Aligning IBM Rational Software
with IBM's Smarter Planet Agenda

The intent of this paper is to familiarize IBM® Rational® software marketing and sales professionals and Rational business partners with IBM's corporate smarter planet agenda and to help them better position the Rational portfolio in the context of this important agenda. As the world becomes more instrumented, interconnected and intelligent, the ability to unlock the business value of software investments becomes a critical enabler to making businesses smarter and increasingly more competitive.

The Smarter Planet Agenda

Leaders from around the world are focused more than ever on the economic, social and environmental implications of global integration, where free trade agreements, the Internet and globalization are making the world simultaneously smaller, flatter, and smarter. The smarter planet agenda concentrates on the world's infrastructure - the systems and processes that enable goods to be developed, manufactured, bought and sold, services that deliver everything from electricity, financial transactions and efficient healthcare systems to name a few, that directly affect billions of lives.

The world's infrastructure is becoming "smart." Consider the following:
- By 2010 there will be 1 billion transistors per human
- An estimated 2 billion people will be on the Web by 2011
- At the same time, we are heading toward one trillion connected objects – comprising "the Internet of things"
- Worldwide mobile telephone subscriptions reached 3.3 billion in 2007 – one for every two people on the planet
- By 2010 there may be 30 billion Radio Frequency Identification (RFID) tags produced globally, embedded in products, passports, buildings – even animals
- Hundreds of satellites are in orbit around the Earth, generating terabytes of data every day

And it's not just about pervasive connectivity. For the first time, massively powerful computers can be affordably applied to processing, modeling, forecasting, and analyzing just about any workload or task. Cloud computing is emerging as a means to connect and provision the proliferating array of end-user devices, sensors, and actuators with powerful, massively scaleable back-end systems. The PC model of the 1980s has been replaced by a new paradigm, based on openness, networks, powerful new technology, and the integration of that digital intelligence into the fabric of everyday work and life.

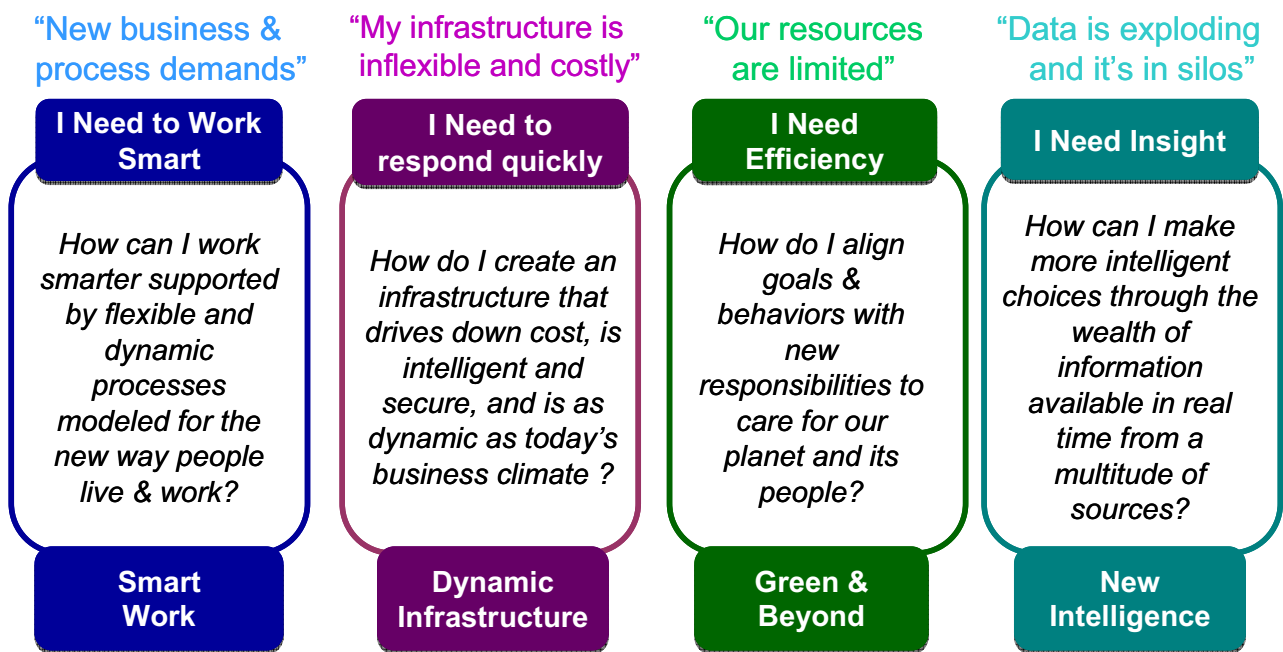As these systems become smarter, they will increasingly exhibit three distinct characteristics:

- **Instrumented**: Any activity or process can now be measured, better understood, modeled and improved upon – generating valuable new insight.
- **Interconnected:** By tapping into the collective intelligence of the entire value chain through the connection of whole systems, the world can become more highly self-regulated, optimized and efficient.
- **Intelligent:** Every insight derived from this world of smart devices can lead to incremental value by enabling action to be handled more automatically and with far greater certainty.

What all of this means is that for the first time in history, almost anything can become digitally aware and interconnected. With so much technology and networking abundantly available at such low cost, what wouldn't you put smart technology into? What service wouldn't you provide a customer, citizen, student or patient? What wouldn't you connect? Why wouldn't you work to get more out of your investments in software?

Smarter Planet themes

IBM has organized the smarter planet agenda around four key themes – Smart Work, Dynamic Infrastructure, Green and Beyond, and New Intelligence. Each of these themes focuses on macro-level, societal and industry trends that will likely remain a critical issue across stakeholder groups for the next 24 – 36 months. They identify CEO's top of mind issues and the challenges faced by CIOs to address those issues, IBM's value proposition and the solutions and services that IBM provides to help companies compete more effectively in this new, smarter, global environment. IBM's vision is to bring a new level of smart to how the world works – how every person, business, organization, government and man-made system interacts, where each interaction represents a chance to do things better, more efficiently and productively.

For us to make sense of this new world, we must answer these four questions:

"New business & process demands"	"My infrastructure is inflexible and costly"	"Our resources are limited"	"Data is exploding and it's in silos"
I Need to Work Smart	**I Need to respond quickly**	**I Need Efficiency**	**I Need Insight**
How can I work smarter supported by flexible and dynamic processes modeled for the new way people live & work?	*How do I create an infrastructure that drives down cost, is intelligent and secure, and is as dynamic as today's business climate ?*	*How do I align goals & behaviors with new responsibilities to care for our planet and its people?*	*How can I make more intelligent choices through the wealth of information available in real time from a multitude of sources?*
Smart Work	**Dynamic Infrastructure**	**Green & Beyond**	**New Intelligence**

Smart Work

In today's business environment, the only constant is change. Organizations supported by agile business models and dynamic business processes are uniquely positioned to win. Reaching the new connected customers takes personalization, collaboration, and co-creation. This includes providing a rich user experience to customers, suppliers, employees, and partners. In today's fluctuating economy, the ability to adapt to changing economic conditions is a critical factor to mitigate risk and drive profit. A secure and dynamic infrastructure will drive costs down, reduce risk, improve service, and enhance flexibility. Is your business model dynamic and optimized to Embrace Change, Empower People, Drive Profit?

Dynamic Infrastructure

The ability to adapt to changing business conditions requires a dynamic infrastructure. The digitally-connected world is driving a convergence of business and IT assets, creating integrated "smart" assets. This converged, dynamic infrastructure must be cost effective. By design, a dynamic infrastructure is service-oriented and focused on supporting and enabling employees, partners, and customers in a highly responsive way. Extending your business to an increasingly connected and collaborative world requires the confidence and trust that your infrastructure is secure and resilient.

Green and Beyond

The environment is now a pervasive and urgent issue for the public, with pressure building from government agencies and other key influencers for increased accountability in areas that impact the environment and society. The business of becoming more "green" needs to be good for the business as well as for the environment. Private enterprises, public organizations, communities, regions and entire industries are faced with how to develop strategies and solutions for becoming more environmentally responsible that also generate new revenue opportunities and lower costs and risk. Rising energy costs and environmental compliance and governance mandates are pushing CIOs and IT departments to a tipping point, requiring new strategies to drive energy efficiencies with people, business operations and products.

New Intelligence

There is no bigger problem facing individuals and organizations today than the reality that they can't keep pace with the complexity and explosion of information. New Intelligence is about gaining control of the information, cutting through the complexity and shifting the agenda to predictive outcomes. Collaboration opens the door to tap into the intelligence of their entire value chain, including customers, employees, partners and other stakeholders correlating those insights, and anticipating opportunities and threats. Customers will require insight and clarity into strategic decisions that support business transformation.

Aligning Rational with the IBM Smarter Planet Agenda

To remain competitive in a rapidly changing world, businesses need solutions to help them create, harness and adapt instrumented, interconnected and intelligent systems. The opportunities created by this more instrumented world, where just about anything can be sensed and monitored, and the drive to become more globally integrated and interconnected highlight the need for smart investments in applications, processes and systems to deliver improved business outcomes. Rational solutions are designed to address these challenges.

Business Themes	Smart Work	Dynamic Infrastructure	Green & Beyond	New Intelligence
CEO Agenda	Flexibility: With demanding new clients, CEOs must reshape ops to be nimble	Flexibility: With demanding new clients, CEOs must reshape ops to be nimble	Pressures: Energy Costs, Regulation & Activism	Better Insights: exploding data to be leveraged
CIO Agenda *(why it matters to you)*	Adaptable & scalable IT w/ apps & services rapidly developed & deployed	Adaptable & scalable IT - cost efficient, responsive, improved service, secure	Skyrocketing IT Power Consumption, Energy Costs,& IT to address other green issues	Integrating disparate data and systems to rapidly act on new customer insights
Rational Value Statement	Rational software helps you adapt and exploit new and changing business models.	IBM Rational supports secure and agile application infrastructure to meet customer demand at scale.	IBM Rational software helps drive energy efficiencies and decreases impact on the environment with people, business operations and smart systems	Not participating
Participation* level	(full)	(half)	(quarter)	(empty)
Rationale for participation level	• Primary focus on AIM (SOA, BPM) and Collaboration (Lotus) • Existing Rational alignment with AIM on SOA, BPM/EA, Collaboration • Revenue expectations from EBF, EP and ESD programs • Business Flexibility a top value theme for 2009.	• Primary focus on Tivoli (Service Mgmt) and STG (New Enterprise Data Center) • Existing Rational alignment with Tivoli around Service Management, Security, Cloud Computing, HP competitive • Limited revenue expectation from MBI and DCO programs.	• True cross-brand theme • Opportunity to highlight systems portfolio in the larger IBM content. • Focus on awareness rather then demand generation. • Limited revenue expectation.	• Primary focus on Information Management (IM) • Limited Rational resource alignment with IM • No revenue expectation from LI programs.

In order to illustrate the power of the IBM smarter planet agenda, let's understand how companies around the world are leveraging an investment in software to fundamentally change their industries.

Rational software in action – Smart Work: TeliaSonera is committed to providing reliable, innovative, and easy-to-use telecom services to fulfill customer demand for mobile, broadband, fixed voice and data communications. Growth and acquisitions resulted in a maze of over 1,000 interconnected IT systems creating challenges in management, maintenance and escalating costs. To understand the complexity and determine a way forward, TeliaSonera leveraged Telelogic System Architect to establish a blueprint for consolidating and standardizing IT. Turning insight in action, TeliaSonera saved 53 percent in IT costs over 5 years by retiring, consolidating and aligning IT systems with business priorities.

Rational software in action – Dynamic Infrastructure: The Chinese Government (WUXI) wanted to capitalize on innovative technologies and emerging business models to grow the Gross National Product. They created a cloud computing center for software development which provided access to Rational Application Developer, Rational Software Architect and Rational ClearCase. The center removed barriers and stimulated the software development community to increase national innovation. Now, 200,000 software developers share a cost efficient IT environment when they need it, for as long

as they need it, from any device, anywhere that has network connectivity. This project was seen as a "milestone in service oriented computing."

Rational software in action – Green and Beyond: DONG Energy is Denmark's largest energy company. Increasing marketplace demands drove DONG Energy to look for a way to better manage its electrical distribution network in order to respond to outages faster and more efficiently. DONG Energy teamed with IBM to implement an Intelligent Utility Network, installing remote monitoring and control devices that give the company an unprecedented amount of information about the current state of the grid. IBM Rational Software Architect helped DONG by providing a UML-based model-driven development approach for creating the well-architected applications and services in the Intelligent Utility Network. The results as stated from Peter Vinter, Power Grid Specialist at DONG Energy were significant, "Our quality of supply will improve considerably. We can reduce minutes of power lost by 25 to 50 percent and reduce our fault search time by one third."

How to Get Started

This may seem like a daunting task to undertake, but the good news is that the technology required to make IBM's smarter planet agenda a reality are available today or just over the horizon. The key to any successful transformation is having the right tools, the right processes and the right environment. IBM Rational delivers comprehensive solutions that help organizations drive energy efficiencies and decrease the impact on the environment, adapt and exploit new and changing business models, and transform organizational complexity into improved strategy and execution. IBM is well positioned to be the partner of choice for organizations that are ready to utilize technology to make the world a better place.

Here is how you can get started:
- Leverage the content available through the [Rational smarter planet XL page](#) to broaden your knowledge of [IBM's smarter planet agenda](#)
- Use smarter planet as a conversation starter with clients and prospects
- Integrate smarter planet themes and content into relevant Rational messages, value propositions, and assets
- Drive smarter planet themes and content into tactics driven through the ESD program