk*, April 6, 2011. Retrieved February 15, 2012 from www.v3.co.uk/v3-uk/news/2041212/ipsoft-offers-cloud-management-managed-service#ixzz1IqR8es5s

IPSoft's Service Offerings

IPSoft offers infrastructure management, standalone services and cloud infrastructure management services. However, infrastructure management is the primary revenue stream and core business of IPSoft.

Infrastructure Management

In a traditional offshoring model, a client's IT infrastructure is managed in another location, which is typically characterised by low labour cost. Level 1/2engineers also normally perform the management of the infrastructure.

IPSoft's operating model differs significantly in its use of a virtual Network Operating Centre (NOC). Calls go first to local NOCs (U.S. customers to the New York City NOC, for example) versus a follow-the-sun basis. IPSoft then deploys an engineer to resolve the problem, based on a comprehensive set of criteria, such as availability, customer experience and applicable skill set.

IPSoft's primary NOCs are located in New York City, Amsterdam, and Information Technology Park in Bangalore, India, with secondary locations in London, Frankfurt, and San Jose, California.24 IPsoft establishes Network Operations Centres in new locations at the request of large clients, or where regulation does not permit the remote management of data. Many financial regulators in Europe and Asia Pacific, for example, do not allow financial institutions to remotely manage certain types of data.

Consistent with its service delivery model, IPsoft does not hire Level ½ engineers. Its most junior engineers are Level 2/3. First responders to new problems within a client's IT infrastructure are most often highly qualified engineers capable of resolving issues without further internal escalation.

Most other global BPOs rely on software and hardware platforms to deliver services and capabilities. 25 Often, they build packages to solve information management problems, with the hope of selling other services. IPsoft services are independent of software, hardware and location. This implies that the components of software and hardware are immaterial to IPsoft's ability to manage an ecosystem. The ability to use a single operating viewpoint to view disparate pieces of a client's IT infrastructure make sit the only managed services provider with the depth and breadth to handle components in many companies. As IPsoft's platform setup does not require the integration of complex software, a typical implementation requires less than 90 days.

IPCentre Platform

IPsoft positions its IPCentre platform as a standalone offering. This allows IPsoft to leverage its autonomic environment as a platform it can lease to clients. IPCentre can be described somewhat like a software suite with corresponding service and support organisation. Once this platform is integrated into a client's IT environment, the client can use it to manage all its software and hardware elements.

[24] IPSoft website, www.ipsoft.com, accessed March 1, 2012.

[25] Cathay Tornbohm, "Outsourcing Trends, 2011-2012: Evaluate Business Process Outsourcing for Business Advantage", *Gartner*, February 9, 2012.

IPCentre also allows clients to extend certain platform capabilities to end-users. Clients in the telecommunications industry find this extension most useful to their operations. With a common framework to manage the entire IT ecosystem, IPCentre, eliminates the need for different packages and maintenance fees associated with disparate software. It is also capable of integrating the software of other firms and gives the company a holistic view of its entire information services platform.

Cloud Infrastructure Management[26]

IPSoft also collaborates with Cloud providers to deliver a full operational platform for public, private, or hybrid Clouds. The core IPSoft service delivery platform, IPCentre, runs on the Cloud provider infrastructure, delivering comprehensive orchestration, cross-platform governance and automation.

IPSoft's Revenue Model

While most industry players bill customers based on charge per incident, IPsoft bills its clients on a per device basis, as 56 percent of incidents are resolved through the use of automation.[27] The charge per device is billed to the client as an annual subscription. The client incurs no significant capital expenditures, and the cost is certain.

The company achieved $700 million in sales based on the 1 million units under its coverage. Labour costs are the largest element of its total cost (refer to **Exhibit 5**).

Customer Segments and Verticals

The enterprise segment forms IPSoft's largest customer segment, comprising large enterprises and small and medium-sized enterprises (SMEs). Both large and small enterprises require the same level of automation.

IPSoft serves many industry verticals, such as Financial Services, Health Care, Telecommunications, Media, Retail, Technology, Utilities and Government.[28] IPSoft sees a large proportion of its IT management projects from companies in developed markets, such as ING, Morgan Stanley and British Telecommunications. To manage its trading desk across nine European countries, leading Dutch financial services leader ING replaced TCS engineers with the IPSoft platform.

Expanding into Asia Pacific

Chetan Dube and his management team were well aware that commercialization is the most critical success factor for disruptive innovations such as IPsoft's autonomic technology. Disruptive innovations based on digital technology often lead to major breakthroughs with high value but low-cost products, yet only firms that managed to commercialise their innovations quickly and effectively become profitable and survive.

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[26] Eric Knipp & Lydia Leong, "Case Study: Using Cloud IaaS for Business Continuity Solutions", *Gartner*, December 19, 2011.

[27] CMN Bureau, "Cloning the manager's brain", *CIOL News Reports*, January 17, 2008.Retrieved March 6, 2012, fromwww.ciol.com/News/News-Reports/Cloning-the-managers-brain/17108102884/0/

[28] IPSoft website, www.ipsoft.com/industries, accessed March 1, 2012.

Dube and his team managed to commercialise IPsoft's innovation rapidly in the U.S. and European markets. With a foothold in these developed markets, Dube saw that to consolidate its global competitiveness, IPsoft now needed to leverage its innovation to exploit new opportunities in Asia Pacific.

Dube and his team agreed that the time was ripe for IPsoft to move in the Asia Pacific region in the spring of 2011. Hiring of Jeya Kumar in late 2011 marked the start of an exciting journey. With the weight of high expectations on his shoulders, Kumar now faced the task of formulating a strategy for IPsoft's entry into the region. He would need to select the right target markets, decide how to enter them, and develop effective marketing (and especially pricing) strategy. Based on his past experiences, Kumar knew that these initial decisions are often the most critical.

IPSoft's Market Strategy in Asia Pacific

As Kumar began to contemplate IPsoft's strategy into Asia Pacific, the first questions he needed to address were: Where and How. Where exactly within the region should IPsoft target? And how should IPsoft move into these target markets? As the Asia Pacific region features highly distinct markets with different languages, business cultures, economic growth rates, market maturities, and end-consumer needs, IPSoft would need a distinct strategy for each market that it entered.

Depending on its strategy, IPsoft could target emerging markets within Asia Pacific such as China, India and South East Asia, or focus on more developed markets such as Japan, South Korea, Singapore, Taiwan and Australia. After selecting specific targets, Kumar and his team would then have to prioritise which to enter first, and when. To help select target markets, Kumar jotted down the attributes that make a market in Asia Pacific favourable for IPsoft to enter. Kumar could then use these as decision criteria to select the target markets. (See **Exhibits 6, 7, 8 and 9** for market data.)

An equally pressing issue was how IPsoft should enter its new target markets. The normal process was to locate potential clients and present a prospectus, but Kumar knew that it would not be so simple. There were a number of underlying issues to carefully consider when entering the target markets in the Asia Pacific.

One issue that immediately stood out was the current lack of awareness in the region – of both the technology, and of IPsoft's brand. As there was little understanding in the region of the autonomic computing concept, IPsoft would first have to increase the level of awareness of the advantages of the technology before asking organizations to adopt it as typically required in any market entry and in business-to-business marketing. IPsoft would also have to increase the awareness of its brand, which was still little known in the region. To increase the level of awareness of its technology, IPsoft could explain how the technology works to potential firms, but Kumar felt they needed alternate strategies, possibly approaches that worked on a larger scale.

Another issue was the mode of operation in each target market. IPsoft could setup a NOC to deliver services and support and troubleshoot network infrastructure components in a new target market. However, the fixed costs to set up a new NOC were high, so the benefits would have to be clear. Alternatively, IPsoft could serve clients by tapping into the nearest NOC through remote infrastructure and provide service from a NOC outside the target market. (See **Exhibit 10** for more information on local NOCs.)

The primary market entry question if IPsoft would embark in an expensive but sticky direct enterprise sales model or if would penetrate through a channels approach given the market maturity, strength (both coverage and depth of relationships) of local managed service providers. 10 established service providers serve some 52% of the local outsourcing market space in Asia Pacific.[29]

Pricing Issues

Besides formulating the market strategy for entry into Asia Pacific, Jeya Kumar also noted that IPsoft would need to carefully review its pricing model. Selecting the right approach to price products and services is particularly crucial in innovation-intensive industries such as IPsoft's, where pricing has often been the determining factor of a product's success when launched into new markets. As companies accelerate the pace of new product introduction, they need to design pricing strategies with a long-term view – failure may cause them to forego potential profits, or even destroy value.[30]

Globally, IPsoft used penetration pricing, introducing its latest IT offerings to the market at lower price points compared to prevailing market prices. As companies constantly seek to reduce costs of IT infrastructure management, this strategy would attract both new clients to try IPsoft's products and existing clients of competitors to switch to IPsoft. By maintaining both price-competitiveness and a quality image, this strategy has bolstered IPSoft's entrance into developed markets. However, Kumar wondered about the viability of such a strategy in the Asia Pacific region.

Given the unique nature of IPsoft's product offerings, another option is to launch IPsoft's products with a premium pricing strategy. Even though customers constantly seek ways to reduce IT expenditures rather than spend more, Kumar felt that, with the right strategy, IPSoft could earn the right to charge more than competitors.

Kumar also contemplated a price skimming strategy, which is a combination of the penetration pricing and premium pricing strategies. With this strategy, IPsoft launches its offerings at a high price, and gradually reduces the price as time passes. Price skimming could help recover the high research and development costs associated with the development of new IT services and help raise profits over a longer time period.

[29] Gartner , Market Share Analysis : IT Outsourcing Services, Worldwide 2011, 30 April 2012.

[30] Walter L. Baker Michael V. Marn & Craig C. Zawada, "Do you have a long-term pricing strategy?" *The McKinsey Quarterly*, October, 2010.

Whichever pricing strategy IPSoft adopts, it must maximise the long-term value of the firm. Kumar thought a good start might be a set of scenario-based analyses that explore different pricing models and penetration rates, versus potential responses by customers and competitors, under varying assumptions about external forces and events.

Long-Term Considerations

While formulating the immediate measures needed to guide IPsoft's entry into the Asia Pacific, Kumar also thought through the longer-term issues raised by Chetan. These focused on three elements – financial, social, and environmental sustainability.

Financial Sustainability

Chetan and Kumar were set to fasten their belts and race ahead to increase the number of units served by IPsoft. However, to ensure that the business remains profitable even in the long run, a number of issues had to be considered.

First, IPsoft had to decide on its level of sustainable growth. While growth is a strategic goal, the strategy must ensure that this growth is sustainable over the longer term.[31] Often, rapidly growing companies end up with problems in their balance sheets when they run out of capital to support growth. To avoid this error, committing to a viable growth rate target would be important to ensure IPSoft's financial sustainability.

Second, IPSoft might need to design a verticals-focused strategy to strengthen its position moving forward. The current IPSoft focus is mainly on the IT infrastructure of its clients, which is largely similar across industries, with minor variations in escalation procedures. Kumar felt this strategy, largely undifferentiated across all verticals, needed review. In order to strengthen IPSoft's position in the autonomics scene, a virtual BPO, staffed by avatars, might be the next logical move. To realize this alternative, IPsoft must tailor-make its virtual BPOs to fit the individual needs of each vertical segment. This approach might require more resources and up-front investment than the firm is willing to commit. Even if IPsoft decides to offer virtual BPO services, new questions soon surface: in which verticals IPsoft should consider developing capabilities, and how should they go about developing domain expertise in each one?

Third, while IPsoft's business model poses a potential threat to traditional industry cost structures, uncertainties inherent in the emergence of new technology might pose a severe risk to IPSoft's value proposition. For example, the increased stability derived from reliability engineering would inevitably lead to process automation built into distributed devices. As a result, centralised software and hardware may record fewer problems and incidents, increasing the cost of data collection. In light of this risk, what direction should IPSoft's innovation team take to ensure that it could maintain its value proposition at the confluence between reliability engineering and pervasive computing?

[31] Bornsen, Arne; Korner, Florian, "Optimal Growth, Conceptualization of a strategy to benefit from Optimal Growth", *Mannheim Business School*, 2011.

Social Sustainability

The industrial revolution substituted machinery for man in the quest for higher efficiency. Later, automation replaced many human functions. IPSoft upped the ante by encapsulating a range of artificial intelligence characteristics in its service offering.

As the industry improves its core technology, IT support staff redundancy will increase. This raises issues with regard to the role of entry-level staff and engineers, who form a large percentage of BPO employment. A shortage of entry-level opportunities would inevitably affect the quality of Level 2/3 engineers that the industry produces. While Kumar believed that automation could unleash creativity and innovation within an organisation, he worried that IPsoft would have to deal with potential activism stemming from the large-scale loss of jobs in key offshoring markets, such as India. He also wished to discuss with Chetan steps that would ensure that IPsoft is able to groom Level 2/3 engineers in an increasingly autonomic environment.

Environmental Sustainability

Globally, many firms now sought to minimise their carbon footprint and energy waste. Responding to this trend, IPSoft designed its computing solutions to promote energy savings. One IPSoft approach is to provide computing resources – such as CPU, applications bandwidth and storage – on-demand, only as needed.[32]This allows clients to allocate resources based on specific needs, and decrease the amount of energy wasted. IPSoft has also started managing server consolidation, so that the available capacity of each client's server is maximised. This also contributes to energy savings for clients.

Kumar saw the IPSoft business model as inherently green: as service delivery requires a fraction of the headcount of the traditional model, the carbon footprint for office space and transport to the workplace is lower. Chetan wanted Kumar to explore other ways to make IPSoft an industry pioneer in achieving environmental sustainability.

In Singapore, Kumar felt he had a viable plan that covered all the bases. The next step would be to sell his strategy to Chetan, then to the Board. Although he thought he knew his way through most of the key issues, he was not quite sure how to present them to Chetan. What were the "hot buttons"? How much detail would be necessary?

Selling the Strategy

Kumar began to contemplate major presentation points for his meeting with Chetan in New York at the end of December. He thought that it would be most effective if he were first to present a framework for selecting markets in the Asia-Pacific region, pinpointing the specific markets IPSoft should target. He wondered how he should address problematic marketing issues such as lack of awareness of autonomic technology and IPsoft's emerging brand presence in the region, as well as the best entry mode to target markets. The trend for experienced Indian IT staff to demand increasing salaries was another issue that the Board might raise.

[32] IPSoft website, www.ipsoft.com/content/green-computing, accessed March 1, 2012.

Implementing one of these alternatives for the Asia-Pacific market would also require a pricing strategy to optimise value capture for IPsoft. The penetrative pricing strategy worked well for IPsoft in its current markets, but what about Asia? Should they adopt premium pricing, price skimming or formulate a new solution? Kumar was unsure on this point, and hoped the Board would provide guidance.

Kumar stood up, walked around his desk, and tried to stretch out his back. The final item he needed to address in his presentation stemmed from his initial discussion with Chetan concerning the long-term sustainability of IPsoft's business. Which barriers to sustainability urgently needed discussion at this meeting? How should he present the potential solutions? He knew his plan would not succeed without the Board's support.

With a final look at his tablet PC, Kumar grabbed his jacket and headed toward the door. He had a good structure and a viable strategy, he felt. But once a strategy was set, the hard work would begin. It was time to start filling in that structure with details. Once his strategy was approved, he would meet with his team to make key tactical decisions.

Appendices

Exhibit 1 IPSoft's Statistics

- **56%** of incidents resolved with no human intervention
- **60%** reduction in Mean Time to Resolution
- **96%** positive client satisfaction rating
- Over **13** years of automation experience in our shared knowledge base
- Average **30-35%** reduction in cost
- Over **1 million** devices under management

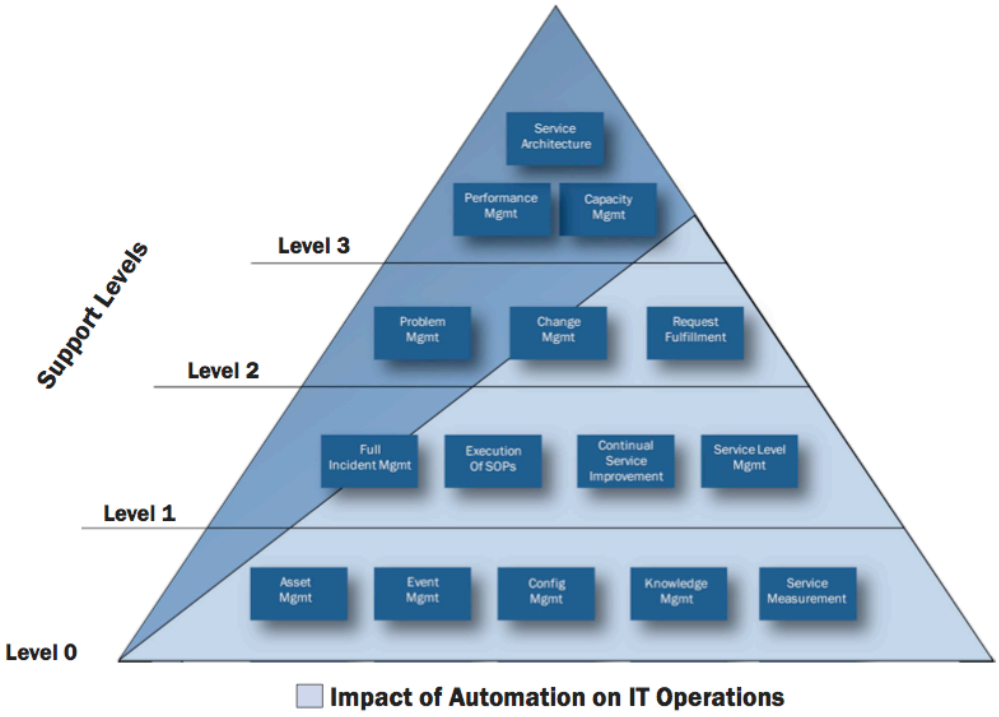
Source: Data provided by IPSoft

Exhibit 2 IPSoft's Key Service Benefits

Cost Reduction	• Typical 30-35% reduction in operational support costs • Additional benefits in cost avoidance of software license and support costs
Availability	• Significant (circa 60%) reductions in mean time to resolution • Increases in application and service availability • Availability and service level guarantees
Scalability	• Global operation across three continents • Ubiquitous shared knowledge management system • Integrated toolset and support operation
Flexibility	• Interoperability with current support structure and investments • Flexible contract structure to allow growth and shrinkage • Support processes configured to work with client and third parties
Continuous Improvement	• 6 Sigma processes for process governance and continuous improvement • Adaptive learning with Bayesian Analysis and Predictive Analysis

Source: Data from IPSoft

Exhibit 3 Leveraging IT Autonomic IP Operations



Source: Data from IPSoft

Exhibit 4a Traditional IT Support Stack

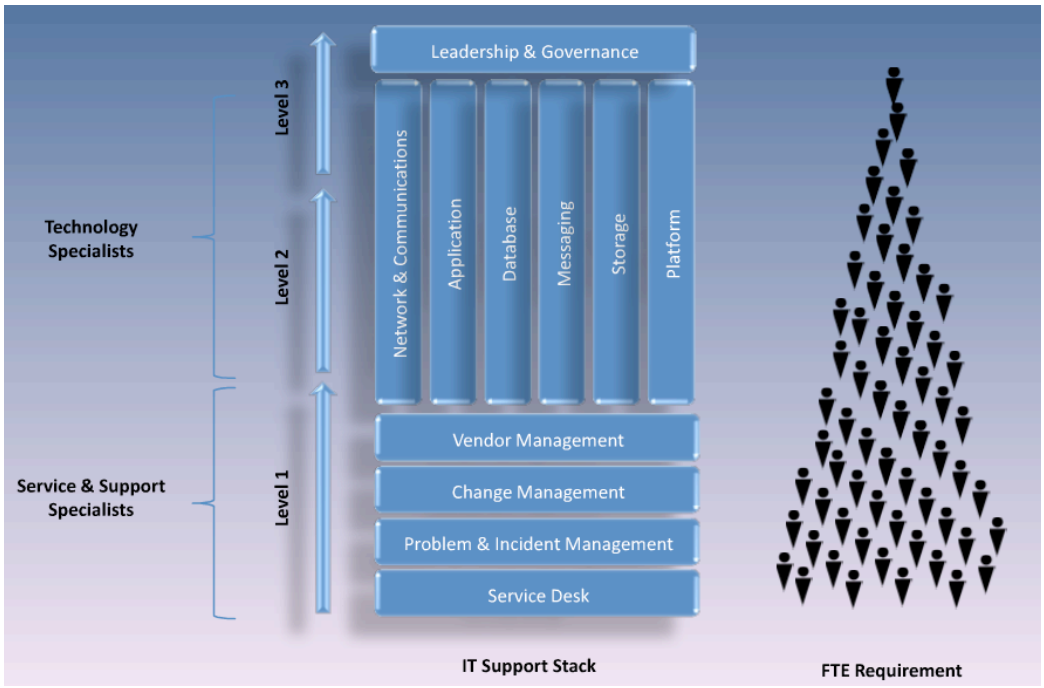
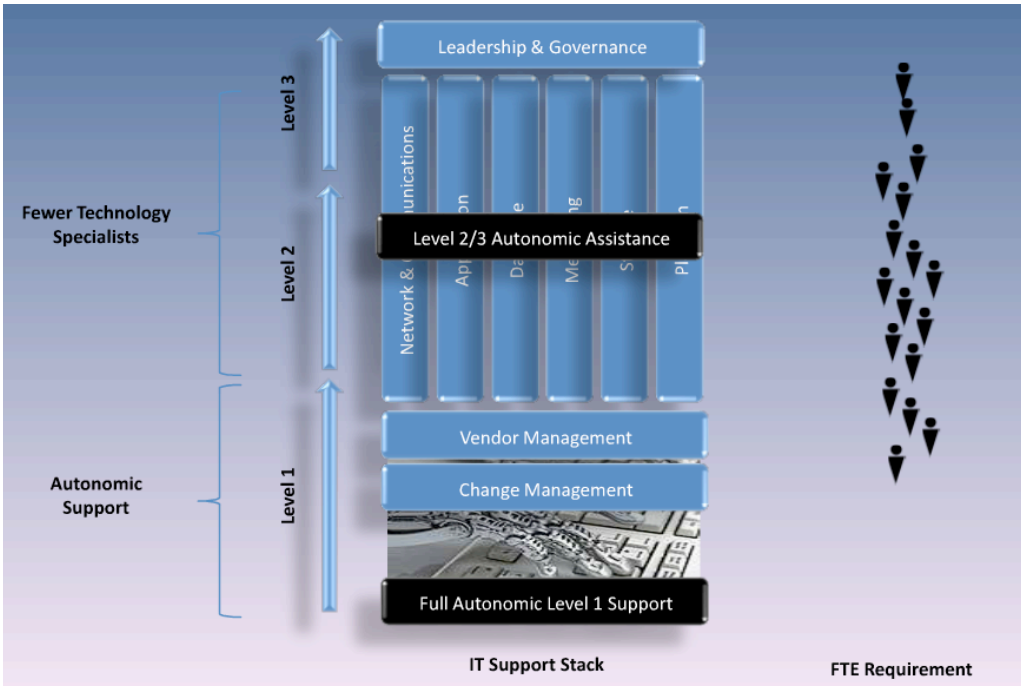


Exhibit 4b Transforming IT Support Through Autonomics



Source: Data from IPSoft

Exhibit 5 IPSoft's Financial Information for 2011

Revenue Information[33]

Revenue	US$ 700M[34]
Devices Under Coverage	1M

Cost Information[35]

Location of Employees	Number of Employees	Cost Per Employee
U.S.	1,000	US$ 150,000
Non-U.S. Employees (Mainly India)	400	US$ 55,000

Estimate of IPSoft's EBITDA

EBITDA = [0.7 * (Revenue – Labour Cost)]

Financial Ratios[36]

Ratios	Industry Average (%)
EBITDA Margin	26.04
Net Profit Margin	18.27
Profit / EBITDA	70.04
Return on Assets	12.59
Return on Equity	35.77
Debt / Equity	75.01
Payout Ratio	8.63
NWC / Sales	0.450

Source: Compiled from interviews of company executives by case writers

[33] Casewriters' interview with IPSoft's Executives, Singapore, January 2012.

[34] Adapted from DataStream.

[35] Casewriters' interview with IPSoft's Executives, Singapore, January 2012.

[36] Adapted from OneSource Information Services and Thomson Reuters.

Exhibit 6 Old Age Dependency Ratio (% of Working-Age Population)

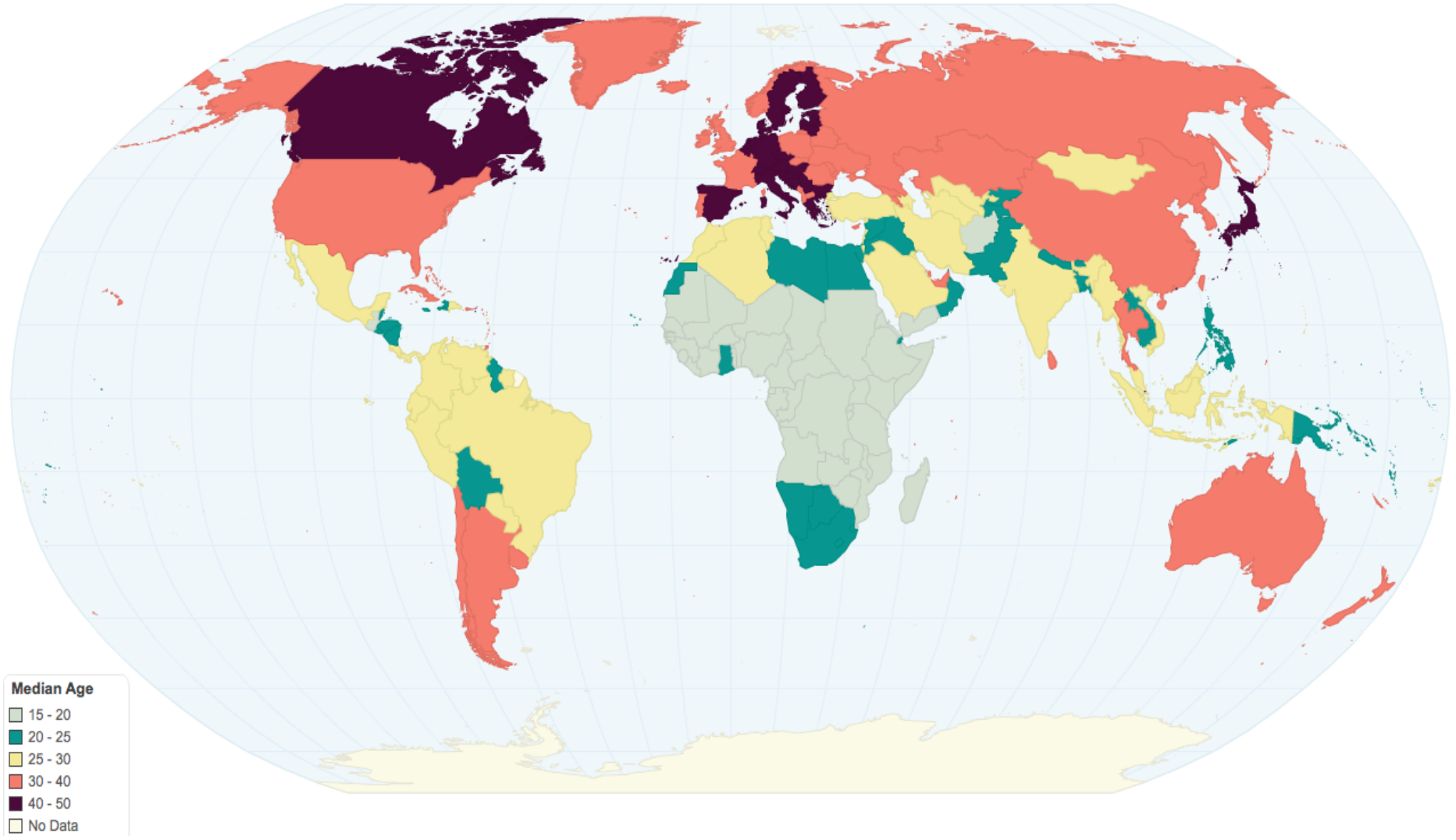
Old age dependency ratio shown below is the proportion of older dependents (age above 64) per 100 working-age population (age 15-64).

Rank	Country Name	Old-age Dependency Ratio
1	Japan	35.5
2	Italy	31.0
3	Germany	30.8
4	Sweden	28.0
5	Greece	27.7
6	Portugal	26.8
7	Belgium	26.5
8	Latvia	26.0
9	Finland	26.0
10	Austria	26.0
11	France	25.9
12	Estonia	25.5
13	Bulgaria	25.5
14	Croatia	25.4
15	United Kingdom	25.1
16	Denmark	25.1
17	Spain	24.9
18	Switzerland	24.5
19	Hungary	24.0
20	Slovenia	23.6
21	Channel Islands	23.6
22	Lithuania	23.2
23	Netherlands	22.9
24	Norway	22.0
25	Ukraine	22.0
26	Virgin Islands (U.S.)	22.0
27	Uruguay	21.6
28	Romania	21.3
29	Serbia	21.1
30	Czech Republic	20.9
31	Georgia	20.7
32	Luxembourg	20.4
33	Canada	20.3
34	Australia	19.9
35	Malta	19.8

Rank	Country Name	Old-age Dependency Ratio
36	Bosnia and Herzegovina	19.8
37	New Zealand	19.6
38	United States	19.5
39	Puerto Rico	19.4
40	Poland	19.0
41	Belarus	19.0
42	Montenegro	18.2
43	Iceland	17.9
44	Russian Federation	17.7
45	Cuba	17.6
46	Ireland	17.4
47	Hong Kong SAR, China	16.8
48	Macedonia, FYR	16.7
49	Israel	16.7
50	Slovak Republic	16.6
51	Argentina	16.4
52	Cyprus	16.4
53	Armenia	16.2
54	Barbados	16.0
55	Moldova	15.5
56	Korea, Rep.	15.4
57	Albania	14.3
58	Korea, Dem. Rep.	14.1
59	Chile	13.5
60	Aruba	13.3
61	Thailand	12.6
62	Jamaica	12.4
63	Singapore	12.2
64	Sri Lanka	12.2
65	New Caledonia	12.0
66	El Salvador	11.4
67	China	11.3
68	Grenada	11.0
69	Guam	10.8
70	Lebanon	10.7

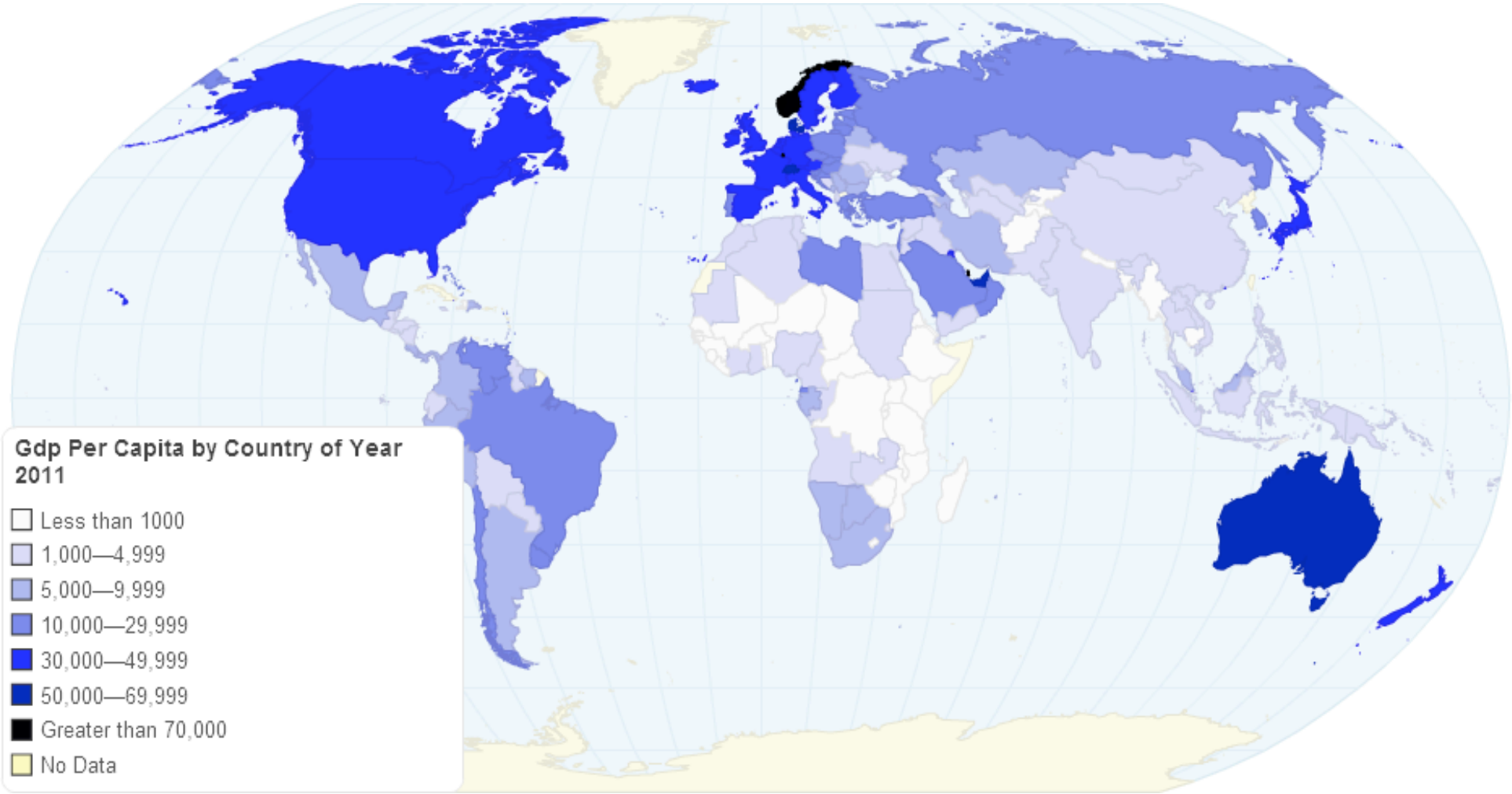
Source: World Bank

Exhibit 7 Median Age of Population



Source: Forbes

Exhibit 8 GDP Per Capita By Country, 2011



Source: ChartsBin

Exhibit 9 ICT Development Index – Asia Pacific

The ICT Development Index is a composite index that serves to monitor and compare developments in information and communication technology across countries. Economies with high scores provide good digital opportunity for most of their inhabitants, with varied and extensive infrastructure, relatively low prices, and widespread use of new technologies.

Economy	Regional rank 2010	Global rank 2010	IDI 2010	Global rank 2008	IDI 2008	Global rank change 2008-2010
Korea (Rep.)	1	1	8.40	1	7.80	0
Hong Kong, China	2	6	7.79	6	7.14	0
New Zealand	3	12	7.43	16	6.65	4
Japan	4	13	7.42	11	7.01	-2
Australia	5	14	7.36	14	6.78	0
Singapore	6	19	7.08	15	6.71	-4
Macao, China	7	21	6.84	27	5.84	6
Brunei Darussalam	8	43	5.61	44	4.97	1
Malaysia	9	58	4.45	57	3.96	-1
Maldives	10	67	4.05	66	3.54	-1
China	11	80	3.55	75	3.17	-5
Viet Nam	12	81	3.53	91	2.76	10
Mongolia	13	86	3.41	87	2.90	1
Iran (I.R.)	14	87	3.39	84	2.96	-3
Thailand	15	89	3.30	80	3.03	-9
Philippines	16	92	3.22	95	2.69	3
Fiji	17	94	3.16	90	2.82	-4
Indonesia	18	101	2.83	107	2.39	6
Sri Lanka	19	105	2.79	106	2.41	1
India	20	116	2.01	117	1.72	1
Cambodia	21	117	1.99	120	1.63	3
Bhutan	22	119	1.93	123	1.58	4
Lao P.D.R.	23	121	1.90	119	1.64	-2
Pakistan	24	123	1.83	121	1.59	-2
Nepal	25	134	1.56	137	1.28	3
Bangladesh	26	137	1.52	135	1.31	-2
Papua New Guinea	27	143	1.38	139	1.24	-4
Average (simple)			4.06		3.61	

Source: Measuring the Information Society, 2011, International Telecommunication Union

Exhibit 10 The Need for a Local NOC

Two main factors drive the need to set up a local NOC in a target market:

1. **Cultural** – customers in certain countries may want to work with a local NOC because they prefer having a local face and voice serving their needs.
2. **Legal** – for security purposes, there are laws enacted in some countries that prevent information from flowing out of the country, especially for certain industries. A typical example of this is the banking sector of many Asian countries, in which all information related to the sector is required to stay within the country. This would thus require a NOC to be set up in the target market.

Source: Casewriters' interview with Jeya Kumar, Singapore, January 2012