White Paper

Embracing Open Innovation
A new approach to creating sustainable value
This paper explores the theory and the practice of ‘open innovation’ – a transformational philosophy that re-casts many of the traditional roles of organisations in any given innovation value chain. The first part of the paper examines why old-economy approaches to innovation are becoming obsolete in today’s fast-paced global marketplace. The second part describes how open innovation is put into practice at BT enabling it to deliver tangible benefits for the organisation and its customers.

Part 1: Towards Open Innovation

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Part 1: Towards Open Innovation

Historical perspectives on innovation

‘Innovation’ has long been used to describe how organisations differentiate themselves and stay ahead of their competitors.

Traditionally, technological innovation has been within the domain of in-house research and development (R&D) departments, where intellectual equity is created solely for in-house consumption. In this insular corporate model, the fruits of ‘innovation’ are jealously-guarded resources for corporate differentiation, used primarily to keep an organisation’s product pipeline filled, get to market faster or drive down operational costs.

Intellectual Property Rights (IPRs) generated through this type of ‘closed’ innovation remain an internal resource, often with limited possibilities for further monetising these assets other than through technology licensing.

“This insular viewpoint dictates that the quantity of innovation an organisation can deliver correlates directly with the amount of resource invested,” observes BT’s Chief Technology Officer Matt Bross. “The number of new ideas that can be developed and brought to market – in other words the breadth of your innovation pipeline – is ultimately constrained by the size and wealth of a company’s R&D department.”
The limitations of a traditional approach to innovation

Innovation is the lifeblood of organisations that want to survive and thrive in a marketplace that’s global in its extension and ferociously competitive. But why are old models of innovation unsustainable in today’s digital networked economy?

As Forrester points out in its report ‘Transforming R&D Culture’ [Source: Navi Radjou (2006) Forrester Research Inc], 20th century industrial models of R&D-led product innovation are becoming increasingly marginalised by market forces. High levels of investment, Forrester notes, are no guarantee of commercial success when fickle customers can switch to an alternative product without warning. Similarly, in tightly regulated industries such as pharmaceuticals, there is a high probability that any given candidate product will fail make it from lab to supermarket shelf, for scientific, safety or market reasons. As a result, risk must be carefully managed lest enormous development investment become effectively worthless overnight.

“Growth-seeking chief executives can learn from pioneers like BT, Eli Lilly, Intel, and Whirlpool about new governance structures, processes, skills, and tools that they must invest in to seed and nurture a dynamic research and development culture.”

Forrester Best Practices
Transforming R&D culture
Navi Radjou (2006)

The impact of technology-focused innovation is becoming commoditised in today’s fast-moving and often unpredictable global economy. Market advantage, expressed through the launch of a new product, loses much of its traction when its technological capabilities can be rapidly cloned or reverse engineered. As Matt Bross explains: “Rather than years or months, the window of opportunity for a new product innovation to carve out an appreciable market niche may be as short as weeks or even days. We need to innovate at the speed of life.” There should be no gap, in other words, between what customers want and what organisations can deliver.

Old models, therefore, aren’t agile enough to keep product pipelines stocked and differentiate companies from their peers through closed, insular models of R&D-driven innovation alone. As a result, forward-looking organisations like BT have in recent years examined the process of innovation itself as they attempt to transform themselves and drive sustainable sources of value creation.
A new approach: innovation opens its doors

The velocity, volume and diversity of innovation are higher than they’ve ever been. High-tech start-up businesses abound – not just in Silicon Valley but as far afield as Israel, Shanghai and Cambridge. Faced by rising costs and global competition, universities are opening their research departments to the commercial world to help them secure a greater slice of annual funding.

“There’s no shortage of new technological ideas being developed by commercial and academic entities globally,” argues BT’s Matt Bross, and the possibilities for tapping into this global knowledge base are expanding all the time. Broadband networks and low-cost air travel have made the opportunity to undertake research and development in collaboration with scientific, commercial and academic peers a cost effective, day-to-day reality.

These more dispersed, dynamic innovation networks are also reflected in the rise of on-line marketplaces like innocentive.com, where cash rewards are offered for solutions to technology problems posted by corporates and start-ups as well as universities and other R&D labs.

It’s a mindset that contrasts starkly with the old, monolithic model that characterised innovation twenty years ago, where research was clustered tightly around a relatively small number of centres, typically research parks and academic institutions.

“The world is different today,” observes David Brown, Manager Foresight at BT Group Chief Technology Office. “Globalisation has largely been driven by the increased ease and ubiquity of communications. For example, in telecommunications the development of the Internet, and the IP networks that underpin it, have completely transformed our industry. Previously we had a small number of very large, vertically integrated suppliers that provided us with everything. This is no longer true. Today, if you have a specific technology need, the chances are that there’s a start-up somewhere in the world trying to address your problem.”

This ‘global innovation bazaar’ has therefore created new opportunities for organisations to track down and exploit new sources of knowledge in pursuit of their own corporate goals.
An open approach to greater returns

Corporate innovation, as a consequence, is opening its doors to the world. An increasing number of organisations are adopting a more pragmatic approach to delivering long-term stakeholder value: one that replaces a ‘closed’ innovation philosophy with one that’s popularly referred to as ‘open innovation’.

An intellectual framework for open innovation was established by US academic Henry Chesbrough, who suggested that monolithic models of corporate R&D restrict the flow of intellectual capital into and out of an organisation, limiting opportunities to monetise this ‘knowledge flow’.

While precise definitions vary, ‘open innovation’ effectively means organisations can draw on external resources and best practices to complement the value of own ‘internal’ innovation assets – and achieve greater real returns on their overall investment in innovation. Open innovation thus acknowledges the emergence of a global innovation marketplace – one where innovation itself is valued as a commodity that can be bought and sold, loaned, licensed, hedged and re-invested.

Crucially, new products aren’t the only tangible manifestation of open innovation. Service and process transformation are equally important facets of open innovation – whether it’s to create an enhanced customer experience, to support internal business efficiencies or to support new products and services in their path to market.

“It’s extremely important to understand that when you are innovating, you’re driving a new type of business – a networked IT services business.”

Andy Green
CEO
BT Global Services

Measuring the returns: how effectively-managed innovation delivers value to organisations

**EBITDA**
New products and services that customers want to buy generate bigger revenues and greater profits.

**Customer experience**
Explore new, more effective ways to engage with consumers and they’ll stay loyal to you.

**Speed to market**
Steal a march on the competition by turning new ideas into measurable revenue streams faster.

**Internal cost reduction**
Re-engineer business processes to drive down operational costs from IT systems to HR.

**Better value**
Create products or deliver services more economically and pass the savings on to your customers.

**Brand investment**
Enhance perceptions of your organisation among customers, employees, suppliers, investors and other commercial partners.

While open innovation has only been described relatively recently, many of its characteristic features have been around for a long time. Companies in a wide range of industries from pharmaceuticals to aerospace – and BT itself – have been ‘scouting’ for bright ideas for many years through linkages with universities, partners, external R&D laboratories and technology start-ups. Similarly, industry has long been acquainted with the notion of generating fresh sources of value from its IPR portfolio – either through technology licensing or via the ‘spin out’ of new technology ventures funded either by the parent company or other parties.
Changing perspectives
Open innovation by no means negates the importance of internal R&D departments. Indeed, it multiplies the value of internal research and development budgets by exploiting external partnerships at every stage of the process, from scientific research to technological realisation and product development.

Similarly, to succeed in this new environment, companies need both deep skills to lead and interpret the opportunities in their innovation networks, but broad and flexible skills to engage with customer needs, assimilate new capabilities and execute. This is the nature of ‘the new R&D’.

In this open model, innovation becomes the common currency of an organisation, its customers and its suppliers. This resonates with the open source movement, where end-users play an intrinsic role in the development of new software products. This increased input of the customer contrasts dramatically with traditional R&D models, where innovation flows in one direction – from lab to store shelf.

“I think we can bring the whole BT story together in one single slide, and the slide is very simple. It talks about a strategy totally based on convergence and innovation.”

Ben Verwaayen
CEO
BT

Another of the most distinctive features of open innovation is a strong strategic focus, acknowledged by its clear visibility in the boardroom. Previously ‘owned’ by R&D and marketing functions, innovation is now championed at chairman-level. Indeed, its heightened profile is already reflected in many large organisations by the appointment of ‘Open Innovation Directors’. At BT, the strategic importance of innovation is evident at the highest levels.

François Barrault, President of BT International stresses that ‘innovation’ spans business models; how BT can become closer to its customers, and how it adapts its business model to customers’ needs. “Innovation is not just inside the R&D lab, but in all the dealings we have with our customers.”
A new wave of opportunities

‘Open innovation’ may be one of today’s corporate buzzwords, but some of its expert practitioners like BT have quietly been leaders in the open innovation space for several years.

BT has a strong track record in mobility, IT and media services alongside the fixed line voice and data services that it’s best known for. Now, however, the steady convergence of voice, data and media – plus increased deregulation and the emergence of a standardised Internet architecture – is driving fresh opportunities for global product and service innovation. As a result, ‘new wave’ revenues from areas like broadband, mobility and IT services now represent just over one third of total BT Group revenue, and have grown by 85% since 2003/4 financial year (£6282m versus £3387m).

To capitalise on these new opportunities, while protecting its existing revenue streams, BT needed a fresh approach to the way that it innovates. Today, open innovation is transforming the way BT brings products and services to market. Recognition that innovation in the product pipeline alone is no longer a differentiator in a fast-moving, ultra-competitive marketplace has led to the creation of a new organisational structure that harnesses innovation globally for the benefit of BT’s customers, employees and shareholders.
All inclusive: BT’s embedded approach to organisational innovation

Open innovation is embedded across all of BT’s internal and external business processes, from architecting new ideas to organisational improvement.

As Matt Bross explains, the key differentiator in BT’s approach to ‘innovating through innovation’ is a deeply-ingrained organisational capability to harness and exploit internal and external resources to serve the needs of its customers, suppliers, employees and shareholders.

The results of BT’s new approach have already been impressive. For example, open innovation has allowed BT to source innovations externally, from suppliers, partners and academia, which have contributed £500 million in potential new product and service revenues since 2002 [Source: Forrester 2006].

BT’s ‘Twenty First Century Network’ (21CN) project – the global all-IP MPLS platform that will enable a new generation of converged voice, video and data services – is effectively the engine room for what Bross calls the company’s global innovation platform.

As well as transforming service velocity, 21CN will also drive down operational costs by as much as £1 billion each year by 2009. BT is a global company, and the impact of this global innovation platform will reach far beyond the UK. By drawing on 21CN’s intelligence and service velocity advantages, BT will be able to identify and serve customer needs across 160 countries. What’s more, it will be able to do this at a pace that will be unprecedented in the telecoms industry.

End-to-end innovation

The process underlying BT’s open innovation strategy is an end-to-end framework dubbed the ‘Innovation Continuum’. In essence this a seamless integration of innovation activities at every step along the value chain, from spotting a possible market opportunity and conceptualising a suitable product or service to the development of a supporting distribution and marketing infrastructure.

By innovating at every stage of the value chain – from research and invention right through to commercialisation and distribution channels – it becomes possible to lock greater value into the entire process. This methodology also makes it far harder for competitors to replicate the fruits of an organisation’s intellectual property assets. BT’s Innovation Continuum is shaped by continuous market, customer and technology insights provided by numerous innovation partners at each stage as well as the involvement of every BT employee in the innovation process.
Risk reduction
The breadth and extension of BT’s open innovation strategy also provides a powerful means of reducing the organisation’s exposure to risk through its research and venturing activities. “It’s seldom meaningful to try and calculate returns on one project in isolation, but you can certainly get a feel for overall return on a broad spectrum of innovation-driven projects,” states BT’s David Brown. “In our case, best practice has been to create a balanced portfolio of R&D projects with a spread of low, medium and higher risk activities conducted through our global network of academic and commercial innovation partners. The timeframe and methodology are quite different in each case... and so are the potential pay-offs.”

Partnership power
In common with other organisations that are transforming their activities through open models of innovation, BT’s cultivates close links with other innovation partners who can add value to each step of the process. BT’s partners include:

- **BT customers**
- **Academic research partnerships** with institutions including MIT, University of Cambridge, University College London, Stanford University and UC Berkeley.
- **External venturing partners**: as well as technology licensing to other companies, BT has so far launched eight independent start-up companies, most of them in association with its corporate venturing partner, New Venture Partners. These start-ups generate value by launching innovative solutions into a global market place in the form of high-technology businesses.
- **Strategic business partnerships** with other companies. Examples of these partnerships include HP, Microsoft and Intel.

The role of each of these partnerships is examined in the following section of this paper that explores some of the ‘external’ and ‘internal’ venturing processes in place at BT.

Academic exercise
A key facet of BT’s open innovation strategy is the close relationship that it enjoys with the university-based research community, where concepts under initial study and development typically precede ‘market ready’ products and services by some three to five years. BT people from across the company — researchers, strategists, operational executives and marketing teams - work directly with their peers in academia. This direct interface engages BT with over £1 billion of global research in information and communications technology (ICT) plus associated fields.
The BT University Partnership Programme includes three strategic relationships, with the University of Cambridge, the Massachusetts Institute of Technology (MIT) and University College London. These are underpinned by a larger number of ‘Partner’ engagements between BT’s own researchers and those in other universities. In total, there are currently 36 core research relationships between BT and academia, 23 of which are UK based and the remainder overseas. In total, BT conducts 10% of its research through the medium of these relationships.

As well as placing its own people in some of the world’s leading universities, BT has also taken the step of bringing universities onto its own research campus. To date, University College London, Essex University and the Cambridge-MIT Institute have established facilities at Adastral Park.

“The relationships we have with universities like MIT and UC Berkeley aren’t based on traditional ‘blue sky’ models of research,” says BT’s Head of Strategic US University Research Partnerships and MIT Visiting Scientist Steve Whittaker. “We work closely with our peers in academia on the most pressing issues and the most transformative opportunities. In doing this, we aim to harness the research process to produce actionable insight – a process that draws on academia’s business experts as much as it does its engineers.”

“We bring together technologists, economists and business strategists from across industry and academia to take a 360 degree view of the issues and opportunities,” explains Whittaker. “We operate through working groups involving competitors, suppliers, customers... and here we discuss ideas that many players may find exciting or uncomfortable. We’re looking at the communications landscape three to ten years out and wrestling with some of the really tough challenges the industry, broadly defined, is going to face: and that’s not something you can do on your own.”

**Multiplying routes to market: BT and external venturing**

Many companies have failed through over-dependence on one market segment, one industry paradigm or one view of the future.

To protect themselves against future risks, far-sighted companies may develop a portfolio of resources and capabilities that doesn’t sit naturally within their current business plan. This provides opportunities to exploit some of these skills and technologies in other market spaces... or even balance them as alternative strategies in a risk managed portfolio. Similarly, products and processes developed for internal use can find a wider audience without damaging their internal value.
Sometimes, then, the challenge facing companies isn’t ‘insufficient innovation’ – but rather an ability to extract maximum long-term value from efficient management of their innovation portfolio.

One of the key deliverables of any innovation strategy is taking advantage of new opportunities and adapting to changing circumstances – and here significant value can be realised either through technology licensing or spinning out new ventures. BT has earned many tens of millions of pounds by licensing its inventions to external innovation partners. ‘Spinning out’ – the process of reaching markets through external business ventures – can generate fresh sources of value by combining BT’s intellectual property assets with money from external investors. The value of this process can be strategic as well as commercial. Aside from the financial benefit to BT when it sells an equity stake in the company that it has helped to set up, the entity that has been spun out often becomes a valuable supplier of new product to its parent company.

**Open innovation is the organisational capability to harness and exploit innovation globally for the benefit of customers, employees and shareholders.**

While some corporates have established their own incubators to bridge this gulf, BT has taken a more radical approach to generating new sources of value from the corporate spin-out process. BT works closely with New Venture Partners LLP (NVP), a venture capital firm with a difference. NVP provides a recognised world leading incubation function: managing, financing and resourcing the process on behalf of the corporate; and maximising both the likelihood of success and the ultimate value through its extensive experience. It’s also unique amongst VC firms in that it focuses on partnering with large corporates to spin out new companies from their engineering and research organisations.
NVP has already spun out over 40 businesses from their parent companies with great success. For BT spinouts, BT and NVP jointly fund incubation costs, and both hold equity in the new companies that have been set up. Eight companies have already been spun out of BT-funded ventures, leveraging even more value from the company’s IPR portfolio.

These start-ups give BT access to great new products and services that it can use itself or sell to customers: like Azure Solutions – the world’s largest revenue assurance company – and iO Global, a leading provider of managed revenue-share content services for mobile network operators.

**Innovation within**
External partnerships are critical to making open innovation work, but that doesn’t mean that innovation is something that BT has simply outsourced. A massive amount of BT’s raw IPR and innovation is generated directly by its world-class research and venturing unit that numbers over 400 people at Adastral Park in the UK, complemented by a mobility applications team of 30 in Malaysia.

Breathing life into the open innovation concept has required the creation of a new organisation in BT, which has three units.

1) **Innovation scouts: facilitating the future**
BT’s innovation scouting teams in the US, Asia and Middle East identify more than 1,200 new technologies, business propositions and market trends each year. Last year the scouting team met with 600 technology companies, liaised with venture capitalists – who invest in new technologies – and talked to existing BT suppliers. They conduct full diligence on approximately 50 start-ups per annum. The team has presented the innovations to more than 70 groups of people responsible for development within BT. Recent areas addressed included home networking, test automation, intelligent agents for customer service, fixed-mobile convergence, e-channels tools and collaboration technologies.

2) **Innovation Central: translating the opportunity**
Innovation Central is a new organisational unit championed at chairman-level within BT Group. With a brief to accelerate the end-to-end innovation delivery process, the mission of ‘Innovation Central’ is to deliver a structured innovation process. This structure enables BT to generate new propositions that are likely to deliver incremental new wave revenues, drive operational cost reductions and improve the overall customer experience. In parallel with this, it encourages a ‘one BT’ collaborative approach to innovation across all the company’s business divisions.
“We listen to our customers and our colleagues, in the product lines and sales teams, and in operations. We hear what problems they might have and what their pinch points are, and find ways of addressing them—not just from a technology point of view but from the perspective of commercial innovation, technology innovation, process efficiency, and the organisation as well. The end result is very far reaching.”

John Nevins
Head of Innovation Central
BT Group

3) Advanced Technology Centre: Prototyping tomorrow
Validation of any concept is a vital step in the journey from blue-sky thinking to a commercialised product. Here, prototyping is often the fastest, most cost-effective way to sanity-check a product’s viability. Conversely, it can stop an impractical idea in its tracks before costs spiral on a doomed venture.

“A prototype is worth a thousand PowerPoint slides,” explains Matt Lawson, Head of Applied Technology at BT’s Advanced Technology Centre. The ATC was set up almost two years ago to fill the gap between global scouting for external innovation partners and internal product development.

At any one time up to twenty individual projects are progressed concurrently by the ATC core team which is based Adastral Park in Suffolk, home to many of BT’s research activities. The core team is augmented by a wide range of internal and external specialists according to the needs of each project, with a clear focus on assembling the right team for the job quickly and efficiently. An intensive, highly focused environment means that results can be delivered back to the business within days or weeks.

Prototypes themselves can take virtually any form – from a simple paper-based scenario or a Flash animation to a proof-of-concept demonstrator or a fully working model. These prototypes can then be evaluated internally by the business, put in front of focus groups to gauge customer reactions or even put in front of the market.

While the ATC has been up and running for less than two years, its activities are already bearing fruit in the shape of commercialised offerings. These include ‘ambient services’ on BT’s converged hub, a chronic disease management system managed via the patient’s mobile and a new-generation WiFi phone.

Innovation Central’s key objectives:

- Realising BT’s ‘innovation dividend’
- Driving innovation to deliver measurable revenue growth for BT
- Identifying cost reduction opportunities through innovation
- Creating alternate methods of cost reduction
- Networking innovation stakeholders across BT
Part 3: Open Guidelines
How organisations can create their own innovation chain reaction

As BT's Matt Bross observes, “the innovation genie is out of the bottle”. Companies like BT are demonstrating with measurable results that best practice today is characterised by a global mesh of partnerships to amplify an organisation’s own R&D abilities, accelerate the internal innovation process and create broader channels to market.

In order to maximise the value of these extended relationships, however, they must be complemented by organisational processes that ensure the smooth flow of ideas and information up, down and across an organisation.

This end-to-end ‘innovation continuum’ maximises and sustains value created at every step of the process, while making it harder for competitors to cherry-pick your best ideas and devalue them with copycat products.
Innovation of any kind isn’t a mechanical process. It’s all about people—and this begins in the boardroom, where innovation must ultimately be driven and championed by all senior stakeholders. Innovating successfully also depends on recognising the vital role of every individual within the innovation process—from invention, design and implementing though to sales, marketing and back-office functions. In BT’s case, this is reflected in its ‘New Ideas’ scheme that offers substantial financial rewards to anyone who makes a distinctive individual contribution to the company’s innovation process.

What, then, are the penalties for companies who choose not to seize the opportunities of a more open, purpose-driven approach to innovation? In a risk-filled commercial environment it is tempting for organisations to stick to what they already know, whether it’s the way they develop new products, deal with customers or manage their people. As Nick Oliver of Judge Business School at the University of Cambridge explains, keeping your head below the parapet can mean sacrificing a view of the bigger picture. “If you don’t take some intelligent risks you can’t go forward as an organisation. By limiting yourself to the known world you can’t get outside your comfort zone and create new products or business models that overturn the status quo.”

As BT and other forward-looking companies are demonstrating, innovation in the Twenty First century isn’t something that complements an organisation’s other business activities—it is the primary business activity. By embedding innovation as best practice in every aspect of an organisation’s operational and strategic activities, organisations can consistently out-perform their competitors.

What’s more, in an environment where unexpected threats are just around the corner, innovation may be the key to organisations ensuring their very survival.

BT’s open innovation principles

**Principle 1**
Know that people make things work—boxes don’t

**Principle 2**
Understand that innovation is everyone’s job

**Principle 3**
Make innovation transparent and connected from start to finish

**Principle 4**
Build innovation DNA as the competitive advantage

**Principle 5**
Give meaningful rewards for ‘bright sparks’

**Principle 6**
Build an innovation chain reaction

Further reading / references:

Inside BT’s technology hothouse

While traditional corporate incubators can take months or years to evaluate and realise a promising idea, BT established a new conduit in 2003 to help the business develop and test potential product or service propositions. Known as ‘hothousing’ or ‘bootcamps’, it’s an intensive environment where ideas are quickly hardened into robust business plans during an intensive six-week development period.

Crucially, the fruits of this process aren’t bleeding-edge tech that’s fresh out of the university research lab. Most of the ideas emerging from the intense six-week process are ‘incremental’ technologies – imaginative recombinations of existing technologies or processes that extract fresh value from existing ideas. A good example is the eDiabetes product, which was developed in a hothouse, and is now in use in most health authorities in the UK.

The hothousing process follows a clearly-defined methodology. When a proposition is generated – via BT’s lines of business, marketing insights, dialogue with customers or the company’s own R&D efforts – Innovation Central may assemble a dedicated team to explore market potential, business models and possible technological solutions.
Teams draw on expertise from a variety of different business units and functions, while external consultants often provide a refreshing alternative perspective.

For the first three weeks, the team focuses on generating and vetting as many different business propositions as possible, clustered under headline focus areas like ‘information security’ or ‘mobility’. Up to a hundred propositions are captured in a structured one-page format, before the most promising candidates are vetted by a steering committee that includes senior executives from the group that owns the idea and the head of Innovation Central.

By the end of the sixth week, proposals that make the grade move forward to the next stage of the process. Here, a more detailed document explores issues ranging from market size and customer need to risk factors and likely financial returns. Successful plans are handed on to champions within the appropriate business unit for execution.

Hothousing draws heavily on an ‘ideas toolkit’ of more than 20 brainstorming techniques. These range from conventional analysis of customer needs to ‘Trend Reversal’ – rolling back the evolution of technology and then imagining its progress along a different path.

Since business ideas are painstakingly catalogued, precious time isn’t wasted revisiting old ideas that have already been determined to be unprofitable. “There is a real tension implicit in innovation - it’s impossible to overstate the time companies waste by re-exploring opportunities that never lead to anything, but similarly timing is critical for many market opportunities, and it’s also easy to be ahead of the game,” says Mike Carr, Director of Research & Venturing, BT Group. “By using techniques such as hothousing, we can comprehensively assess our major growth opportunities and also efficiently draw on our corporate memory without reinventing the wheel.”
Measuring innovation

- BT has been ranked best for innovation in a recent European survey of Telcos by Forrester.

- BT’s chief technology office, including the world-class research and venturing unit, has in excess of 400 people in the UK, and is complemented by a further team of 30 in Malaysia and a team in Silicon Valley.

- BT has earned many tens of millions of pounds by licensing its inventions to external innovation partners.

- Open innovation has allowed BT to source innovations externally, from suppliers, partners and academia, which have contributed £500m in potential new product and services revenues since 2002 [Source: Forrester].

- BT invested £727m in research and development in financial year 2005-06. This represented an increase of 40%, and 3.7% of BT’s turnover, reflecting the increased investments by BT in its transition towards a global converged networked services company.

- BT’s total portfolio currently numbers 7,700 patents. BT filed 141 new patent applications in the financial year 2006.

Industry analyst views on BT’s approach to innovation

The Yankee Group: WiMAX service providers report, September 2005

- BT highlighted as an “innovative challenger” to the market
- “BT is familiar with the technology and views itself as a broadband company. BT needs to maintain a track record of innovation to remain competitive”

Forrester comments on the launch of BT Fusion, June 2005

- “BT shows again that it’s at the cutting edge of telecom innovation by launching the world’s first fully integrated fixed and mobile telephony service – BT Fusion. Congratulations!” Lars Godell, Principal Analyst

Forrester: “Telcos must restructure the way they operate” report, October 2004

- BT sets the standard for a comprehensive approach to innovation
- BT’s leadership position compared to peer organisations and overall approach to innovation recognised as best practice