

Energy and Utilities at IBM

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Agenda

- Smarter Energy & Utilities
 - A new landscape driving leadership transformation
 - Smarter strategy for the new energy value chain

- Solution Architecture for Energy and Utilities Framework (SAFE)
 - Framework value and use
 - Solutions and domains
 - Harness IBM's leadership

- IBM Capabilities for Energy and Utilities
 - Value description
 - Key components

- Partner Ecosystem and validation process

IBM Software Group Business Partner Advisory Board

Let's Build a
Smarter Planet:
Energy and Utilities



The **need** for progress is clear.

36.8%

Projected growth in worldwide energy demand by 2030.

170 billion

Kilowatt-hours wasted each year by consumers due to insufficient power usage information.

1/4

Proportion of worldwide CO₂ emissions created by power generation, the largest man-made source.

The **opportunity** for progress is clear.

15%
reduction in
peak loads

In the Pacific Northwest National Laboratory Smart Grid project, consumers decreased their overall peak load on the grid by 15% when offered the opportunity to save an average of 10% on their electricity bills.

\$70 billion

The U.S. could save up to \$70 billion in infrastructure spending over the next 20 years through better management of existing assets.

**14% lower
emissions**

Smart grid technology has the potential to reduce the power sector's CO₂ emissions 14% by 2020.

The way the world works is changing—and leaders must lead through the unknown.

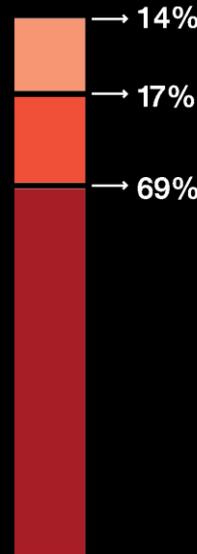
7 in 10

Utilities CEOs anticipate turbulent change and bold moves.

19%

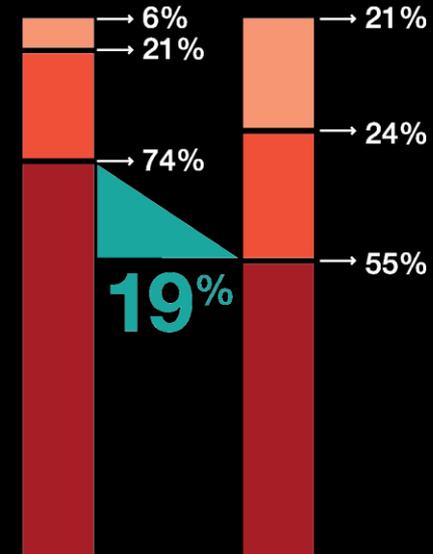
Drop in utilities CEOs' rate of success in managing change.

CHANGE NEEDED



2008

PAST CHANGE SUCCESS



2006

2008



For energy and utilities organizations, this means finding a way to lead in a new environment shaped by three key factors.

CLIMATE CHANGE CONCERNS

As the debate over climate change has become much more public, governments around the world are responding with new energy policies, programs and legislation. Consumers are increasingly concerned about the environmental impact of the products they buy, including energy.

CONSUMER EMPOWERMENT

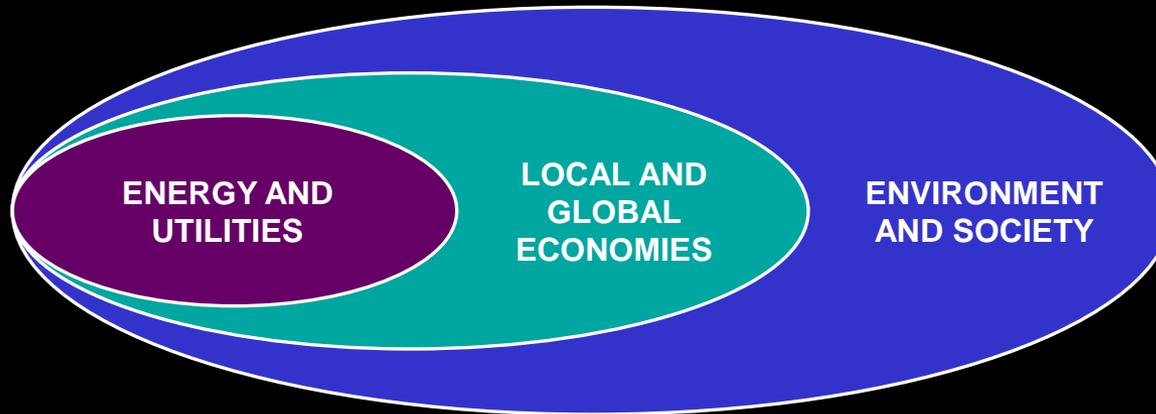
Energy and utilities organizations face an increasingly leveled playing field. Newly empowered consumers are leveraging provider choice options, actively managing their usage, moving toward self-generation of power and making their voices heard through multiple channels.

TECHNOLOGY INNOVATION

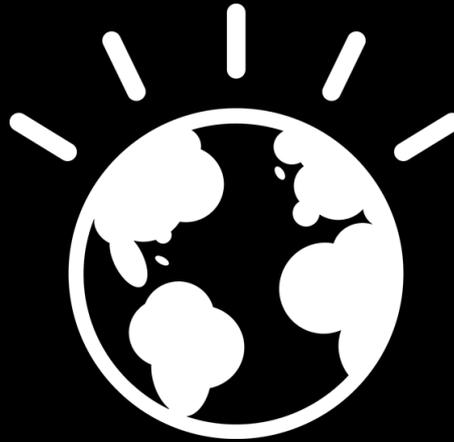
Lower-cost communications, more cost-effective computing and open standards are strengthening the business case for technology innovation in the energy and utilities industry. Technologies such as smart meters, network analytics and distributed generation are changing the way energy is created and delivered.

There is an imperative from government and consumers alike for energy and utilities organizations to transform themselves

**By leading innovation throughout the industry,
their positive impact will be felt far beyond.**



This mandate for change is a mandate for smart.



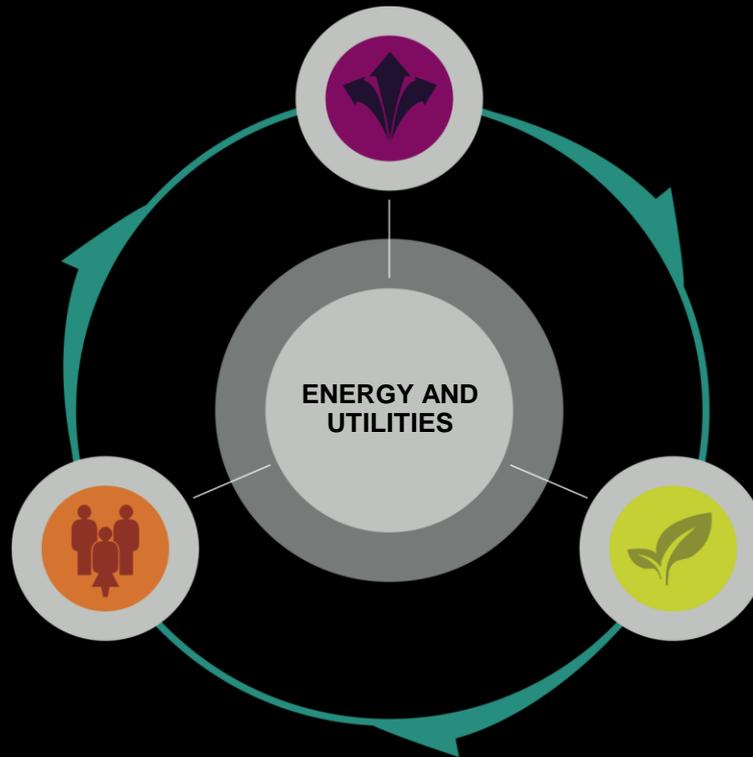
To deliver power more **responsibly** and more **efficiently**, energy and utilities organizations are working toward a smarter **energy value chain**.

TRANSFORMATION OF THE GRID

Transforming the grid from a rigid analog system to a dynamic and automated energy delivery system.

EMPOWERMENT OF CONSUMERS

Empowering consumers by providing them with near real-time, detailed information about their energy usage.

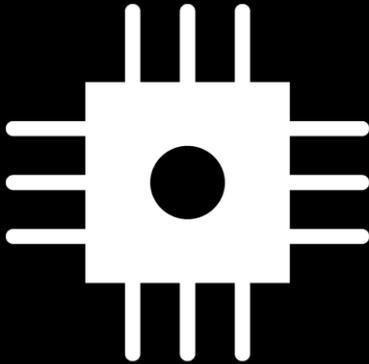


REDUCTION OF GREENHOUSE GAS EMISSIONS

Meeting stringent greenhouse gas emissions targets while maintaining sufficient, cost-effective power supply.

They are doing so by becoming
instrumented, interconnected and intelligent.

INSTRUMENTED

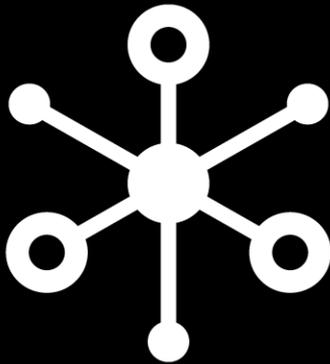


We now have the ability to measure, sense and see the exact condition of everything.

- Today, there are 1 billion transistors for each person on the planet.
- By 2010, 30 billion RFID tags will be embedded into our world and across entire ecosystems.
- In 2008, 6.7 million intelligent meters were used for advanced metering in the U.S., compared to 947,000 in 2006.

Remote monitoring devices tell when and where faults occur and where the inefficiencies are, enabling smarter sourcing and distribution of power.

INTERCONNECTED



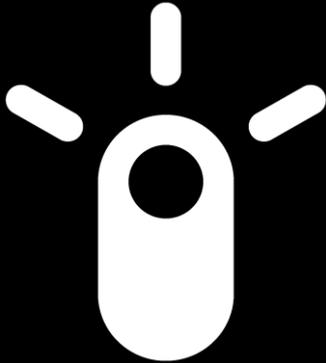
People, systems and objects can communicate and interact with each other in entirely new ways.

- The Internet of people is 1 billion strong. Almost one third of the world's population will be on the web by 2011.
- There are an estimated 4 billion mobile phone subscribers worldwide.
- Hybrid car sales in the US market are expected to cross the one million mark by 2012.

Virtual marketplaces between consumers and providers allow consumers to trade flexibility in usage for lower costs.

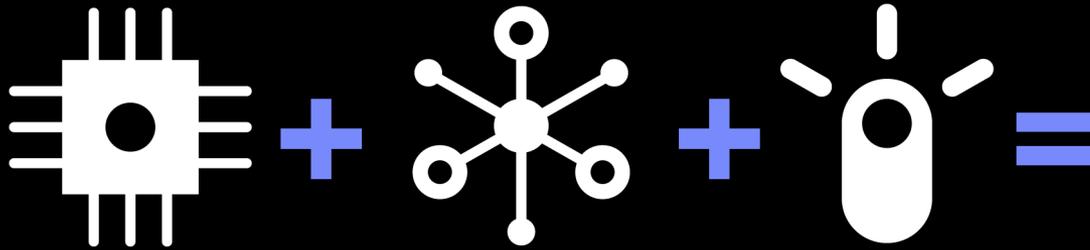
INTELLIGENT

We can respond to changes quickly and accurately, and get better results by predicting and optimizing for future events.



- Every day, 15 petabytes of new information are being generated. This is 8x more than the information in all U.S. libraries.
- An average company with 1,000 employees spends \$5.3 million a year to find information stored on its servers.
- If the U.S. grid were just 5% more efficient, the energy savings would equate to permanently eliminating the emissions from 53 million cars.

Power grids use sensors, smart meters, digital controls and analytic tools to automatically monitor and control two-way energy flow.



An opportunity for energy and utilities organizations to think and act in new ways.

Transform the grid from a rigid, analog system to a dynamic and automated energy delivery system by driving operational excellence.

Empower consumers and improve satisfaction by providing them with near real-time, detailed information about their energy usage.

Reduce greenhouse gas emissions to meet or exceed environmental regulatory requirements while maintaining a sufficient, cost-effective power supply.

Smart energy and utilities: Transforming the grid.

SMART IS

Knowing exactly where a power outage occurs and instantly dispatching a crew to fix the problem.

SMART IS

Preventing outages before they occur by sensing potential equipment failures.

SMART IS

Extending asset life by sensing and managing the stress placed on aging equipment.

SMART IS

Reducing peak load by communicating with energy consumers and having them turn off non-essential machinery or appliances.

Smart energy and utilities

Transforming the grid.



DONG Energy: Installed remote monitoring and control devices to gain an unprecedented level of information about the current state of the grid, lessening outage times by a potential 25-50%.



CenterPoint Energy: Plans to leverage a mix of leading-edge communication technologies, smart meters and first-of-a-kind process innovations to create an intelligent utility network.



Energie Baden-Württemberg: Offers residential customers smart appliances and meters that enable them to adjust electricity consumption based on price—reducing waste and easing peak loads.



Pacific Northwest National Laboratory: Used intelligent measurement devices, smart appliances and a virtual marketplace to help manage stress in the electric grid, achieving a 50% reduction in short-term peak electricity distribution loads and a 15% reduction in overall peak loads.

Smart energy and utilities: Empowering the consumer.

SMART IS

Analyzing customer energy usage and providing customized energy products and services to meet their needs.

SMART IS

Helping customers conserve energy by providing them with tools to proactively manage their energy usage.

SMART IS

Ensuring that customers are billed accurately and on time.

SMART IS

Helping customers establish a “smart home” that turns appliances on and off to reduce energy costs.

Smart energy and utilities: Empowering the consumer.



Energie Baden-Württemberg: Lessened energy demand at peak times by offering customers smart appliances and meters that enable them to adjust their consumption based on price.



A Canadian regulator: Launched a pilot time-of-use program that rewards consumers for using less power during times of shortage or peak demand, leading participants to shift 25% of their usage away from peak hours.



Ecotricity: Re-engineered its business processes and systems to enhance the speed and accuracy of billing while working toward the ultimate goal of a fully interactive, automated, multi-channel customer experience.



Pacific Northwest National Laboratory: Provided customers with smart appliances such as water heaters that can sense impending grid failures and automatically respond by cutting back on power consumption.

Smart energy and utilities: Reducing greenhouse gas emissions.

SMART IS

Smoothing power demand in order to take advantage of off-peak supply such as wind.

SMART IS

Maintaining a sufficient, cost-effective power supply while managing stringent greenhouse gas emissions targets.

Smart energy and utilities: Reducing greenhouse gas emissions.

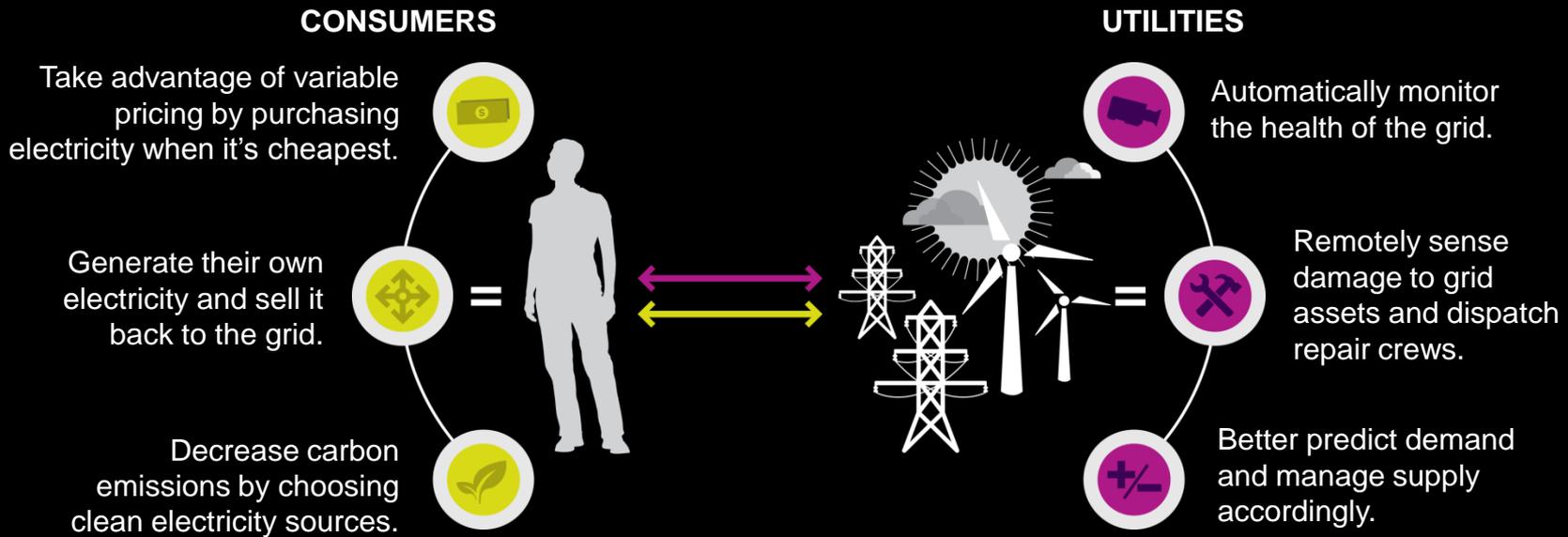


A German Power Company: Deployed a proof-of-concept Wind Generation Monitoring Solution that will connect numerous power plants to a central monitoring application, enabling better collection and use of raw data.



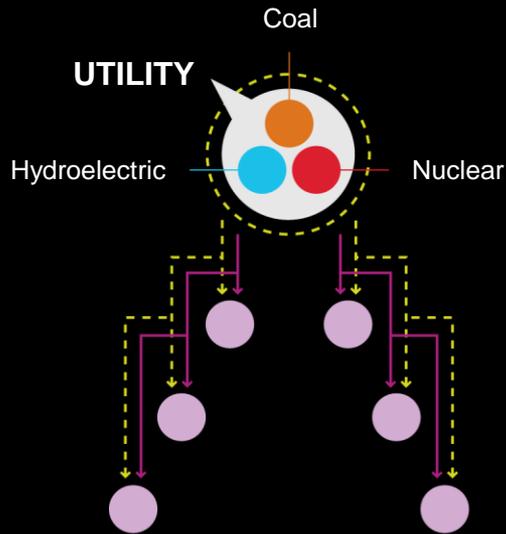
A Japanese Power Company: Implemented a software solution that allows the company to analyze and monitor the conditions of its plants in order to make continued improvements.

Having access to real-time information about the flow of energy in the grid enables utilities and consumers to make **smarter, more responsible choices.**

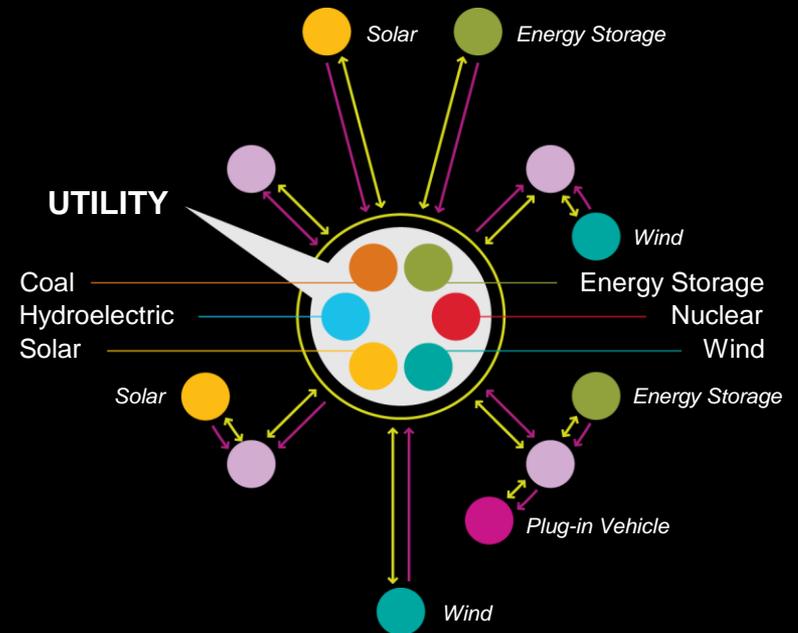


The result? A transformed grid that empowers consumers and provides the energy for a sustainable future.

TRADITIONAL GRID



SMART GRID



- Consumer
- Power Flow
- Periodic Information Flow
- Continuous Information Flow

Why must we take action now?

VOLATILE DEMAND AND INCREASING COST

Changing business operations will create mismatches of power and high prices due to their continuing pressure on our inadequate infrastructure.

ENVIRONMENTAL CONCERNS

Consumers are increasingly concerned about the environmental impact of the products they buy, including energy. As a result, they are demanding that utilities provide them with new sources of energy and more information that will enable them to make smarter decisions

CONSUMERS DEMAND A DIFFERENT MODEL

Consumers desire more information and reliability when it comes to their energy use and the system as a whole. Building a smarter infrastructure is a singular way to meet these demands while stimulating growth in the greater economy.

The imperative for energy and utilities organizations today is threefold.

FOCUS ON VALUE

Do more with less

- Cash/capital focus
- Flexibility

Focus on the core

- Business process
- Strategic initiatives

Re-align relationships

- Financial solidity of suppliers, partners and customers
- Revisit/renegotiate
- Collaborate

EXPLOIT OPPORTUNITIES

Build future capabilities

- Protect and acquire assets and talent
- Initiatives

Transform your industry

- Bold moves
- Position nationally and globally, where appropriate

ACT WITH SPEED

Manage change

- Clearly communicate simple goals
- Seek and leverage experience

Leadership

- Get the information to act
- Set the agenda

Risk and transparency

- Business performance management and analytics
- Risk management

IBM's solution strategy is aligned with the needs of energy and utility organizations.

ORGANIZATIONS ARE FOCUSED ON...



Transformation of the grid



Empowerment of the consumer



Reduction of greenhouse gas emissions

IBM IS DELIVERING...

- Intelligent utility network optimization
- Communications & IT networks
- Systems integration & intelligence operations
- Advanced metering infrastructure optimization
- Enterprise asset management

- Customer focused utility
- Customer intelligence and analytics
- Revenue assurance management
- Retailer strategy
- Contact center optimization
- Customer channel strategies
- Customer systems management
- Total data migration

- Plant asset performance management
- Knowledge management
- Energy value chain optimization
- Wind power suite
- Intelligent plant lifecycle management
- High performance computing
- Generation virtualization
- GHG emissions management



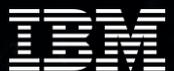
We've only just begun to uncover what is possible on a smarter planet.

- The world will continue to become smaller, flatter and smarter. We are moving into the age of the globally integrated and intelligent economy, society and planet.
- There's no better time to start building smarter energy and utilities organizations—focused on providing energy responsibly to empowered consumers. And there's no better time to invest in creating the kind of society we all desire.

Let's work together to drive real progress in our world.

IBM Software Group Business Partner Advisory Board

The Solution Architecture for Energy and Utilities Framework (SAFE)



Market forces are impacting the landscape of utilities, requiring the transformation of business models

Climate change and environmental concerns

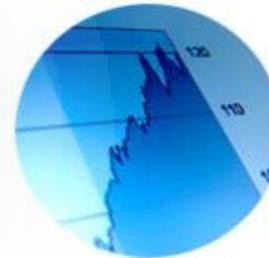


Growth in renewable generation and distributed resources

New entrants and disruptive technologies



Industry pressures



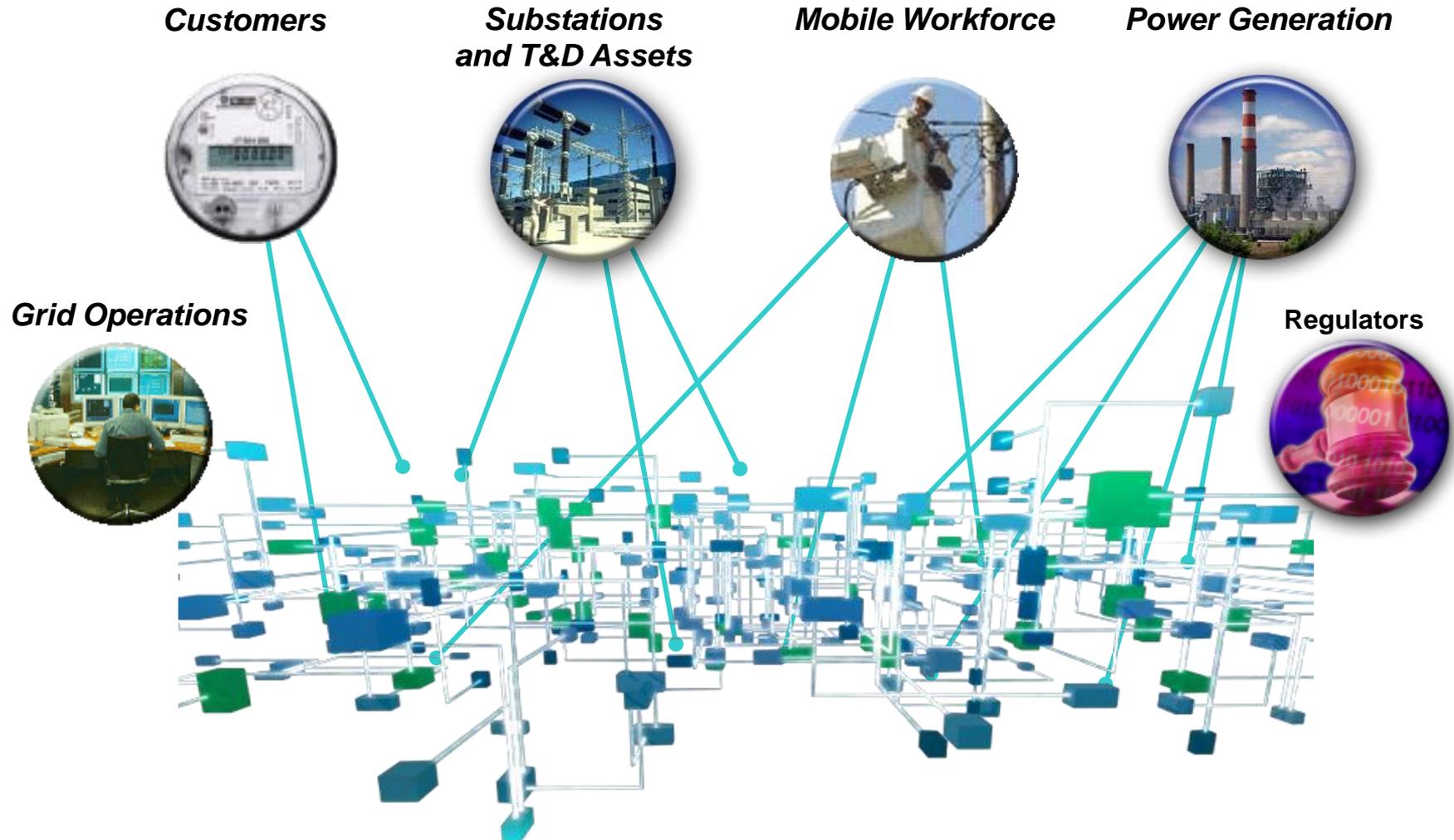
Aging asset performance with increased expectations on reliability

Increasing desire by consumers for a role in energy management and conservation



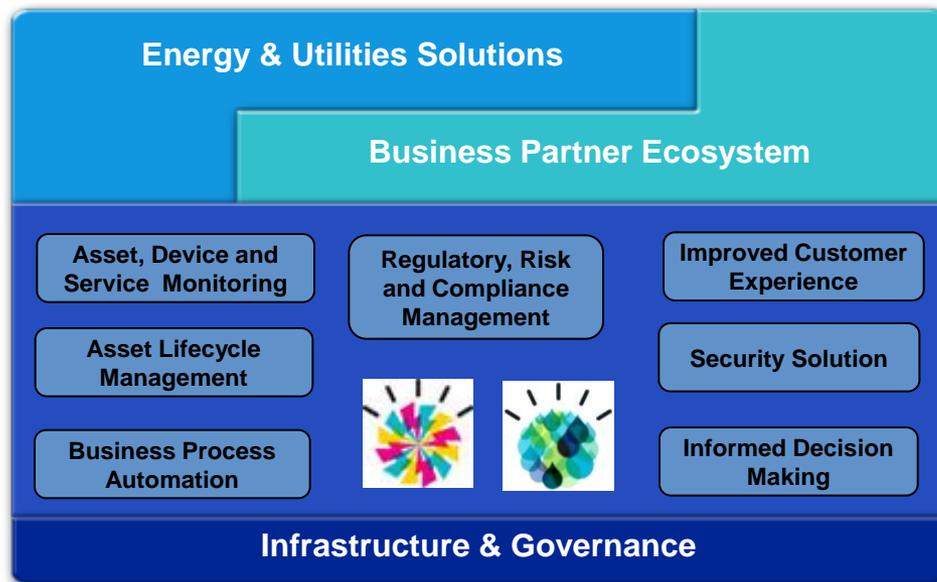
Increased pressure on operational efficiency and workforce productivity

Inflexible and complex operations and silo'd data inhibit utility transformation



IBM provides a comprehensive Energy and Utilities framework that delivers smarter solution deployment

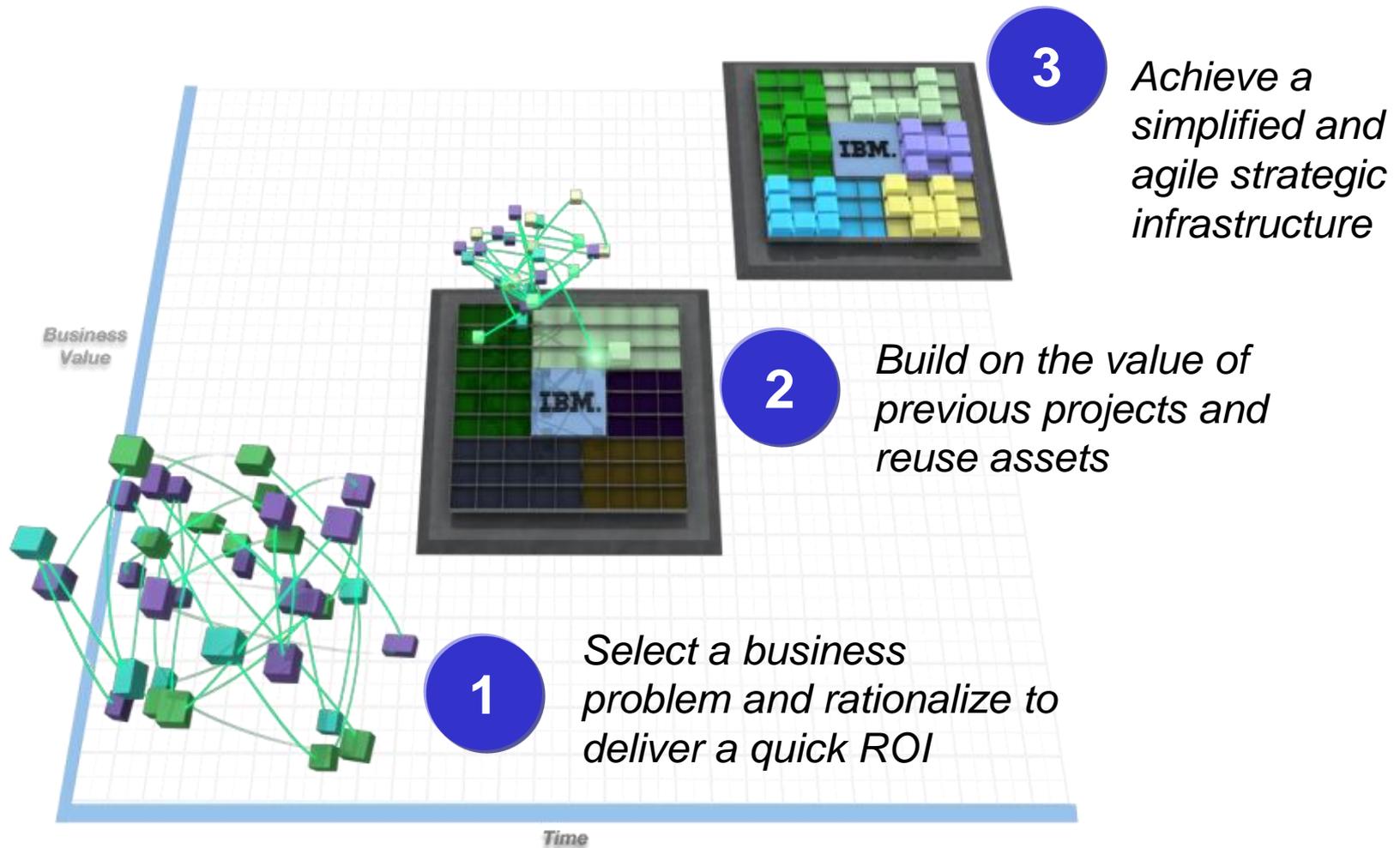
The framework gives you speed, flexibility and choice in deploying solutions while reducing cost and risk!



The framework provides...

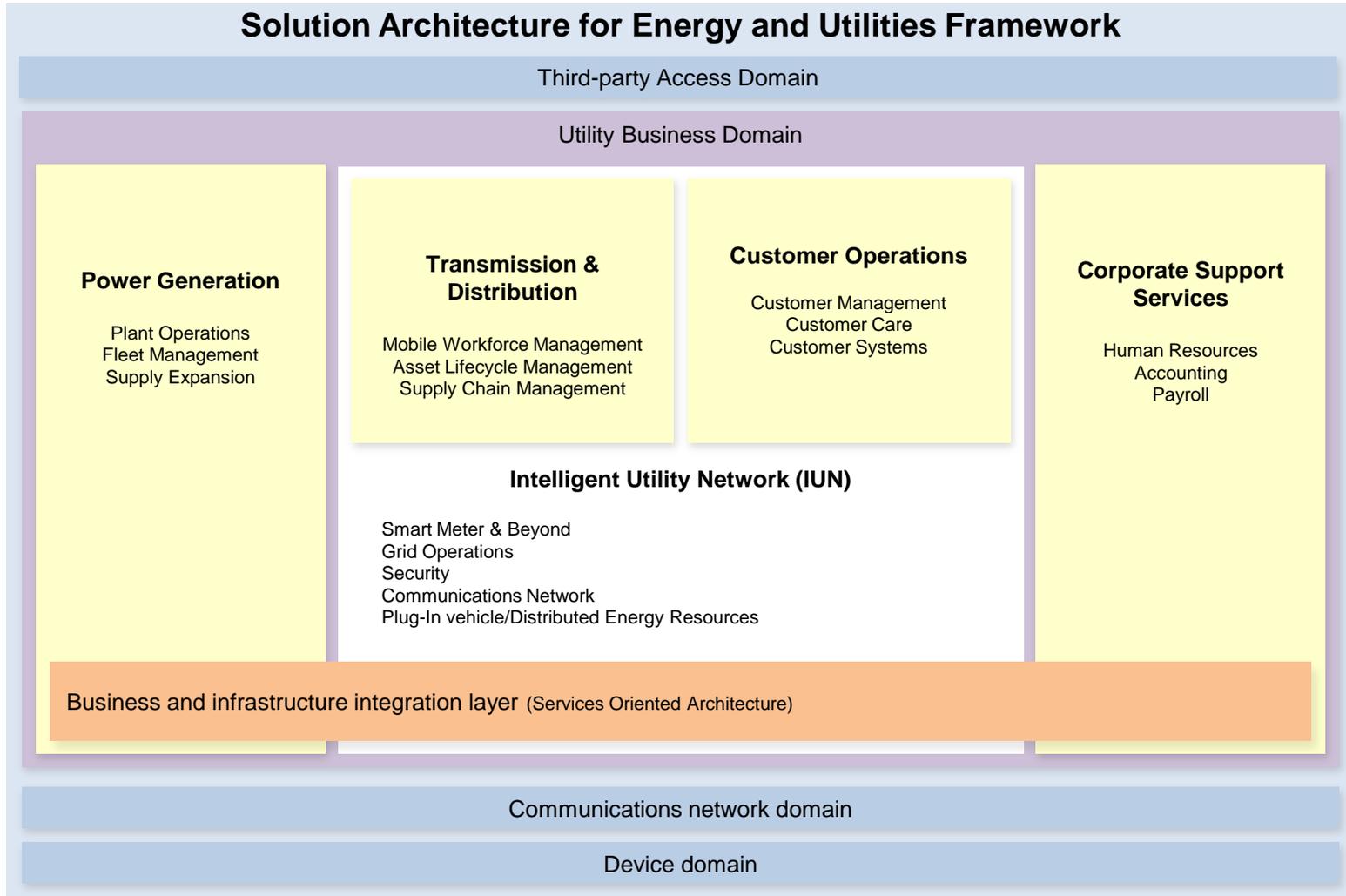
- An approach to align technology with utility business needs
- Utility industry best practices and solution accelerators to speed deployment
- Re-usable implementation patterns to lower risk
- Support for adoption of open and industry standards
- A choice of business applications from IBM business partners

Leveraging components of a framework, a utility company can progressively transform to a simplified but strategic infrastructure



Increasing reuse and business agility along the way!

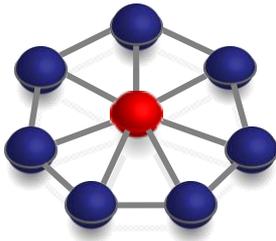
The SAFE Framework enables integration of information and processes across the utility company



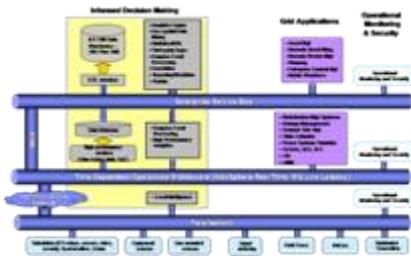
IBM's IUN solution contains key tools to help utilities plan and execute their smart grid transformations



Component Business Model. A structured set of functions performed by utilities regardless of organizational orientation



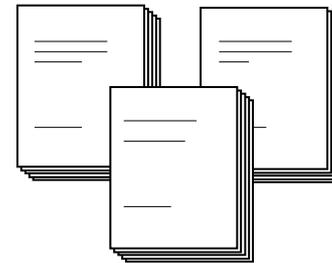
IUN Method. A set of activities and tasks that guide the planning and delivery of smart grid projects and the cataloguing of assets



IUN Conceptual Architecture. A reference model of smart grid technical components and their inter-relationships

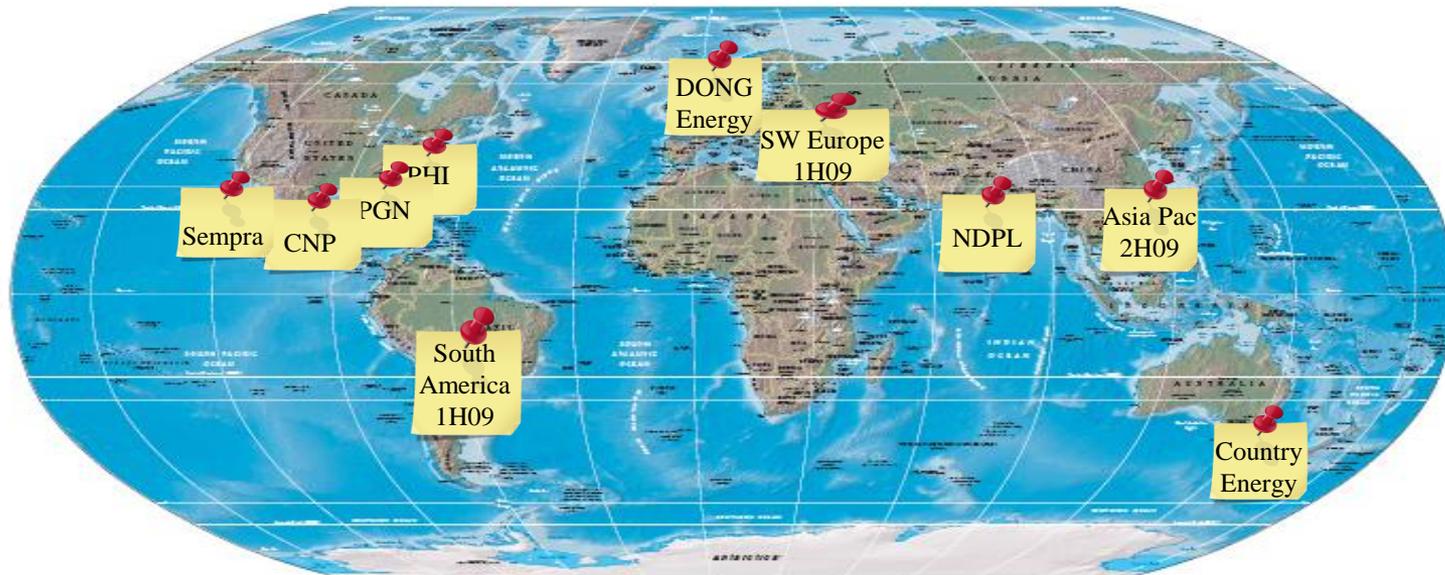


Smart Grid Maturity Model. A common framework for assessing a utility's current smart grid status and planning for the transformation



IUN Engagement Assets. The templates, accelerators and sample deliverables gathered from IBM's many smart grid engagements

IBM founded the Global Intelligent Utility Network Coalition to accelerate the adoption of Smart Grids globally



- The Global IUN Coalition is a strategic relationship that IBM is forming with a small group of select utilities globally to shape, accelerate, and share in the development of the smart grid
- The Coalition purpose is to collaborate in the market to enable the rapid creation of solutions, adoption of open industry-based standards, and informed policy/regulation which drive the adoption of the IUN/Smart Grid
- A key benefit of the coalition is it reduces regulatory, financial, market and implementation risk for both IBM and the coalition members

IBM is driving industry transformation through its active participation in leading industry organizations



GridWise Alliance formed in 2004 as a public private partnership working to transform the US power supply system by moving the grid into the information age. Expanded in 2008 via formation of Smart Grid Australia, plans underway to launch in India in 2009. IBM chairs the council.



GridWise Architecture Council formed in 2004 working to shape the guiding principles, or architecture, of a highly intelligent and interactive electric system. IBM chairs the council.



Electricity Advisory Committee formed in 2008 to provide advice to the US DOE on implementing EPCACT 2005 and EISA 2007, and modernizing the nation's electricity delivery system. IBM chairs the Smart Grid subcommittee.

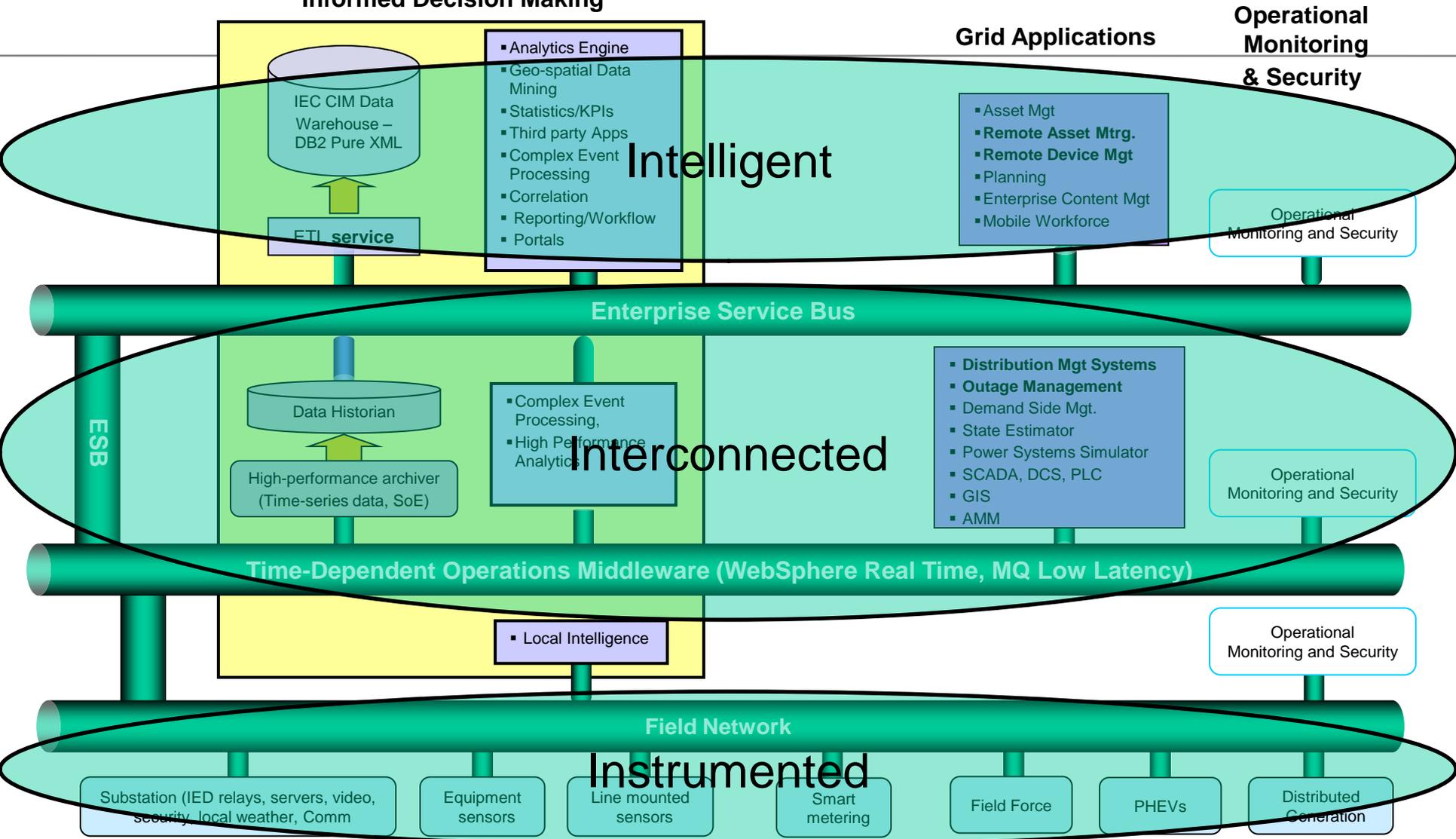


Electric Power Research Institute's (EPRI) IntelliGrid Initiative is creating the technical foundation for a smart power grid that links electricity with communications and computer control to achieve tremendous gains in reliability, capacity, and customer services. IBM is an active member of the program.

SAFE/IUN Conceptual Solution Architecture

→ Essential infrastructure to build a smarter grid

Informed Decision Making





IBM Software Capabilities for Energy and Utilities



IBM Solution Architecture for Energy and Utilities

Framework spans the enterprise

Linking business and IT to enable new capabilities



Asset, Device and Service Monitoring

Visualize infrastructure availability and performance through device, event and usage data, providing real-time control and analysis to speed time to resolution.



Asset Lifecycle Management

Track, document and make decisions about the procurement, deployment, operation, maintenance, and disposal of generation plant, transmission or distribution field assets.



Informed Decision Making

Use data and information aggregated from business and operation systems to analyze events, develop insights, correlate reactions to change, to improve business flexibility and performance.



Improved Customer Experience

Deliver convenient, personalized customer experience, by enabling interactive communication and providing consumers more control of their of their energy sources and usage.



Business Process Automation

Model, manage, and optimize business processes resulting in faster time to market, increased customer satisfaction, and higher productivity.



Regulatory, Risk & Compliance Management

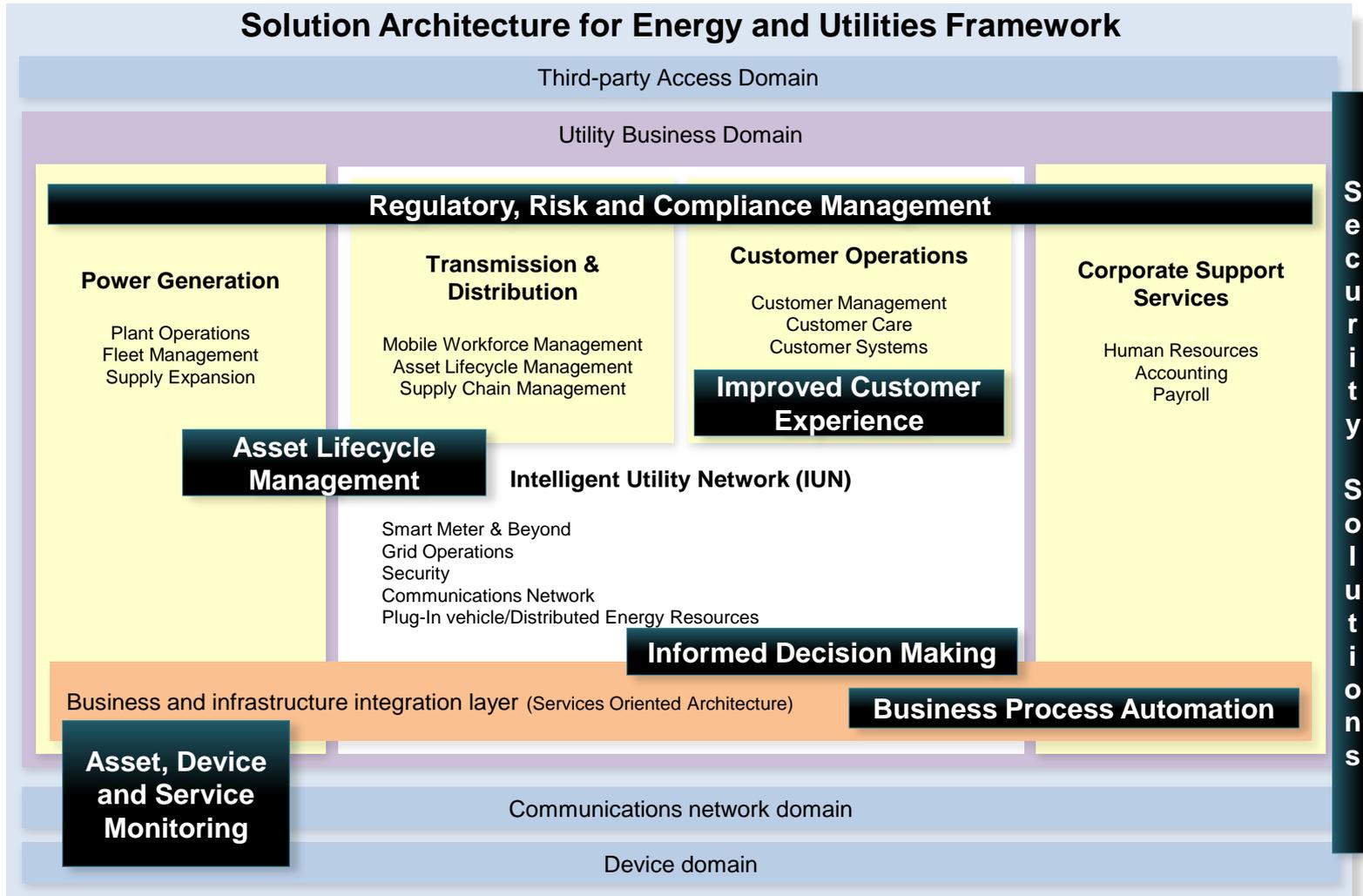
Manage large quantities of utility documents and processes to comply with government mandated regulations



Security Solutions

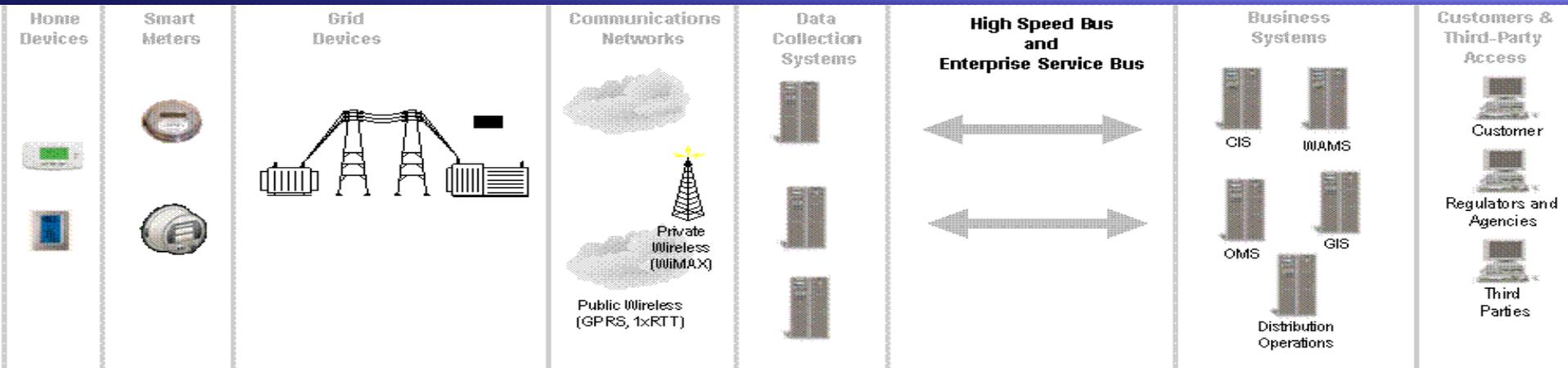
Comprehensively manage and prevent security risk across all business domains

The SAFE Framework enables integration of information and processes across the utility company



Asset, Device and Service Monitoring

Visualize infrastructure availability and performance with the SAFE Framework



- **Real Time Visibility** into a utility's operations
- **Control** of resources and costs
- **Automation** of business processes enforcing best practices and knowledge capture from aging workforce

Monitor smart utility infrastructure and intelligent network devices

Manage the health of the infrastructure and make better decisions

Meter and infrastructure Monitoring - Monitor and manage events from all elements of the network infrastructure including power devices, communications/data network, systems and infrastructure

Tivoli Netcool

Application and I.T. infrastructure Monitoring - Optimize performance and availability of solutions and ensure I.T. resources are operating effectively.

Tivoli Monitoring

Real time analysis and presentation –Real time measurement and analysis of utility network data providing business dashboards for utility LOB applications

CognosNOW!

→ IBM software delivers value through the SAFE Framework

Asset Lifecycle Management

Track, document and make decisions about field assets with the SAFE Framework

**Fossil & Nuclear
Generation**



**Renewables
Generation**



**Transmission &
Distribution**



**Vehicle
Maintenance**



**Corporate Functions:
IT Asset Mgmt
Facilities Mgmt**



Manage all types of utility assets

- **Reduce cost and complexity** associated with redundant asset management infrastructure and manual processes
- **Improve availability and longevity** of strategic assets
- **Improve decision support and asset maintenance** by collecting and monitoring relevant maintenance related data

Streamline and automate asset operations

Manage all aspects of an asset's lifecycle

Asset Management - Manage every aspect of an asset's or meter's life cycle including acquisition, compatible unit estimating, work management, inventory control, purchasing, preventive maintenance, safety and disposal.

IBM Maximo Asset Management

Asset Document Management - Manage content needed to operate and maintain the assets or device include drawings, procedures, vendor manual, training records

IBM FileNet

→ IBM software delivers value through the SAFE Framework

Informed Decision Making

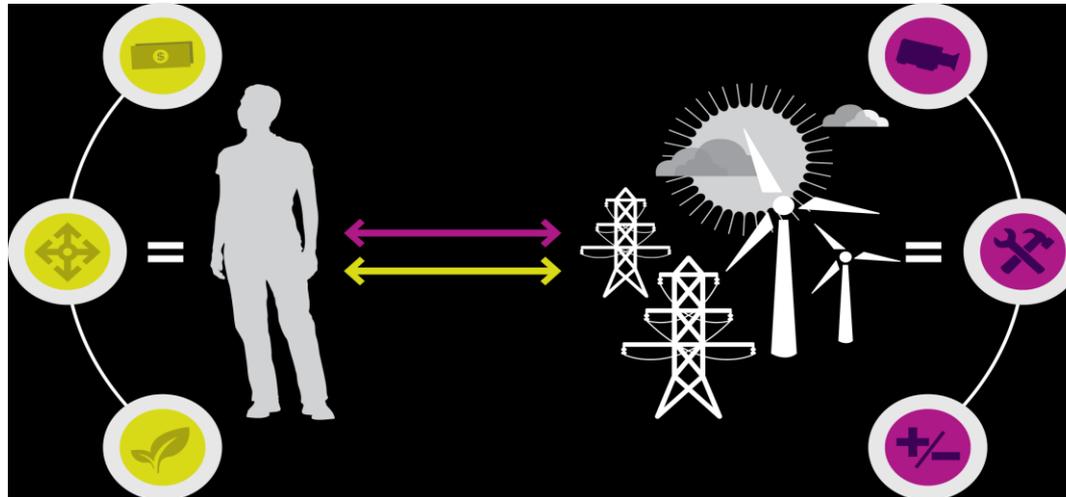
The SAFE Framework adds the 'intelligence' in the Intelligent Utility Network

CONSUMERS

Take advantage of variable pricing by purchasing utilities when it's cheapest.

Generate their own electricity and sell it back to the grid.

Decrease carbon emissions by choosing clean utility sources.



UTILITIES

Automatically monitor the health of the utility.

Remotely sense damage to utility assets and dispatch repair crews.

Better predict demand and manage supply accordingly.

- **Aggregate data** from business and operational systems to develop further insight into business and network performance
- **Empower consumers** with information
- **Deploy analytics** to improve carbon management, workforce planning, and address other key utility challenges
- **Visualize operational metrics** and develop optimized plans and processes

Convert Real Time Data into Business Intelligence

Turning business intelligence into informed decisions by utilities and consumers

- **Optimize Business Performance, Organization & Planning**

Cognos

- **Optimization, visualization and decision making** technology to improve utility operations and planning

iLog

- **Integrate disparate data and systems** and provide meaningful information and insights to the utility's various stakeholders

Information Management Portfolio

- **Business Event Monitoring** - Detect, evaluate, correlate and respond to business events.

WebSphere Business Events

→ **IBM software delivers value through the SAFE Framework**

Improved Customer Experience

Consumers can manage their energy consumption with the SAFE Framework

The screenshot displays the KUB website interface. At the top, there is a navigation bar with links for 'Take Our Survey', 'About Us', 'Procurement', 'Careers', 'Contact Us', and 'Español'. A search bar is located on the right. Below the navigation bar, there are several menu items: 'Residential Customers', 'Business Customers', 'Money-Saving Tips', 'Safety & Outages', 'Environment', 'Community', 'News/Media', and 'My Account'. The main content area features a 'Home' breadcrumb and two large promotional banners. The first banner, titled 'Pay Your KUB Bill From Anywhere, Anytime', shows a woman smiling next to a laptop. The second banner, titled 'The Future Is Here. Switch to Green Power for a Cleaner Environment', shows a child and an adult standing in front of a wind turbine. To the right of these banners is a 'Login' section with fields for 'Username' and 'Password', a 'Remember Me' checkbox, and a 'LOGIN' button. Below the banners are four columns of links: 'Payment Options' (AutoPay, Bank Draft Payment, Monthly Budget Pay, Credit Card Payment), 'Service Options' (Welcome to KUB, Start Service, Stop Service, Report Service Problem), 'Tools and Tips' (Energy Audit, Green Power Sign Up, Tree Trim Map, RSS News Feed), and 'Hot Topics' (Community Meetings, Lower Your Bills, Green Power, Tree Trimming). At the bottom right, there is a 'KUB Outage Map' section with a map and a 'See Live Map' button. The footer contains links for 'Site Map', 'About Us', 'Procurement', 'Careers', 'Contact Us', 'Español', and a copyright notice: '© 2009 KUB. All rights reserved.'

- **Improve outage management** and supply/demand through two-way communication with customers
- **Empower consumers** to manage their utility consumption
- **Deliver offerings** that enable consumers to have greater insight and control of their energy usage

Support a new relationship with your customers in addition to delivering utility services

Single point of personalized interaction with applications, content, processes, and people for a unified user experience.

WebSphere Portal

Build social networks, WIKI, communities , blogs for dynamic bi directional communities around energy

Lotus Connections

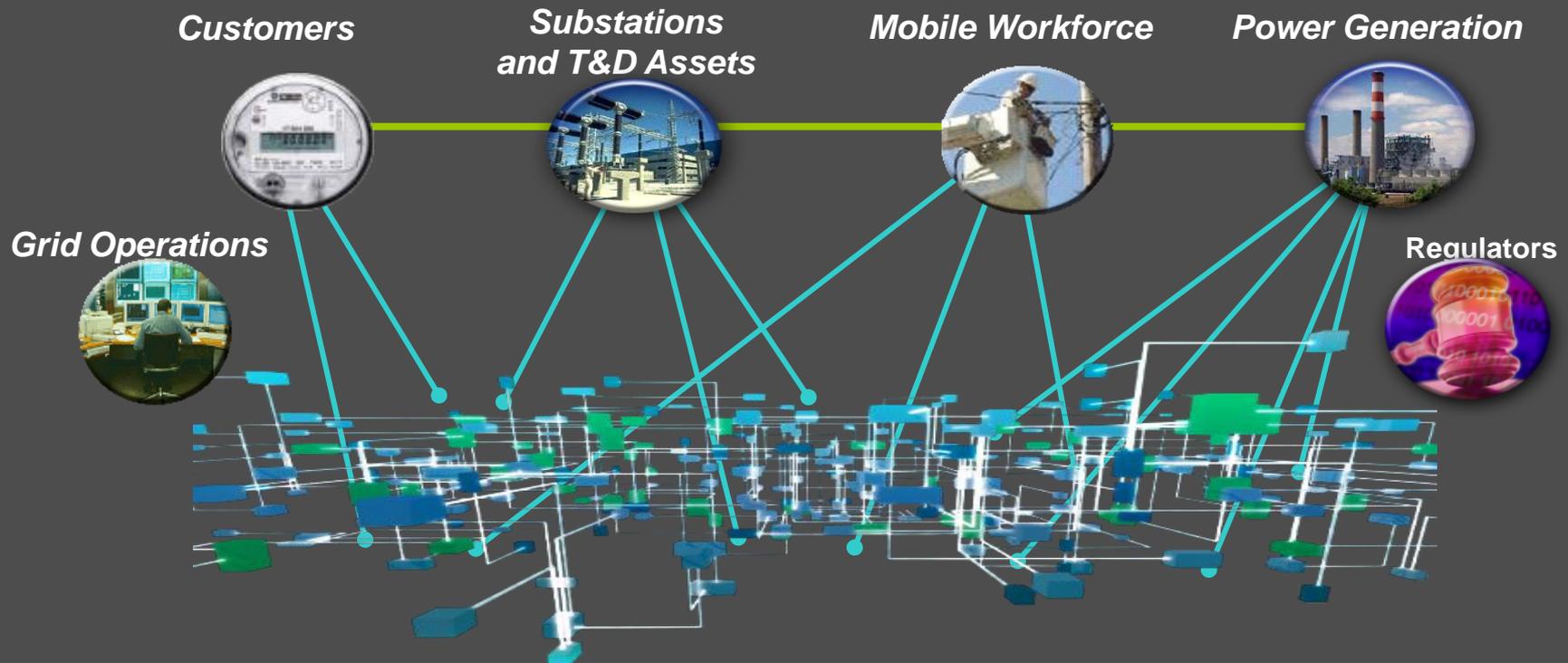
Extend web experience to semi-connected (offline) capabilities across managed clients either wired or on wireless networks

Lotus Expediter

→ IBM software delivers value through the SAFE Framework

Business Process Automation

Model, manage, and optimize business processes with the SAFE Framework



- **Enhance customer systems** with new processes that extend legacy CIS applications
- **Create, redesign and support** new core business processes used to manage a utility
- **Identify and reduce bottlenecks** in your business processes

Flexibility and visibility of business processes

Model, manage, optimize, deploy, distribute and integrate processes

- Model and optimize utility business processes

WebSphere Modeler

- Deploy and execute business processes

WebSphere Process Server

- Integrate applications and services within a utility with a flexible connectivity infrastructure

WebSphere Enterprise Service Bus

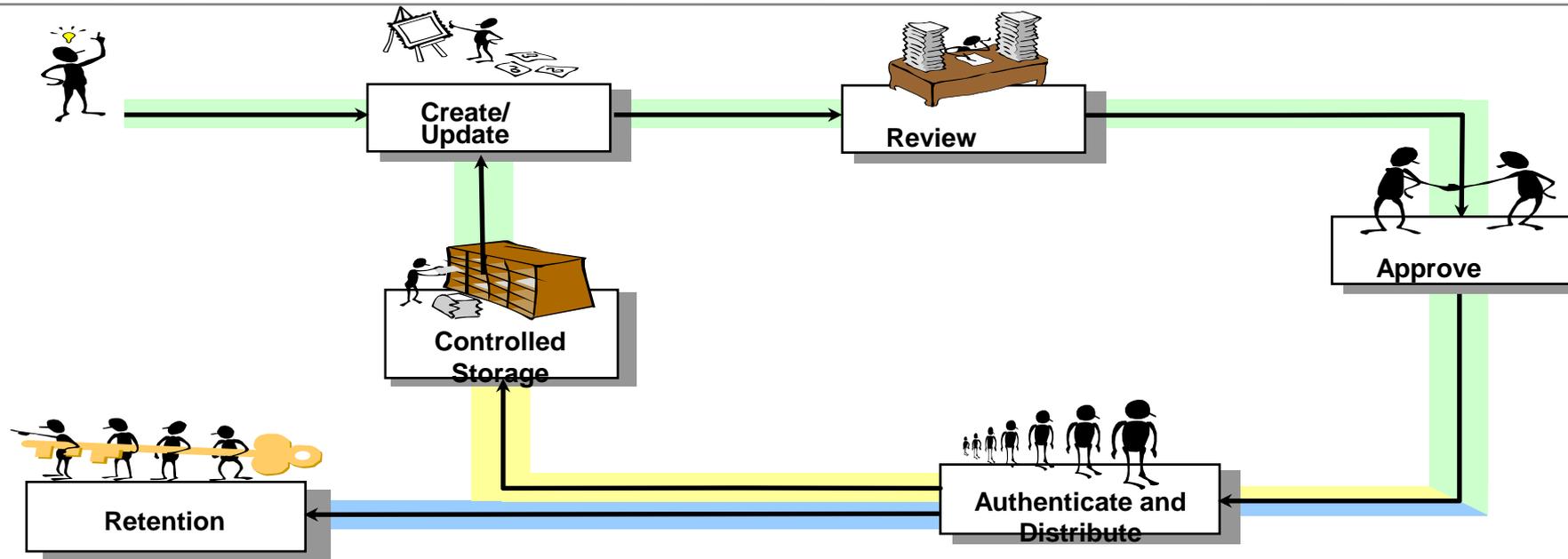
- Distribute and share information and data in real time

WebSphere Message Broker

→ IBM software delivers value through the SAFE Framework

Regulatory, Risk & Compliance Management

The SAFE Framework helps address changing regulatory requirements



- **Manage regulatory interaction** including rate case management and Federal Energy Regulatory Commission (FERC) audits.
- **Managing risk** to improve operational efficiency
- **Base strategic decisions** on both cost and environmental impact.
- **Compliance Management** to meet increased regulatory oversight, new regulations and enforcement initiatives

Regulatory, Risk & Compliance Management

Manage content, process and compliance

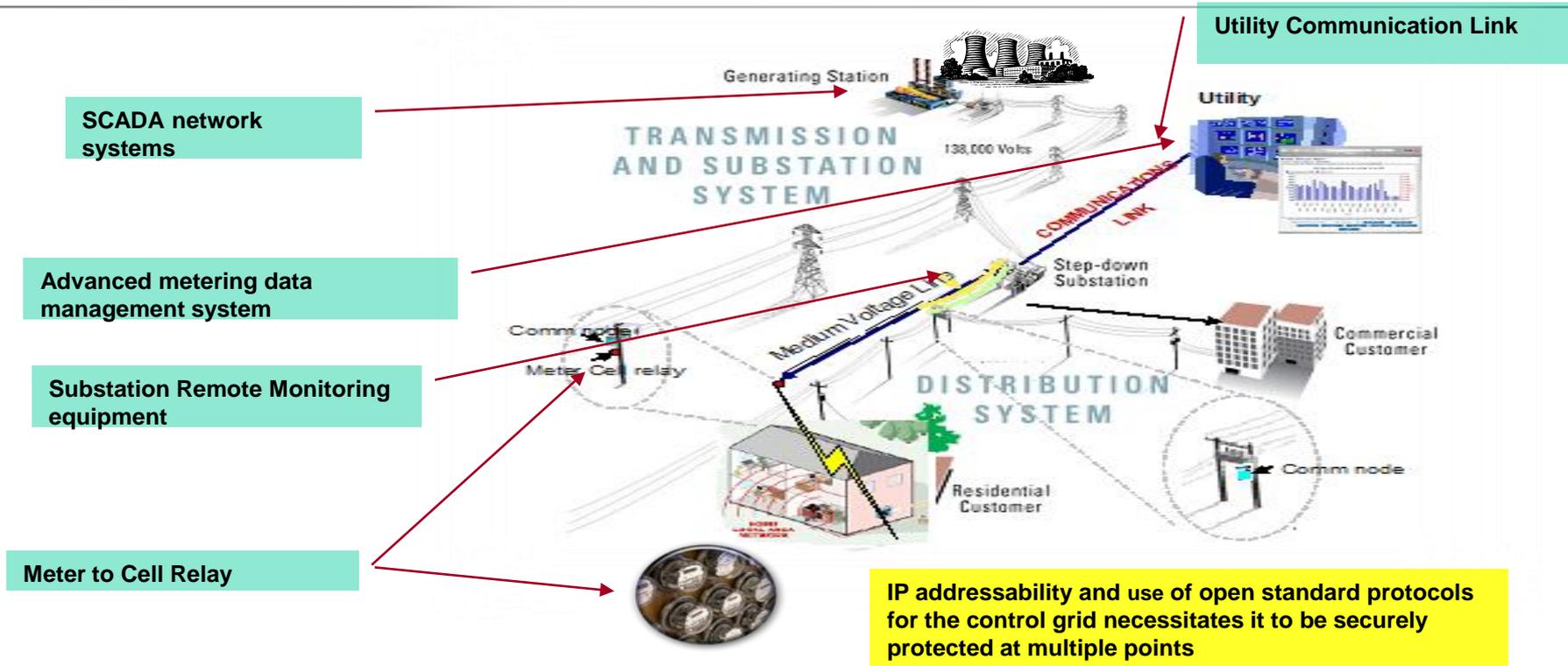
- Capture, manage, store, preserve and deliver information, content and documents related to a utility's organizational process

IBM FileNet

→ IBM software delivers value through the SAFE Framework

Security Solutions

Reduce security threats with the SAFE Framework



- **Monitor** internal and external behaviors; address aberrations and violations
- Manage **access** to business systems and information to ensure integrity & compliance
- **Assess** the overall security and compliance status of the business infrastructure
- **Defend** against potential security threats and business risks.

Security Solutions

Comprehensive Security Addressing the Entire Security Lifecycle

- Provide secure, automated, user management

Tivoli Identity Manager

- Manage access to critical applications, data, and other I.T. resources

Tivoli Access Manager

- Protect confidentiality, integrity, privacy, and assurance of utility systems.

Tivoli Security Solutions

- Protect and inspect XML traffic across all network boundaries

WebSphere DataPower

→ IBM software delivers value through the SAFE Framework

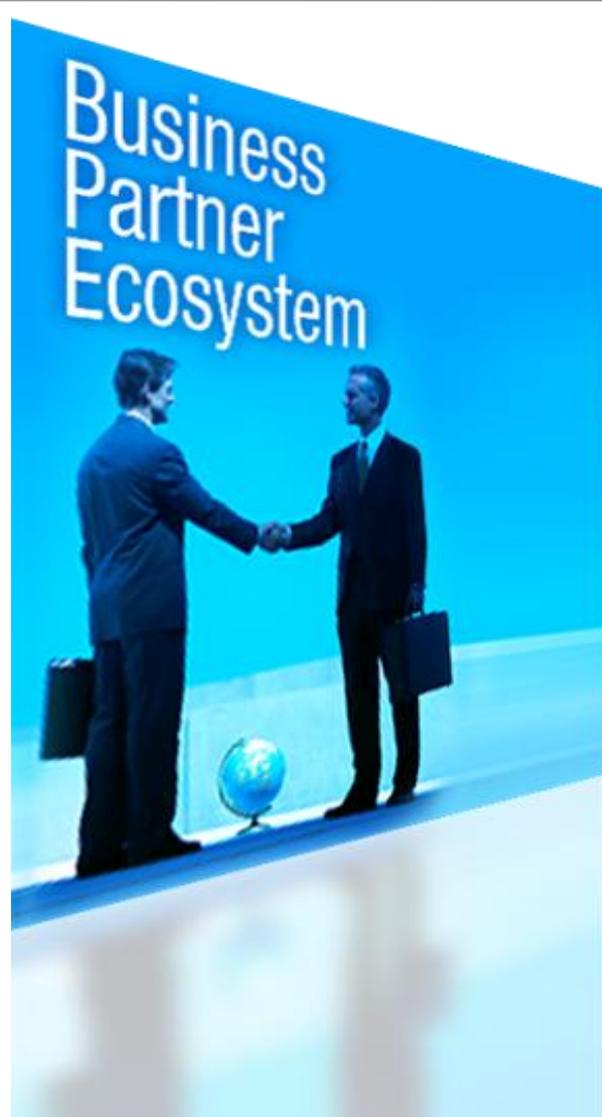


The SAFE Partner Ecosystem



The SAFE Business Partner Ecosystem

Providing a choice of applications that are compatible with the IBM Solution Architecture for Energy and Utilities Framework



Validated partners:	
Partners committed to validation:	

Energy & Utilities Solutions

Business Partner Ecosystem

Asset and Device Monitoring

Regulatory, Risk and Compliance Management

Improve Customer Experience

Asset Lifecycle Management

Security Solution

Business Process Automation

Informed Decision Making

Infrastructure & Governance

Pre-integration between SAFE software capabilities and industry-leading partner applications provides...

- Faster deployment
- Easier integration
- Lower cost of operations

SAFE Partner Validation Program available at:

<http://www.ibm.com/isv/tech/validation/framework/index.html>

Achieving the SAFE Framework Partnership Vision

Objective: prove pre-integration and focus on marketplace success

1. Industry Specific Technical Criteria

Validation criteria: Business Processes Automation

Model, manage, and optimize business processes resulting in faster time to market, increased customer satisfaction, and higher productivity.

Partner earns 2 points, one must be a major (A*)

<p>A</p> <p>"Major" Key Framework Building Block (1 pt)</p> <ul style="list-style-type: none"> WebSphere Process Server WebSphere ESB WebSphere Message Broker WebSphere DataPower 	+	<p>B</p> <p>"Minor" Partner (1 point each)</p> <ul style="list-style-type: none"> ESB WebSphere Business Monitor WebSphere Integration Developer Additional qualifying products IBC CIM
---	---	---

IBM PartnerWorld > Technical > Develop and migrate > IBM technical validations

IBM technical validations

Overview Hardware Services Software Technologies

IBM Industry Frameworks

IBM Industry Frameworks validation recognizes that your solution integrates with key IBM middleware software components. Each Industry Framework will have their specific technical validation criteria. Once you have achieved validation, you will become part of an Industry Framework community focused on best practices, interoperability and open standards. This help to support the industry to offer innovative business solutions that leverage existing IT investments, as well as expand the open portfolio of interoperable applications available to each industry organizations.

Industry Frameworks offers different paths depending on your industry of focus. The Industry Frameworks paths are:

- IBM Health Integration Framework
- IBM Retail Integration Framework
- IBM Product Development Integration Framework
- IBM Payments Framework for Financial Services
- IBM Service Provider Delivery Environment

Membership

- Join PartnerWorld
- Go to member resources
- Need assistance?

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Easy ways to get the answers you need.

PartnerWorld Contact Services

Validation resources

Find validated

2. Validate pre-integration is Complete

Ready for IBM Retail Store Integration Framework IBM Business Partner

CVS Walgreens Rite Aid Kroger Target Costco

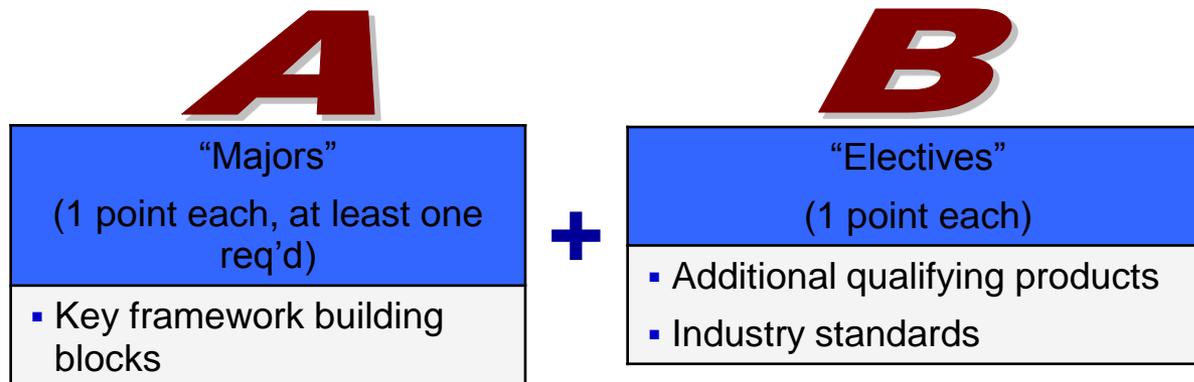
EXTEND

Additional Business Partners seeking to be IBM Integrated Framework validated

3. Promote Value of Solution as a Framework Asset

Validating as a SAFE Framework Partner

- Partner integrates their solution with IBM SAFE framework capabilities
- Each integration with a qualifying product earns one point
 - Key technologies associated with each SAFE capability designated as “Majors”
 - Additional participating products termed “Electives”
 - Partner can integrate their solution with more than one IBM capability
- At least one Major integration required, two points total to satisfy criteria



Validation criteria: Asset, Device and Service Monitoring

Visualize infrastructure activity/health through device data, event messages and utility usage data, providing real-time control and analysis

Partner earns 2 points, one must be a major (“A”)

A

“Majors” Key Framework Building Block (1 pt)
<ul style="list-style-type: none">▪ Netcool Omnibus▪ IBM Tivoli Network Manager▪ IBM Tivoli Monitoring / ITCAM SOA▪ Cognos Now▪ WebSphere DataPower

+

B

“Electives” (1 point each)
<ul style="list-style-type: none">▪ WebSphere Business Monitor▪ WebSphere Service Registry and Repository▪ Additional qualifying products

Validation criteria: Asset Life Cycle Management

Track, document and make decisions about the procurement, deployment, operation, maintenance, and disposal of generation plant, transmission or distribution field assets.

Partner earns 2 points, one must be a major (“A”)

A

“Majors”

Key Framework Building Block (1 pt)

- Maximo Enterprise Asset Management
- FileNet P8 ECM

+

B

“Electives”

(1 point each)

- Tivoli Provisioning Manager
- Additional qualifying products

Validation criteria: Improve Customer Experience

Deliver convenient, personalized customer experience, by enabling interactive communication and providing consumers more control of their of their energy sources and usage.

Partner earns 2 points, one must be a major (“A”)

A

“Majors” Key Framework Building Block (1 pt)
<ul style="list-style-type: none">▪ WebSphere Portal▪ WebSphere Expeditor▪ Tivoli Identity Manager▪ Tivoli Access Manager

+

B

“Electives” (1 point each)
<ul style="list-style-type: none">▪ Lotus Connections▪ Additional qualifying products

Validation criteria: Informed Decision Making

Use data and information aggregated from business and operation systems to analyze events, develop insights, correlate reactions to change, to improve business flexibility and performance.

Partner earns 2 points, one must be a major (“A”)

A

“Majors” Key Framework Building Block (1 pt)
<ul style="list-style-type: none">▪ Cognos BI▪ InfoSphere DataStage▪ InfoSphere QualityStage▪ MDM Server▪ Ilog▪ WebSphere Business Events

+

B

“Electives” (1 point each)
<ul style="list-style-type: none">▪ WebSphere eXtreme Scale Object Grid▪ Rational Software Architect▪ Additional elective options

Validation criteria: Business Processes Automation

Model, manage, and optimize business processes resulting in faster time to market, increased customer satisfaction, and higher productivity.

Partner earns 2 points, one must be a major (“A”)

A

“Majors”

Key Framework Building Block (1 pt)

- WebSphere Process Server
- WebSphere ESB
- WebSphere Message Broker
- WebSphere Business Modeler
- WebSphere Business Monitor

+

B

“Electives”

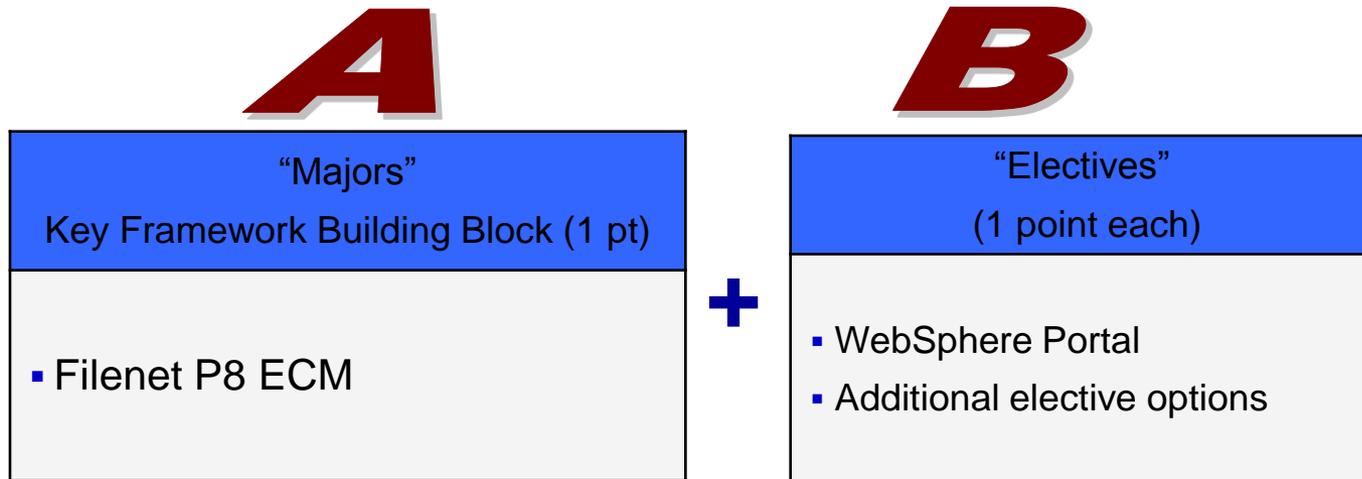
(1 point each)

- WebSphere Service Registry and Repository
- Additional qualifying products

Validation criteria: Regulatory, Risk, & Compliance Management

Manage large quantities of utility documents and processes to comply with government mandated regulations

Partner earns 2 points, one must be a major (“A”)



Validation criteria: Security Solutions

Comprehensively manage and prevent security risk across all business domains

Partner earns 2 points, one must be a major ("A")

A

"Majors" Key Framework Building Block (1 pt)
<ul style="list-style-type: none">▪ Tivoli Identity Manager▪ Tivoli Access Manager▪ Tivoli Provisioning Manager▪ WebSphere DataPower <p>Additional security solutions for</p> <ul style="list-style-type: none">▪ Governance▪ People and identity▪ Data and information▪ Processes and Applications

+

B

"Electives" (1 point each)
<ul style="list-style-type: none">▪ Tivoli Service Request Manager▪ Additional elective options

Validation criteria: Electives

Additional qualifying products can be used as electives. These provide common, foundational SOA capabilities.

A

“Majors” (1 point each, at least one req'd)
<ul style="list-style-type: none">▪ Key framework building blocks

+

B

“Electives” (1 point each)
<ul style="list-style-type: none">▪ WebSphere Application Server▪ WebSphere MQ▪ IBM DB2▪ IEC Common Information Model (CIM)

Step 1 – Go to the Industry Frameworks Website & Select Framework

<http://www-304.ibm.com/jct01005c/isv/tech/validation/framework/index.html>

United States [change]

IBM

Home Business solutions IT services Products Support & downloads My IBM Welcome [IBM Sign in] [Register]

Search

IBM PartnerWorld > Technical > Develop and migrate >

IBM Industry Frameworks

IBM Industry Frameworks can provide proven, integrated solutions that are SOA-based and support industry specific business and technology standards. Industry Frameworks bridge the gap between general purpose middleware and industry specific business applications to help you solve your most challenging business issues.

Each Industry Framework has specific technical validation criteria, a recognition that your solution integrates with key IBM middleware components.

Select the Industry Framework of your choice to learn which products are components of its criteria and to start the validation process.

Select your industry framework

- IBM Banking Industry Framework
- IBM Chemical and Petroleum Industry Framework
- IBM Industry Frameworks for Government
- IBM Health Integration Framework
- IBM Insurance Process Acceleration Framework
- IBM Product Development Integration Framework
- IBM Retail Integration Framework
- IBM Service Provider Delivery Environment
- **IBM Solution Architecture for Energy and Utilities Framework**

Membership

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- Member sign in
- Need assistance?
- Find Business Partners ▶

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Contact PartnerWorld

Highlights

- See all technical validation offerings
- Find validated solutions

Step 2 – Click on the “Get started now” for the Framework

United States [change]

PartnerWorld [dropdown] Search

Home Business solutions IT services Products Support & downloads My IBM Welcome Mrs. Pascale XELOT [Not you?] [IBM Sig

IBM PartnerWorld

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 - Technical libraries
 - Technical training
- Training and certification
- Collaboration
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- Small and medium business
- Orders and fulfillment
- Forms and agreements
- Events
- News

IBM PartnerWorld > Technical > Develop and migrate >

IBM Industry Frameworks

IBM Solution Architecture for Energy and Utilities Framework

The Solution Architecture for Energy and Utilities Framework is a powerful software platform for the management and integration of a utility's assets and information to help drive business agility and intelligent network transformation. This industry framework supports IBM energy and utilities solutions through:

- Open industry standards for IT and energy and utilities
- Pre-built energy and utilities industry solution accelerators
- A Smart SOA™ foundation

Solution Architecture for Energy and Utilities Framework technical validation means your solution integrates with IBM software and industry standards like IEC Common Information Model. When you successfully validate your solution, you join a community focused on innovation in energy and utilities. With industry best practices and the exchange of ideas, we can work towards truly interoperable applications required to implement business solutions.

IBM is leveraging its industry lead in SOA, global delivery capabilities, long-term commitment to industry standards, and industry leading software and hardware to deliver solutions that address the challenges facing today's energy and utilities customers.

Get started

[IBM Solution Architecture for Energy and Utilities Framework validation process](#)

Integration resources

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Highlights

- [See all technical validation offerings](#)
- [Find validated solutions](#)
- [Using validation marks and logos](#)

Step 3 – You will see the details of the Framework validation process

IBM PartnerWorld > Technical > Develop and migrate > IBM technical validations

IBM Industry Frameworks

IBM Service Provider Delivery Environment validation process

These steps must be completed to validate your product or products.

- 1. Create a Global Solutions Directory listing.**
 Go to **Manage solutions**, sign in to the Global Solutions Directory using your IBM ID and create a listing for each product you wish to nominate for validation. If your product is already listed in the Global Solutions Directory, you're ready to proceed.
Note: If you create a listing in a non-English language, please create an English version to be used when nominating your product for validation.
- 2. Nominate your product for validation.**
 After you submit your solution, return to **Manage solutions**. Go to **Nominate your solution for an IBM technical validation**.
Note: Please use your English language listing to nominate your solution.
- 3. Preview SOA scenario options.**
 Preview the options available to help you complete the validation form in step 4.
- 4. Complete the validation form.**
 When you complete the validation form, you may qualify for complimentary access to the [IBM Software Access Catalog](#).
- 5. Download the validation instructions.** (PDF, 56KB)
 Follow the instructions on how to use the submittal tool to gather the required solution log files and submit them to the IBM validation lab.
- 6. Take advantage of technical resources.**
 Find online assistance, technical support and technical documentation.
- 7. Provide a demonstration of the product being validated, if requested by IBM.**
 Depending on your solution, the IBM validation lab may request a demonstration either through a Web session or by remote connection over an IBM secure network.
- 8. Take advantage of marketing benefits.**
 After you have completed your validation, take advantage of multiple marketing benefits, such as entering your solution in the SOA Business Catalog, participating in the Business Partner Application Showcase, and creating a press release.

Validation resources

- [Find validated solutions](#)
- [Using validation marks and logos](#)

IBM PartnerWorld®

Marketing

Selling

Technical

- Products and technologies
- Downloads and drivers

• Develop and migrate

- Configuration and sizing

• Support

- Technical libraries
- Technical training
- Technical site map

Training and certification

Collaboration

Products

Solutions

Services

Industries

Small and medium business

Orders and fulfillment

Forms and agreements

Events

News and announcements

PartnerWorld program

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Step 4 – ISV creates GSD Entry (if one does not exist)

IBM PartnerWorld >

Global Solutions Directory

IBM Business Partners:
Market your solutions to a worldwide audience
The Global Solutions Directory is the IBM repository of Business Partner offering information. Creating a thorough entry for your solution in the Global Solutions Directory represents a critical step in marketing with IBM. These entries become an integral part of IBM marketing programs, generating exposure with clients, other IBM Business Partners and the IBM sales network. This international resource is available worldwide in ten languages.

To get started, click on "[Manage solutions](#)" in the menu on the left. For more information, view the [tutorial for Business Partners](#).

Alternatively, the IBM Business Partner Application Showcase represents specialists who have demonstrated expertise in a particular industry. Learn more about the IBM Business Partner Application Showcase by [visiting the site](#), or learn more about - [PartnerWorld Industry Networks](#) - the first step to list your solution in the IBM Business Partner Application Showcase.

Customers:
You may search the Global Solutions Directory for offerings from IBM Business Partners at all membership levels, from all industries, worldwide. Click on "[Search solutions](#)" in the menu on the left to access detailed information about products from thousands of providers. If you prefer to limit your search to companies with proven success specific to your industry, please visit the [IBM Business Partner Application Showcase](#).

Select a language
Select a language for the Global Solutions Directory
English

Find a solution
→ Search for solutions now!

Learn more
→ Tutorial for Business Partners (available in English only)

Step 5 – ISV selects the framework for validation, chooses “create and update your solutions”

Step 6: ISV selects "Nominate our solution" and goes to Nomination Form in GSD

The screenshot shows the IBM PartnerWorld interface. At the top, there is a navigation bar with the IBM logo, a search bar, and a dropdown menu set to "PartnerWorld". Below the navigation bar, there are links for Home, Solutions, Services, Products, Support & downloads, and My IBM. The main content area is titled "IBM Industry Frameworks" and includes a thank-you message and instructions for nomination. A sidebar on the left contains a "Manage solutions" section with several options, including "Nominate your solution for an IBM technical validation". The main content area also features a "Coverage" section with contact details for Covergence, including location, telephone, company name, and URL. A note at the bottom of the coverage section states that the current PartnerWorld profile information is displayed above and provides instructions for updating it. At the very bottom, there is a "Contact details" section with a form field for the "Project contact first name".

IBM PartnerWorld > Global Solutions Directory > Manage solutions

IBM Industry Frameworks

Thank you for your interest in the IBM Industry Frameworks. To apply for participation, verify your company information and answer all questions below, then press Submit.

The fields indicated with an asterisk (*) are required to complete this transaction; other fields are optional. If you do not want to provide us with the required information, use the "Back" button on your browser to return to the previous page, or close the window or browser session that is displaying this page.

Manage solutions

- Create and update your solutions
- Submit a customer experience
- Add a solution to the IBM Business Partner Application Showcase
- Nominate your solution for an IBM technical validation
- View response cards

Contact us

Site help

Covergence

Location ID:	19187927
Mailing address:	One Clock Tower Place Suite 200 Maynard , Massachusetts 01754 United States
Telephone:	1- (781) 789-8907
Company name:	Covergence
Company URL:	http://www.covergence.com
Global Solutions Directory solution name:	Covergence Session Manager
Global Solutions Directory solution ID:	13450

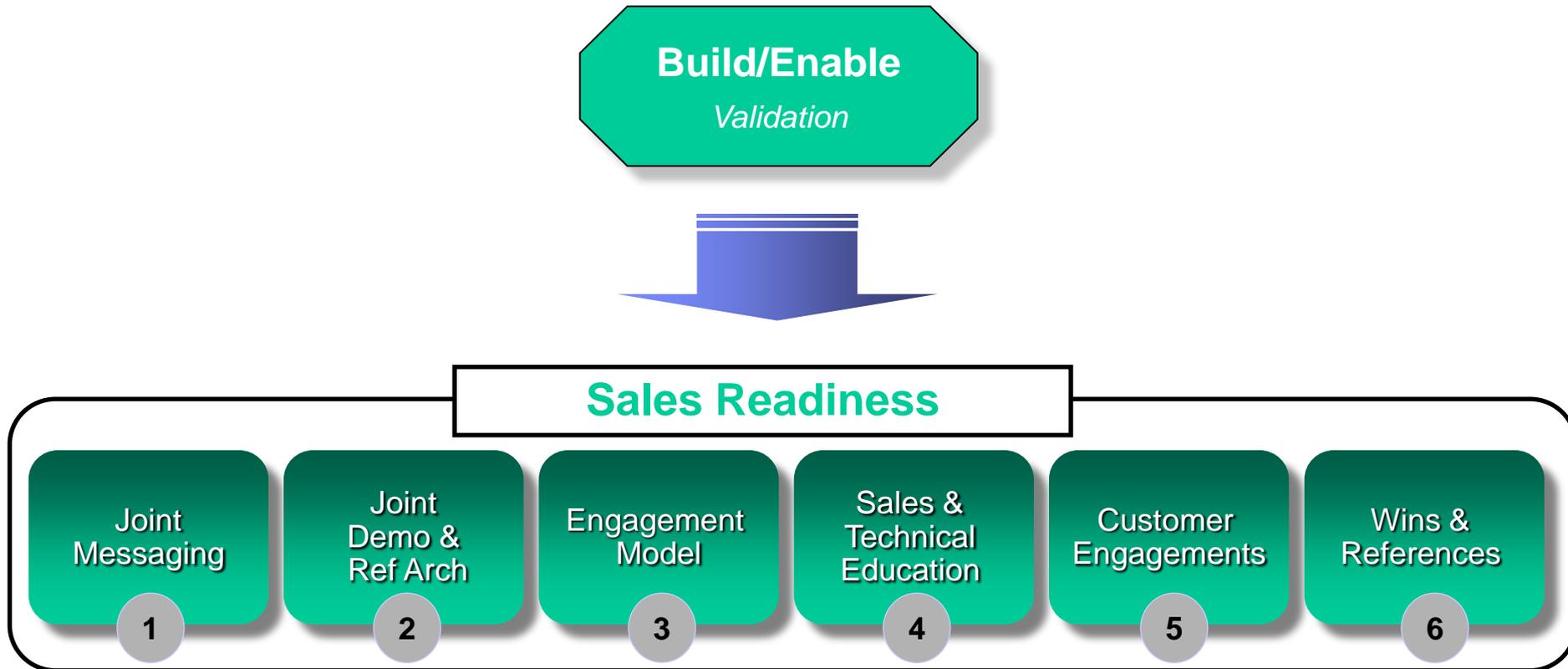
NOTE: Your current PartnerWorld profile information is displayed above. If you would like to update this information, go to the IBM PartnerWorld Web site member area and update your profile.

Contact details

* 1. Project contact first name:

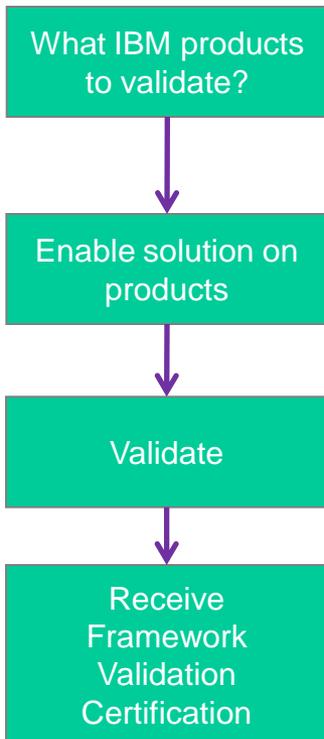
Sales Enablement for Industry Framework ISV's

Critical Success Factors to Successful Joint Revenue



High Level Overview of Program Validation Process

1. Create solution entry in Global Solution Directory (GSD) and Submit Nomination for validation
2. Determine integration scenario and submit Validation Requirement Document (VRD)
 - Request [“Tech Talk”](#) or a consultation with IDR e-architects (optional)
 - Complete and submit the VRD
3. Plan and complete enablement **(if requested)**
 - On-site or remote using IBM Innovation Centers or
 - Using Partner's testing environment
 - Leverage existing Ready for Programs
4. Collect and submit the validation logs
 - Download Validation Package Preparation instructions
 - Perform validation product demo if requested by IBM





Backup slides



Power Generation Optimization Solution Overview

	Power Generation Optimization		
	Plant Operations	Fleet Optimization	Supply Expansion
Offerings	Asset Performance Management Information Management Knowledge Management Business intelligence & analysis Security	Enterprise Asset Management Enterprise Information Management Energy Value Chain Optimization Wind Power Suite GHG Emissions Management	Generation Portfolio Planning intelligent Plant Lifecycle Management High Performance Computing Knowledge Management for New Plants Generation Virtualization
Domain			
Solution			

Utilities Network Revitalization Solution Overview

Solution	Utilities Network Revitalization	
	Intelligent Utility Network	Enterprise Asset Management
Offerings	<p>Advanced Meter Management</p> <ul style="list-style-type: none"> • Deployment of intelligent telemetry and the integration of meter data throughout all applicable enterprise systems <p>Network Automation & Analytics</p> <ul style="list-style-type: none"> • Transformation from legacy utility networks to a self-healing environment capable of automated diagnostics and control 	<p>Mobile Workforce Management</p> <ul style="list-style-type: none"> • Enabling real-time, two-way communication between the field force and dispatch center; enables timely access to vital information. <p>Asset Lifecycle Management</p> <ul style="list-style-type: none"> • Providing end-to-end information around a company's assets throughout all phases of an asset's life; from planning to procurement to retirement <p>Supply Chain Management</p> <ul style="list-style-type: none"> • Integration of solutions including strategic sourcing, supplier enablement, requisitions, order management, work management and materials management

Customer Operations Transformation Overview

		Customer Operations Transformation		
		Customer Management	Customer Care	Customer Systems
Domain				
Solution				
Offerings	<ul style="list-style-type: none"> • Intelligent network integration strategy • Customer focused utility strategy • Business intelligence and customer analytics • Program design for: <ul style="list-style-type: none"> – Demand response – Revenue assurance – Credit operations – Sales and marketing 	<ul style="list-style-type: none"> • Customer care processes optimization • Contact center <ul style="list-style-type: none"> – Diagnostic and roadmap – Consolidation strategy – Self-service assessment and web enablement – Telephony assessment and channel integration – Operations redesign • Composite desktop <ul style="list-style-type: none"> – Web portal application and infrastructure design and implementation 	<ul style="list-style-type: none"> • Billing, payment, and collection processes optimization • CIS <ul style="list-style-type: none"> – Strategy, implementation, consolidation, testing, componentization, optimization, replacement – Legacy systems enhancements – Total data migration solutions (TDMS) • Meter Data Mgt - Customer care integration & billing • Application Mgt for CIS systems 	

Validated partners

Partner	Value Proposition	Validated ?
 ESRI	SOA-Ready, GIS software that authors geo-spatial asset data, publishes this data as mapping and functional services, and consumes these GIS services in thin client solutions either connected or mobile.	✓
 Retriever Communications	Provides wireless access to complete asset records removing the need for paperwork in the field for asset inspections	✓
 SISCO Inc	Extends the IBM WebSphere ESB platform to enable data exchange of real-time and historical information using an enterprise data model based on the IEC Common Information Model (CIM)	✓
 Trilliant	Communications, monitoring, reporting, and remote control tools for time-of-use pricing, demand response, direct load control, and distribution grid monitoring	✓
 Consert	Energy Management Solution that provides customers with a real-time, two-way interactive communication and control system that allows devices and components to easily work together.	✓
 C-Lock Technology Inc	Quantification, verification and reporting of greenhouse gas emissions	✓
 KLG Systel	Solutions for IT enablement to organisations in the areas of Oil and Gas, Manufacturing, Retail, Infrastructure, Power, Process, and new economy industries such as Information Technology, Telecommunications and the service sector.	✓
 BPL Global	The Power SG Foundation provides platform services such as user security management, data repository & reporting, messaging and a common user interface framework	
 Coulomb Technologies	Delivers networked charging stations and provides a service that meets the needs of drivers, municipalities, electric utilities and government entities	
 eMeter	Meter Data Management system delivers event-driven information and automation in real-time to integrate utility operations and manage the Smart Grid	
 Itron	OpenWay® provides advanced metering and smart grid capabilities for measuring and managing energy usage	
 OSISoft	Operational, event, and real-time data management infrastructure	
 Powersense	The DISCOS® System is a cost-effective, modular system for remote integrated supervision, control, operation and condition monitoring of medium voltage (MV) and low voltage (LV) power distribution grids	

SAFE Bill Of Materials (BOM)

Asset, Device and Service Monitoring

To improve outage management and speed time to resolution, utility companies need real-time monitoring, control and analysis tools that can help visualize network, device, and infrastructure availability and performance.

Asset, Device and Service Monitoring provides tools to monitor and manage events from all elements of the network infrastructure including power devices, communications/data network, systems and infrastructure. Real time measurement and analysis of utility network data provides operational dashboards for utility LOB applications. Powerful workflow automates business processes on an agile technology platform enforcing "best practices" and knowledge capture from a skilled workforce. Better, more real-time decisions result in a healthier, integrated and, responsive infrastructure.

Primary Software Products	Secondary Software Products
<ul style="list-style-type: none">• DataPower - Security and routing of data & events• Netcool Omnibus/Impact T&D and Generation event management• IBM Tivoli Network Manager - for utility T&D communications network monitoring• IBM Tivoli Monitoring / ITCAM - for monitoring utility IT assets and applications associated with ADM• Tivoli Business Services Manager - provides operational dashboards targeting network operations personnel• CognosNow - realtime monitoring and analysis of utility network data providing business dashboards for utility LOB applications	<ul style="list-style-type: none">• WebSphere Adapter Toolkit - Develop adapters to Industry Standards• Lotus Expeditor-- Remote device connectivity in both connected & disconnected modes.

SAFE Bill Of Materials (BOM)

Asset Lifecycle Management

Asset management is often a manual process full of cost and complexity. Consider Asset Lifecycle Management tools to help track, document and make decisions about the procurement, deployment, operation, maintenance, and disposal of field assets.

This capability of the framework can help manage every aspect of an asset's or meter's life cycle including acquisition, compatible unit estimating, work management, inventory control, location, configuration, preventive maintenance, safety and disposal, reducing the cost and complexity associated with redundant asset management infrastructure and manual processes. It helps improve the availability and longevity of strategic assets by managing the content needed to operate and maintain them.

Primary Software Products	Secondary Software Products	Accelerators
<ul style="list-style-type: none">• Tivoli Maximo for integrated asset inventory management, maintenance tracking, work order management and related functions• FileNet integration with Maximo providing streamlined document and records management with Maximo asset management workflows	<ul style="list-style-type: none">• Tivoli Provisioning Manager - Initial Provisioning through patching of IT assets• Tivoli Asset Management for IT - IT Extension for Maximo	<ul style="list-style-type: none">• Maximo / FileNet Integration Adaptor 

SAFE Bill Of Materials (BOM)

Informed Decision Making

As the rate and pace of change to utility systems and technology increases, companies that can analyze events, develop insights and correlate reactions to change in a timely fashion will benefit from improved business flexibility and performance.

Projects within this area of the Solutions Architecture for Energy and Utilities Framework help you turn real time data into actionable information. With strong analytics and effective business dashboards, you can assess carbon reduction programs to see if they are effective, optimize energy line load profiles or analyze workforce metrics to help create strategic plans. You can also drive new interactions with customers as you enable them to monitor personal utility consumption, costs and power sources. You can target new time and use energy packages to encourage users to save electricity during peak periods.

Primary Software Products	Secondary Software Products
<ul style="list-style-type: none"> ● WebSphere Business Events - Correlation of the infrastructure events received from Omnibus and enrichment/correlation with business events from other enterprise systems. ● ILOG - Rule Management and analyze, plan, track and improve business processes ● Information Analyzer - structure, content and quality of grid data sources. ● Business Glossary - create, manage & share a grid classification system ● DataStage - integrates data across multiple grid data sources and applications ● QualityStage - ensures accuracy of data across the enterprise ● WorkBench - maintains the relationship paths of information throughout an integration lifecycle ● MDM Server - manages grid master data ● Cognos BI Platform - grid data analysis 	<ul style="list-style-type: none"> ● Websphere Application Server XS- Object Grid - High availability and scalability for Business Event Instances ● Rational System Architect - view the Data as a component of the complete Enterprise Architecture ● Rational Software Architect- integrate the software architecture components with the Data Models created in Infosphere Data Architect

SAFE Bill Of Materials (BOM)

Improved Customer Experience

Environmental and economic issues are leading many consumers today to look for ways to be actively engaged in the understanding and management of their personal utility use. Utility companies can now deliver a convenient, personalized customer experience by combining self-service capabilities with interactive communications, enabling consumers to have more control of their utility management and helping Customer Service Representatives to better serve customers.

Solutions built around this framework capability can improve outage management and supply/demand through two-way communication with customers. Utility companies can deliver new tools that provide consumers with more information about, and control of, their sources and uses of utilities.

Primary Software Products	Secondary Software Products
<ul style="list-style-type: none">● WebSphere Portal - provides customers self-service capabilities to monitor and manage their energy usage● Tivoli Identity Manager - provides provisioning management that is a secure, automated and policy-based solution for managing user roles, identities and access rights● Tivoli Access Manager - provides the necessary access to the utility back office and datamarts to ensure data security by utility client● Lotus Expeditor -- for integration of legacy CIS and Enterprise Applications into unified CSR Portal	<ul style="list-style-type: none">● Lotus Expeditor -- Extend Portal by include devices● Lotus Web Content Manager - Management● Lotus Connections for Web 2.0 functions -- Social community components● Mobile Portal Accelerator- helps users customize portal content for mobile devices



SAFE Bill Of Materials (BOM)

Business Process Automation

Utility transformations calls for companies to create new approaches, integrate existing applications and optimize business processes to drive pro-active network management, increased customer satisfaction, and improved business productivity.

Today, process logic and user interfaces are often tightly bound together within business applications and changes to systems are difficult and costly. The Solution Architecture for Energy and Utilities Framework provides tools and best practices to help create or redesign, model, simulate, implement and support new core business processes as well as extend the investment in legacy CIS applications. By leveraging an SOA-based infrastructure that is open, scalable, flexible and based on E&U industry standards, you can better identify and reduce bottlenecks in your business workflow and improve the distribution and sharing of data in real time.

Primary Software Products	Secondary Software Products
<ul style="list-style-type: none">● WebSphere Process Server - Example Run business process workflow to automates outage repair.● WebSphere Business Modeler to model and optimize utility business processes and related BPM software ESB / Message Broker / WID● WebSphere ESB, Message Broker - Backbone to utility Enterprise Service Bus● WebSphere Application Server - Platform for Industry Standard adapters● WebSphere Business Monitor	<ul style="list-style-type: none">● WebSphere Service Registry and Repository

SAFE Bill Of Materials (BOM)

Regulatory, Risk and Compliance Management

Every utility must address changing regulatory requirements, managing large quantities of utility documents and processes to comply with government-mandated regulations. Utilities must also manage regulatory interactions, including rate case management and federal audits.

To meet increased regulatory oversight, new regulations and enforcement initiatives, the Solution Architecture for Energy and Utilities Framework enables a flexible approach that helps you make smart, cost-effective decisions. While each mandate has its own specific requirements, all have a common denominator: the need for greater visibility and control of content and processes to lower risk. This capability helps you effectively manage regulatory interaction including rate case management and federal audits, while providing security-rich content, data provenance and change control for regulatory compliance.

Primary Software Products	Secondary Software Products
<ul style="list-style-type: none">• FileNet for Common management repository (system of record)	<ul style="list-style-type: none">• Tivoli Compliance Insight Manager (TCIM) tied to IUN Security solutions• Websphere Portal - to Provide that User Experience (Suggested)



SAFE Bill Of Materials (BOM)

Security Solutions

As security standards for the Smart Grid are refined, the grid's control networks will take advantage of technology already used in IT networks from other dynamic industries. One of the biggest advantages of this transformation is the ability to use TCP/IP technologies for remote monitoring of energy devices, as well as managing grid assets and operations. But this could also increase the opportunity for some to exploit the more open protocols of the Smart Grid for cyber-attacks. And the stakes are enormous.

The good news is that hardened TCP/IP security technologies and software architectural frameworks have evolved to the point where they can be used to help keep the Smart Grid secure. The key is implementing an end-to-end security architecture within the Smart Grid network. Security solutions can encompass everything from grid and distribution management, to finance and administration, customer management, HR and procurement.

Security solutions within the framework can help a utility monitor internal and external behavior to detect patterns of traffic and actions that are suspicious, going beyond a 'perimeter defense' style of security. Software can also help manage access of business systems and information to ensure integrity and compliance as well as assess the overall security and compliance status of the business infrastructure to defend against potential security threats and business risks.

Primary Software Products	Secondary Software Products
WebSphere DataPower, Tivoli Identity Manager, Tivoli Access Manager, Tivoli Federated Identity Manager, Tivoli Security Policy Manager, Tivoli Security Information and Event Manager, Rational AppScan, ISS Proventia	Various products depending on specific Grid aspect (People and Identity, Data and Information, Application and process, Network, server and grid devices, Physical infrastructure security)

