

Introduction

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“BRIC or BRICs are terms used to refer to the combination of Brazil, Russia, India, and China. General consensus is that the term was first prominently used in a thesis of the Goldman Sachs investment bank. The main point of this 2003 paper was to argue that the economies of the BRICs are rapidly developing and by the year 2050 will eclipse most of the current richest countries of the world. ”

Extract from the Wikipedia entry for ‘BRICs’

How can a subject such as the BRICs be introduced and summarised in a way that will not date immediately? It’s a question I have asked myself as I prepared to put this introduction together. Of course, I am focusing only on the technology and technology-enabled services sector – the hi-tech offshoring that has enabled India to develop a reputation for technology – rather than just curry – amongst the western public.

The millennium bug was the catalyst that sparked this great wave of change. Because every company in every country using any form of computing equipment could not be quite sure of whether it would be working correctly on January 1, 2000, there was a requirement to check everything. With a deadline that could not be changed that meant that there was a resource crunch – quite literally there were countries such as the US with not enough skilled people to check the systems. Enter India and the rest is history, as the share prices of the major Indian service companies since that time clearly demonstrate. Once they got a foot in the door and demonstrated the ability to serve customers remotely, there was no going back.

Yet, this trip down memory lane merely explains that India is now a dominant force in offshored technology services and does not indicate the importance of other regions and their potential, not least the other members of the BRICs.

This book is really all about the twelve senior executives who took the time out from their schedule to contribute. It's a great pleasure for me to be able to marshal together their views into a single volume in this way, as they are the people really changing the industry – not the commentators or analysts. There is a great detail of debate on the ongoing development of the BRICs region, and the combined might of India and China – 'Chindia' – in particular. Before moving on to the contributed chapters, I want to briefly introduce the original BRICs analysis by Goldman Sachs. I will then explore some of the present trends in global sourcing and finally will explore some ideas on the changing nature of the industry. Offshoring technology itself is very much tied to the industry that it serves and there are a number of innovations changing the entire concept of global services and company interaction with customers that I feel will impact on the development of this market.

The BRICs Report

On the first of October 2003, the global investment bank Goldman Sachs published a research report titled 'Dreaming with BRICs: The Path to 2050'. Jim O'Neill, a global economist at Goldman Sachs, led this research programme and has been credited as the father of the BRICs acronym, although it is worth stating that Dominic Wilson and Roopa Purushothaman are the credited authors of the report. Though there are examples of the term CRIBs being used by academics before and since, it is O'Neill's version that has become shorthand for the new economic superpowers.

The report forecasts that the BRICs region would encompass over forty percent of the world population and hold a combined GDP [PPP] of 14.951 trillion dollars over the projected timescale – which is to the middle of this century. Goldman Sachs never presented the BRICs as a potential economic or political trading bloc, but the exercise of studying their projected economic growth and global contribution over the decades to come does indicate that this is a region to watch.

One of the major reasons is the way the four countries slot together in different ways. China and India are already beginning to dominate global manufacturing and services, with that dominance set to grow. Brazil and Russia have abundant supplies of raw materials (soy, iron ore...) and energy resources (oil, natural gas...). Combine all four nations and you create a powerhouse than can supply energy and raw materials, to the world

and also operate as a back office and manufacturing hub to offshore companies. The governments in all four countries have recognised this potential for growth and are all engaged in various measures, the most basic of which is to embrace western capitalism as a way of doing business. The concept and adoption of democracy is variable between the four, with China being the most obviously removed from western ideas of democracy, but this has not prevented Chinese companies from doing business with international clients.

If the BRICs were to join together and form a unique trading bloc of countries that are not even geographical neighbours, but complementary in other ways, then they could create a formidable rival to the present world-order and established power structures.

The initial report stresses that the demographic situation in India gives the country the potential to grow fastest. Working-age population decline in Russia and China will take place much earlier than in India and Brazil, with India enjoying the most favourable ratio of working-age citizens to others.

In 2004, Goldman Sachs released a follow-up report to the original study titled 'The BRICs and Global Markets: Crude, Cars and Capital'. This update went a step further and examined how the growth of these four nations would impact on global markets generally. This report estimates that the BRIC economies share of world growth could rise from 20 per cent in 2003 to more than 40 per cent in 2025. An interesting estimate that gives a clear indication of what this growth could mean for citizens of these countries is the Goldman Sachs assertion that between 2005 and 2015 over 800 million people in these countries will have crossed the annual income threshold of \$3,000. In 2025, it is calculated that approximately 200 million people in these economies will have annual incomes above \$15,000.

Just think about that increase in wealth, and on the immense scale that we are considering here – India and China alone comprise a third of humanity. There will be an extreme increase in demand for luxury goods and non-essentials, especially attractive branded products.

Although this growth indicates immense economic might on national terms, some of this can be attributed to the large population of the BRICs region. Goldman Sachs estimates that by 2025 the income per capita in the G6 region will exceed \$35,000 – only 24 million people in the BRIC economies will have a similar income to this, so levels of worker pay are not about to harmonise.

The report goes into more detail on the use of energy – and waste of energy in countries such as India – and the relative unimportance of the capital

markets in these countries when compared to the bourses in the US and Europe. However this book is more of an attempt to examine the importance of growth in the BRICs region for the global trade in technology enabled services, so there is little value in repeating the economic predictions verbatim. All the Goldman Sachs analysis is freely available from their website: www.gs.com. What is of more concern in this context are the issues and trends taking place within the international sourcing marketplace.

Offshoring 2.0

In 2006, IDC reported that the global spend on technology – including IT services, BPO, packaged software, and hardware – was around \$1.5tr. That figure grew by 7.7 per cent since the previous year and IT services plus BPO account for about 70 per cent of the entire total. Clearly the market for IT services, and services enabled by technology, is huge and continues to grow.

But this is not really a book about immediate trends, the aim is to explore the BRICs hypothesis within the context of IT services. The Internet is potentially a better source of information on the availability of staff in any particular city or location. However, do I want to explore some ideas I have on changes in the underlying business model of IT services. There are changes in hardware design, software design and the way remote services are marketed and priced that could change the direction this industry is headed. One important mantra that I think needs to be considered by anyone considering offshoring is:

Country, Company, Change.

These three ‘C’s are important to remember, as the debate of offshoring is often reduced to discussions on which country is more suitable than another for a particular business. This is generally too simplistic. Every company seeking help with a process and considering offshoring as a solution must at the very least consider the country criteria (tax regime, stability, employee supply etc.) alongside the actual companies being considered.

Companies contract with companies, not countries, so it’s important to remember this in the approach to an offshoring decision. I have certainly experienced the same question over and over again – “I am flying to India next week, can you recommend a company that can perform service X?” This is a concern because it demonstrates a lack of due diligence on the part of the company trying to decide how and where to offshore. If organi-

sations can be so casual about the search for a partner then they have probably not analysed their processes on the inside either, so a situation where ill-defined plans meet less-than-suitable partners is very possible.

In the context of this book, my CCC concern is that companies such as Politec or Luxoft may not even be considered for some contracts – simply because they are not Indian. I’m all in favour of a more genuine level playing field where each company can compete with the other, regardless of where they are headquartered. I’m sure that Dalton or Dmitry would be able to promote their advantages in any head-to-head comparison with NIIT or HCL.

The third C – change – could also be termed innovation. This industry moves fast and expectations from consumers change even faster. Although IT services is essentially a business to business (B2B) environment, the consumer has embraced the Internet and turned it into a robust platform used for all manner of services – the B2B world needs to learn a little more from the changes taking place online at present so some of these innovations might change service delivery from remote locations. Some specific changes taking place right now that are certain to have an effect on this industry are virtualisation and interactivity with service consumers.

Anyway, what kind of technology does the modern enterprise need today? Let’s think back just a few years to the distant days of the 1990s. You would certainly need some PCs, servers and a local-area-network to offer storage and print capabilities, fax hardware, telephones and a PBX for the telephone extensions.

It sounds like quite a lot, and that’s before starting on the software requirements. All those pesky licenses for office automation software and email clients.

What about the modern environment? If you started a new company today then what infrastructure would you install? You could probably get away with nothing more than a fat pipe to the Internet, plus laptops using wifi and mobile phones.

Services such as Skype or Vonage can utilise the Internet bandwidth for telephone calls with the mobile as a trusty last resort. Storage and backups can use the facilities of your ISP and if you start using online office tools, such as the office and email suite provided by Google then your co-workers can share documents and email clients using a robust delivery platform known as the Internet. This isn’t a dream; it’s a reality for every small knowledge-based company that has started over the past couple of years. If you could start from scratch would you buy licenses for each user in the way larger companies often seem to?

There is an increasingly virtual environment within modern technology. I would like to outline some of these virtualisations, and thank Dr. Richard Sykes as this is essentially a great deal of his thought. The virtual environment has been developing across five key areas of technology:

- Virtual servers
- Virtual applications
- Virtual architecture
- Virtual communications
- Virtual services

Virtual Servers

The first impact of the new diversity of specialised software systems has been to enable the virtualisation of the server. Classically, a server has always been run on one operating system – whether proprietary such as Windows, Mac OS X, or an open system such as Linux – and the applications running on them have been accordingly restricted. In practical terms, virtualisation now means that different operating systems and the applications that run on them can now be managed on a single machine – or flexibly across a number of machines.

Virtualisation software manages the computing power available in a highly flexible fashion against operating rules designed to optimise the use of capacity. The computing engine can be transformed from a rigid to a flexible resource allowing it to change and respond rapidly while still offering high levels of productivity.

Virtual Applications

The second impact of the new diversity of specialised software systems has been to enable a similar virtualisation of the design and structuring of the applications systems. This emergent software capability, known as Business Process Management (BPM), is a framework of specialised software systems that enable business processes to be both monitored and managed – automatically or by manual intervention, as needed.

BPM can enable the easy integration of business transactions across multiple application systems, delivering their end-to-end alignment as and

when required. The important capability to deliver straight through order processing, as one concrete example of this approach in action, can now be implemented with relative ease.

By breaking the stranglehold of tightly coupled business applications BPM allows a flexible structure of loosely coupled processes, the applications equivalent of the first virtualisation.

Virtual Architecture

The third impact of the new diversity of specialised software systems has been to enable the virtualisation of the architecting of the diversity of components that are assembled to create the contemporary IT infrastructure – processing power, data storage, and network bandwidth. This emergent structure of industry standards is labelled Service-Oriented Architecture (SOA). It is in essence an application architecture, in which all functions are defined using a descriptive language, with interfaces that can be invoked, or activated, to create interconnecting applications delivering business processes. Each interaction between the functions is designed to be independent of each and every other interaction – and the interconnecting protocols for communicating devices are specified to be interface-independent and interfaces themselves are computing platform independent.

SOA focuses on the business solution and not the IT platform. Clearly it is a key enabler of the BPM promise – the former creating the means for the latter to be delivered. The working assumption of both is a move from tightly coupled to loosely coupled systems. More importantly, the combination of both creates the environment for the architecting of systems around the specific requirements of the business objectives to be delivered.

Virtual Communications

The virtualisation of data communication across a wide diversity of frequencies from cabled to wireless has changed the communications environment. Tools such as Wifi, wimax, Bluetooth and emerging Voice over IP standards are all shaping new innovations in communication.

The speed of innovation and development here is shaped by a complex mix of hardware development, software development and the development of agreed industry standards and protocols and, in the wireless world, regulatory regimes around the exploitation of the radiofrequency spectrum.

Exploitation of Internet data transmission protocols and new software structures has brought to market the ‘Voice over IP’ capabilities being exploited by recent business start-ups such as Skype and Vonage. These systems exploit the operational reality that the digitisation of voice as data packages to be switched and transmitted over the Internet (loose coupling) is so much more efficient in utilisation of the fixed assets of the telecoms network than classic open-line analogue telephony that it can competitively undercut established services by major margins. The telecommunication companies are responding with major programmes of reinvestment in new-generation digital networks based on the exploitation of virtualisation to allow very much higher productivity operations.

Virtual Services

The web has matured as a robust public utility. The consumer imperative for new and improved services has been the prime driver behind this process. The prime enablers have included the development of increasingly reliable server farms and data centres whose costs of operation have plummeted; increasingly reliable network capabilities, capacities, and asset productivity driving down bandwidth costs sharply.

At the same time, the consumer imperative has speeded the development of broadband access to the web. Competition between the cable and telecommunications industries has accelerated the process. Broadband access has now become essentially free in the UK, with TV providers such as Sky bundling access to any TV subscriber or retailers such as Carphone Warehouse offering it to phone customers in bundled packages.

Whether access is by wired or wireless means, the web has emerged as a natural delivery highway for a diversity of relatively straightforward digital consumer services – the transmission of email to music files to films and video and so on, to the remote accessing of online services such as Google. This has in turn promoted and fostered a range of new industry standards and protocols designed to further improve and extend the web’s operational flexibility in servicing a wider arena of more complex and sophisticated digital services – this fifth virtualisation.

These new open standards and protocols have created a framework that allows web services to share business logic, data and processes (the structured core of business applications) through interfaces across the web – applications interfacing applications, rather than users. The standards and protocols ensure that different applications from different sources can

communicate with each other without time-consuming custom coding, and because all communication is in the web language of XML, web services are not tied to any one particular operating system or programming language. These open standards allow data to be tagged, transferred through a messaging protocol that is operating-system independent, and provide standard languages to describe and list the services available on central catalogues. So web services allow corporate organisations to inter-communicate business logic, data and processes without any requirement for a specific knowledge of what systems lie behind protective firewalls.

These same standards are in the process of being actively developed to provide security structures for web services, including encryption and digital signatures. Computers can now talk to computers in a far easier and more open way, allowing services to be more easily constructed and merged with others. Typically the merger of online services in this way is termed a ‘mash-up’. Examples include services such as the classified advertising site Craigslist using Google Maps to help users find where that rental property they are reading about is located. Another very common service deployed in this way is credit card authorisation; why construct all the technology required to perform this process when open standards allow your own site to call on the services of another?

A leading example of the potential for web services in the corporate arena has been the success of Salesforce.com, who offer a family of integrated and fully customisable customer relationship management services that are available on demand – all delivered over the web. The core services include the range of capabilities required to support effective sales work, including sales force automation, customer service and support, analytics, offered within a framework that allows straightforward assembly and self-customisation. The architecture of the computing platform that Salesforce.com utilises (‘AppExchange’) has more recently been exploited to allow an a widening range of third-party software vendors to both customise and integrate the Salesforce.com applications and to build, publish and share their own enterprise applications as services on the Salesforce.com platform.

Summary

These five various forms of virtualisation lie at the root of the switch from being dependent on technology – and the limitations of specific technology – to the ability to start thinking more in terms of business services. The combination of BPM and SOA changes the game for enterprise soft-

ware and hardware design. Business requirements start shaping IT design in a way that should have happened many years ago, but it now forced because of the way the architecture is constructed.

The communications revolution liberates the individual worker to operate to their best advantage in both time and space. The shift from the paradigm of the tightly coupled to the loosely coupled not only enables this greater flexibility, agility and responsiveness, but also provides the means of working assets harder and to higher levels of effectiveness and efficiency.

There is a major revolution in business IT taking place around us right now and it is the shift to virtualisation, in its many forms. The consumerisation of IT since the late 1990s (acceptance of the web) has speeded the development of the Internet as a public utility; a platform for genuine service access and delivery.

The five virtualisations have been releasing the world of applied IT from the historic constraints that ensured technology-specified application scope, restricting the opportunity for business-shaped, business responsive application systems. The new freedom to deliver application-specified technology scope are – in parallel – enabling the development of new generations of flexible enterprise business systems deliverable as services, including over the net.

The Web 2.0 Generation

Myspace, Bebo, Facebook, Youtube, Flickr, Blogs, Second Life, Podcasts. Is your company actively engaged in the ‘blogosphere’ or do you still think that interactive social networks are for teenagers to burn the hours they used to spend watching Neighbours on TV? Is it even possible for corporate IT to engage with social networks without selling out and possibly even causing brand damage in the headlong rush to ‘keep it real’?

Key attributes shared by all of these sites and methods of sharing information include transparency and immediacy. That’s exactly what Mike Scott, UK head of innovation for Tata Consultancy Services, was looking for when he wanted to find a way of keeping customers informed about research at the Peterborough-based innovation lab he heads: “We could have started publishing yet another glossy corporate newsletter, but they usually go straight into the bin, they are expensive, and the information

flow is one-way.”¹ Scott produced a new blog to not only update customers on what TCS is doing, but to also stimulate online debate on innovation. He hired technology journalists to contribute and encouraged TCS executives to comment, both on the blog and through audio podcasts.

In their book ‘Wikinomics’ authors Don Tapscott and Anthony D. Williams (Tapscott & Williams 2006) argue that increasing interaction with clients through interactive web technologies encourages a transparency that can have positive long-term business benefits: “Recently, smart companies have been rethinking openness, and this is beginning to affect a number of important functions, including human resources, innovation, industry standards, and communications. Companies were closed in their attitudes towards networking, sharing, and encouraging self-organisation, in large part because conventional wisdom says that companies compete by holding their most coveted resources close to their chest.” Tapscott and Williams go on to argue: “Today companies that make their boundaries porous to external ideas and human capital outperform companies that rely solely on their internal resources and capabilities.”

This resonates with the experience of Scott at TCS: “For a very low initial investment we have created an extremely collaborative environment. Globally we have nineteen innovation labs and interaction between them has improved because of the blog, along with the improved communication with those reading the information – who might never have interacted with TCS if this was on glossy paper.”

It’s not just companies that are exploring this potential for reaching out to interested collaborators; politicians are dipping a toe in the water too. British MP and would-be leader of the Labour party Michael Meacher ran his ultimately unsuccessful MM4PM campaign almost entirely on various social networking sites. Meacher’s campaign manager Dan Judelson explains: “The Labour leadership election will be the first major party oriented contest involving social network sites. We can expect all three major political parties to draw lessons from them for the next general election campaign. The interesting thing about Facebook, Live Journal and Myspace is that they have the potential to put campaigns in places where a target audience already is – we are going to them, rather than designing an expensive looking platform with any number of interactive plug-ins to make it look more interesting and hoping voters will turn up. The test will be to see if political campaigns are accepted in social network sites and

¹ Mike Scott, Personal interview with the author, April 2007.

how many people attracted to online campaigns will be attracted to knocking on the doors of voters on polling day.”²

Meacher’s tenacity and willingness to explore new ground has to be admired, especially when his myspace page does not hide the fact that he is 67, rather than 17. On opening, his myspace launches into the song ‘I have a dream’ by Brixton hip hop artist Logic, and one of his other musical favourites is ‘Hospital Beds’ by the Cold War Kids.

But beyond the use of blogs to reach out to interested consumers or voters, how else can companies use a collaborative web environment to their advantage? Mahesh Ramachandran, a non-executive director of foreign exchange currency firm FXaWorld explains the rationale behind an initiative his company has launched on youtube: “We decided to run an online competition that utilises youtube as a delivery platform. Basically, we asked the online community to upload their own videos to youtube with the promise of a ten thousand dollar cash prize for the video that best captures the spirit of our company.”³ As a peer-to-peer company that directly connects a currency buyer to seller using the Internet, FXaWorld can already be viewed as an innovative organisation, but wasn’t Ramachandran afraid of people making spoof videos or in some way abusing the competition? “Not at all. We have seen some excellent videos being produced, which we can now use for our own marketing purposes. If anyone wanted to go to the effort of making a negative spoof then it would in fact be quite complimentary – all online publicity is good publicity!”

But the networking and collaborative possibilities of the Internet don’t have to be harnessed from the boardroom for the initiatives to be useful. A Californian college student and former Starbucks employee, Andrew Gonis, created a myspace group named ‘Starbucks HQ’ 18 months ago – now he has 4,000 members. The group was not created or endorsed by the company itself, Gonis wanted to create an unofficial environment where colleagues could connect with their international peers and share experience and ideas.

Gonis explains his motives: “I think there is no way you can go wrong when you connect employees who share the same passion for your company. When you put people like that together, their passions ignite and they feed off one another.” He goes on to say: “Myspace and similar sites ‘humanise’ your brand or company. Rather than having to look at a corporate ‘dot com’, the viewer is on equal ground with the company because

² Dan Judelson, email interview with the author, April 2007.

³ Mahesh Ramachandran, personal interview with the author, March 2007.

myspace is something they can identify with. I love the company. Even though I am not employed by Starbucks at the moment, I still feel connected for some reason.”⁴

Tony Virdi is a managing director in the consulting division of IT services company Atos Origin. He recently asked one of the new graduates entering the company to study the online virtual world ‘Second Life’ to see if there is any value in them getting more involved in this virtual society.

The initial study proved positive and now Tony is recruiting a larger team of researchers to live and breathe Second Life, and report back on longer-term opportunities in this new world for Atos Origin.

Tony explains his reasons for taking such a methodical approach to what many might still see as an unimportant ‘virtual’ community: “The first thing about this is that we are continually looking at our solution portfolio. We look at the ideas that are winners and losers and this idea is closely linked to product innovation. Second Life is just a different way of dealing and working with people and businesses. We have observed some other technology companies on there – though not too many yet – and some product-based companies such as Reebok are advertising there.”⁵

Tony doesn’t have a specific objective for the Second Life research project, Atos Origin just wants to understand what is going on: “We have looked at the environment in some detail already and realised that a lot of real money is transacted within Second Life. I don’t really know where all of this will lead, but there is something in it; so many people are involved and interacting in this environment. I think that those of us used to a certain way of doing business are just not attuned to this environment yet.”

Atos Origin has already created a virtual group of existing employees who are regularly to be found living out an alternate existence within Second Life and they are actively recruiting full-time researchers for their detailed examination of the real possibilities of the environment – beyond the usual media hype. They want to determine how to purchase some real estate in Second Life and what kind of services can work for the organisation in a virtual space. Tony said: “We need to do this detailed research ourselves to really tap into the way it works, not just gather some opinions from a newspaper. I know that my daughter is fifteen and she is on all the social networking sites. The way that kids interact with each other through this medium is amazing – this is the way people are going to do business in future.”

⁴ Andrew Gonis, email interview with the author, March 2007.

⁵ Tony Virdi, telephone interview with the author, April 2007.

It's clear that online collaboration is the next killer app. Web 2.0 has already arrived and whether you are a B2B organisation with a maximum of 100 possible customers, or a retailer with millions of customers, tapping into the creativity of your employees and customers through established web platforms is an essential key to future innovation. The Web 2.0 phenomenon of interactivity and collaboration that allows viewers to create and improve the web sites they interact with can be of immense use to organisations, provided they learn how to engage in an open and transparent manner. Corporate blogs that capture the ongoing thoughts of a senior executive can be a fascinating insight into an organisation, but the turgid style of some suggests a triple-layer editing process to ensure nothing damaging (or interesting) is published. If you can't embrace openness then attempting to interact with a social networking environment as a company will probably fail. There are many benefits to making it work:

- Encouraging interaction at all levels of an organisation, particularly useful in large multinational companies.
- Encouraging collaboration with business partners and end-consumers through easy and direct channels – anyone can access the web to read a blog or view a video on youtube or picture on flickr.
- Encourage more active participation and two-way information flows between company and customer.
- Reduce the cost of collaboration and information. The required tools already exist on the public Internet and are robust enough to be deployed as corporate solutions.
- As Tony Virdi suggested, sometimes there is no immediate benefit, but just a feeling that a particular technology is going to go *some-where*. If you are not actively exploring what is going on then you will only ever follow the curve – if you survive the change.

So there it is. I think the IT services industry is being changed through a combination of Countries, Companies, and Change. The change is immensely important as it transcends the region of delivery and company offering a service. However, the BRICs concept remains important as shorthand for us to understand who are the new regional players in global services. In the nineteenth century, Britain dominated global trade, culture and politics. In the twentieth century this was achieved by the United States. We are just entering the twenty-first century now, but it already looks like this could be the BRICs century.



<http://www.springer.com/978-3-540-46453-2>

Building a Future with BRICs
The Next Decade for Offshoring
Kobayashi-Hillary, M. (Ed.)
2008, XVIII, 220 p., Hardcover
ISBN: 978-3-540-46453-2