

# WebSphere

## Driving Business Value For Your Enterprise

Mobile, IoT, Cloud, Big Data & Social

*July 2014*



# Agenda



**1**

Composable  
Business

**2**

Mobile

**3**

Internet of  
Things

**4**

Cloud

**5**

Big Data

**6**

Social



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# The Information Age

## Shifts in the digital economy

**Shift** in personalized computing towards mobile using cloud-based services

**Shift** towards unbundling business offerings

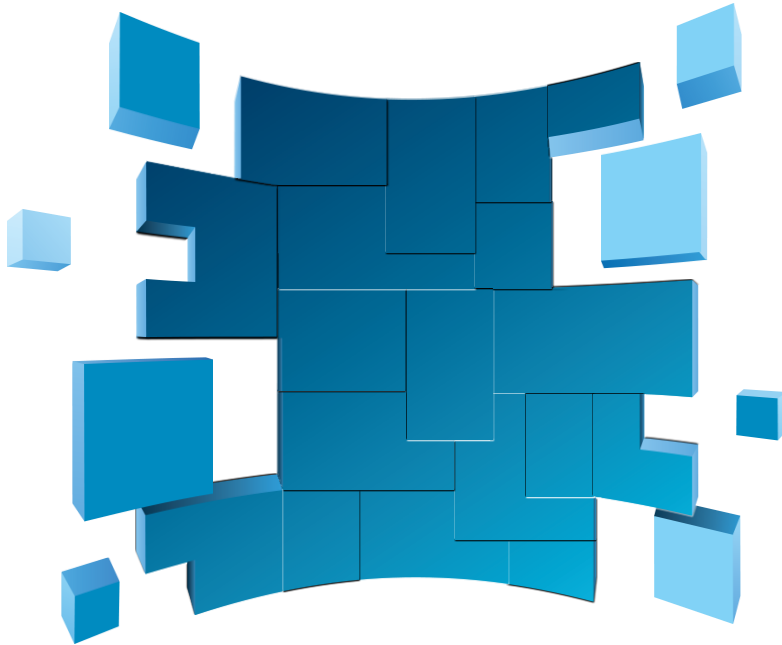
**Shift** towards killer-apps disrupting entire industries



# An Organization Built on a New Foundation

*A Composable Business forces you to rethink your enterprise*

## A Building Block Approach



Transform how you engage with your ecosystem

Restlessly reinvent and innovate your processes

Make better decisions with Real-time Actionable Insights

Accelerate your time to market

Integrate across the enterprise

# Driven By its People



*A Composable Business requires entrepreneurs*

Enable **technology leaders** to provide a flexible, scalable, infrastructure that secures and **protects** the organization



Empower **business leaders** to create new markets, **engage** new customers and **transform** business models



Provide **developers** an ecosystem and platform to quickly **create** and deploy the next killer app

# Capitalizing on the major technology shifts is essential to accelerate growth



**Big Data**

**\$175B**

CAGR **7%**



**Mobile**

**\$71B**

CAGR **21%**



**Social**

**\$81B**

CAGR **8%**



**Cloud**

**\$199B**

CAGR **27%**



**Internet of Things**

**\$6B**

CAGR **9%**



# WebSphere Capabilities



*Play an increasingly significant role in each of these technology shifts*

## Mobile



- Platform for development, deployment and cross device mobile apps
- Management of apps, devices, security and mobile analytics to ensure security, and user insights

## Internet of Things



- Connecting sensors through integration and driving actions based on analytics
- Solutions to quickly develop and manage APIs enabling new business models and expanding the reach of organizations

## Cloud



- Economically scale deployment of cloud centric and cloud enabled workloads to deliver best in class deployment and support in private or public cloud
- Composable services environment to rapidly develop and deploy applications

## Big Data



- Integrate data sources and data, routing it to the right decision maker in a form they can use in a timely manner
- Continuous monitoring of streaming data to provide real-time insight

## Social



- Built in coaches enable workers to find the right individual to ensure collaboration
- Platforms for developing social engagement models and integrating to transform the business



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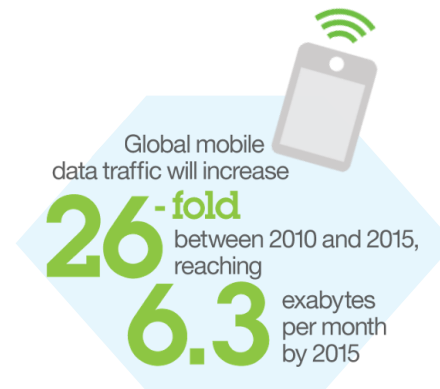
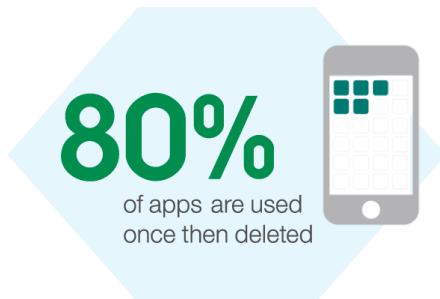
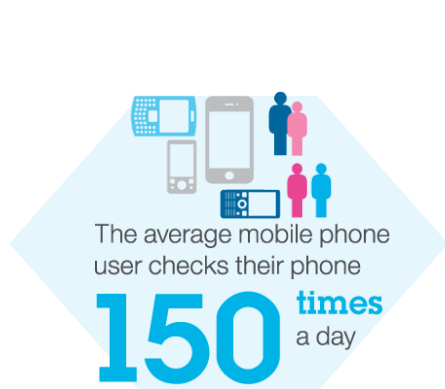
Social



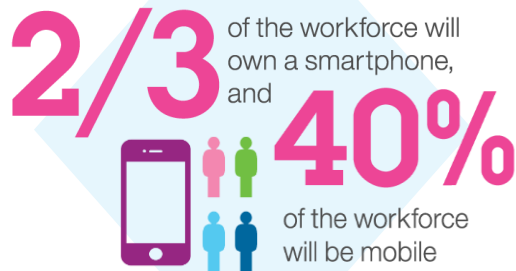
# Adapting to New Engagement Models



*Mobile is changing engagements and how work gets done*



By 2015,



Fewer than half of all companies have a mobile strategy, and this is despite the fact that



# WebSphere empowers companies



*To build & continuously deliver mobile apps that transform value chains*



## Mobile

Build, test, run and manage mobile apps that create new, secure interactions between customers, employees & partners.

### Build & manage mobile apps.

Quickly develop and deploy native, web or hybrid apps from a single code base and continuously deliver on any platforms.

*Worklight Foundation, Mobile Quality Assurance, IBM Security Application Scanning, CICS Tools and PD Tools*

### Connect to systems of record.

Seamlessly and securely connect and synchronize rich mobile applications to enterprise data and services.

*Worklight Foundation, WAS Liberty, API Management, DataPower, Cast Iron, MQ, IIB, BPM, Caching, z/OS Connect, CICS TS, CICS TG*

### Leverage mobile information.

Collect, exchanges and act on information from sensors and mobile devices quickly, efficiently, and securely.

*API Management, MessageSight, Caching*

**60%** reduction in the cost of multi-platform development

[Rohde & Schwarz](#)

# Clients succeeding today

*With IBM Mobile solutions*



## Consistent Omni-channel marketing



- Utilized IBM Worklight to speed time to market and to provide maximum flexibility in aligning its mobile apps with its marketing initiatives.
- Keeps the mobile app in sync with its web site and supports emerging device capabilities such as “talking” shelf tags and mobile payments.



## Rapid Deployment of New Mobile Applications



- Selected Worklight for its ability to quickly develop extensible mobile apps for use by its customers using existing in-house web development skills.
- Develop mobile apps within weeks to support customer search for in-network doctors and treatment facilities, search for pharmacies and customer inquiry on the status of patient claims and benefits.



## Personalizing the Customer Experience



- Integrated MessageSight to enhance its customized services by quickly routing information from the thousands of sensors in each car, while connecting and infusing that data with intelligence to improve decision-making.
- Improves the consumer experience with features that are delivered more quickly and accurately and allow additional personalized functionality such as mobile concierge service, automatic cabin temperature adjustments, preferred alternate routes, and location tracking.



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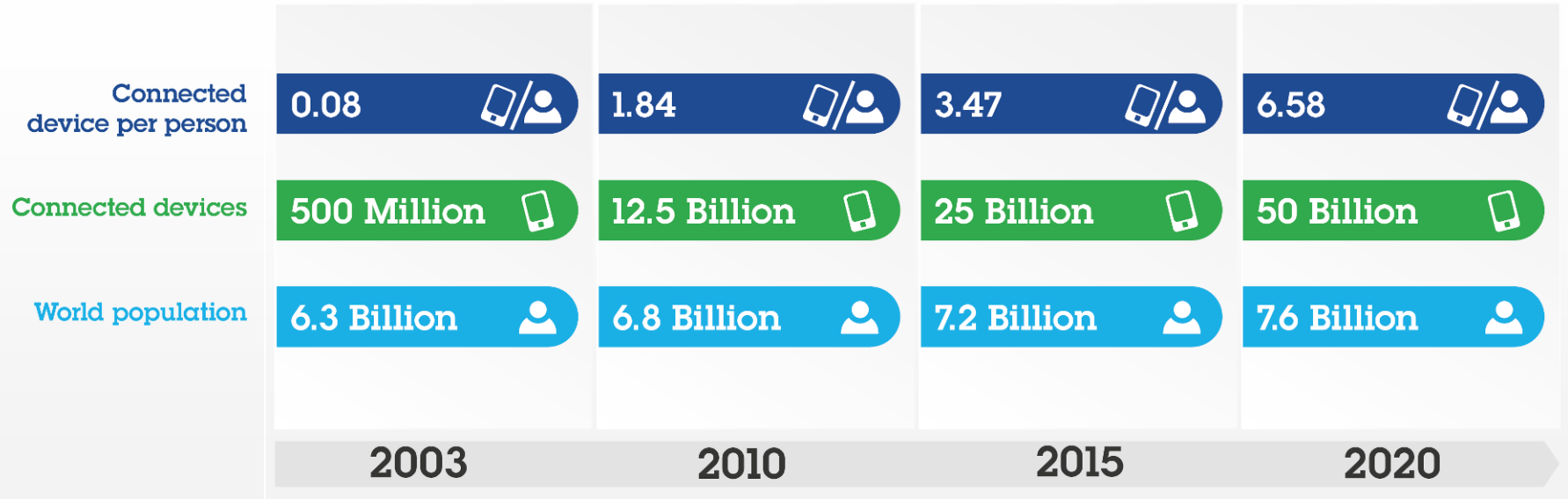
Big Data

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Social



# Connecting devices & people: Internet of Things



# WebSphere empowers the Internet of Things

*For better business outcomes.*



## Internet of Things

Connect end to end from sensors to insights to actions to sensors and unlock new business possibilities from smarter devices and smarter applications.

### Connect and integrate devices.

Mobile and machine-to-machine communication within and beyond the enterprise.

*MessageSight,  
Internet of Things Cloud, IIB, z/OS  
Connect, WebSphere Application Server*

### Capture and use information.

Collect and act upon data from a wide variety of traditional means and new interconnected devices and sensors.

*MessageSight, BPM, Worklight  
Foundation*

### Process large volumes of events.

Use real time analytics to enable better business outcomes and improve operational management and customer satisfaction.

*Caching, ODM Advanced, z/TPF*

**100%** Throughput improvement, nearly eliminating queues

[Qantas](#)

# Clients succeeding today

*With IBM Internet of Things solutions*



## Improved Care through Location Analysis



- ODM correlates time stamps and events coming from the business process engine with time stamps and location stamps from the real-time location tracking system .
- 100 percent of physicians, nurses and managers at Osler said the solution probably or definitely will improve patient flows and overcrowding.



## Tourist Management through Sensors



- The BPM solution allows users to interact with sensors and devices, helping the city to locate and guide tourists, as well as measure, control and eventually predict and optimize tourist flows and routes.
- Allows the city to become citizen-focused by optimizing resources, propelling tourism and improving the quality of life for both citizens and tourists.



## Real-time Customer Interaction



- Leveraging MessageSight and MQTT the solution allows them to consider new business models based on the ability to connect and interact with our customers in real-time.
- The robustness, scalability and security capabilities offered by the platform will allow for the deployment of new services for millions of customers without compromising customer privacy or quality of service while reducing.





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# Cloud

as a Growth Engine for Business

IBM is making **major investments** in cloud.

**\$2B**

SoftLayer  
Acquisition

**\$1.2B**

Data Center  
Expansion

**\$7B+**

Acquisition  
Investment

**100+**

SaaS  
Offerings

**40,000+**

Experts

# WebSphere empowers clients



*To innovate faster in the cloud*



## Cloud

Seamlessly run, quickly build and easily use existing and new applications in the cloud with leading cloud middleware software, tools and services.

### Run apps in the cloud.

Easily deploy, run and scale WebSphere software in the cloud and seamlessly go between on premise and cloud.

*WAS, Caching, PureApplication, z/OSConnect*

### Build engaging cloud-born apps.

Compose cloud-born web and mobile apps using middleware cloud services and securely connect new systems of engagement to systems of record.

*Bluemix, DataPower, Cast Iron, API Management, z/OS Connect*

### Employee business process services.

Tap into business process as a services to easily and quickly discover, design, automate and manage business processes and rules.

*BPM, Blueworks Live, ODM, Cast Iron*

**30minutes** to deploy a complete, new application

[Tongliao Municipal](#)

# Clients succeeding today

*With IBM Clouds solutions*



## Fast, Flexible Test Environment



- Uses the IBM® PureApplication® System platform's built-in patterns of expertise to efficiently trial many different targeted marketing solutions.
- Dramatically improves expected time to market for fast implementations of trial solutions.



## Rapid Deployment of New Transactional Applications



- 2 PureApplication Systems allows them to rapidly deploy customers' new application environments and provide top-level performance, dynamic scalability and improved monitoring, even under variable workloads.
- The solution helped the company optimize and consolidate its infrastructure, decreasing maintenance costs, and raising the service level for customers.



## Jumpstarting the API Economy



- Utilized the Bluemix catalog to leverage location based services for their development environment.
- Allow innovators and developers to seamlessly extend their products and services to cloud and mobile devices.



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# Thank You



# A Composable Business enables



*Digital Reinvention harnessing the three big technology shifts*

**Cloud** as the growth engine  
of your business

**Mobile** to reinvent how  
you engage

**Big Data** to transform your  
enterprise and industry



# Cloud References



# Visa Europe gains the flexibility to pilot different mobile commerce solutions quickly and easily



**Uses patterns** To swiftly and simply implement a customer-facing showcase environment

**Dramatically improves** expected time to market for fast iterations of trial solutions in market

**Anticipates simplified** development and reduced ongoing management costs

## Solution Components

- IBM® PureApplication® System
- IBM Business Process Management pattern
- IBM Operational Decision Management pattern



**The transformation:** Visa Europe needed to deliver targeted marketing, the electronic wallet, mobile commerce and data exploration. The company sought a fast, flexible, seamless solution to rapidly install a customer showcase environment. Visa Europe uses the IBM® PureApplication® System platform's built-in patterns of expertise to efficiently trial many different solutions.





# Cedacri Group raises its service level by rapidly deploying new transactional applications for banks

**Quickly deploys** new transactional applications and raises service level for customers

**Optimizes and improves** the company's infrastructure, which reduces maintenance costs

**Achieves flexibility** with dynamic scalability and improved monitoring under variable workloads

## Solution Components

- IBM® PureApplication® System
- IBM Business Process Management pattern



**The transformation:** To raise the service level for its customers, Cedacri Group, located in Italy, needed to rapidly deploy new application environments, achieve top-level performance and reduce infrastructure and management costs. Installing two IBM® PureApplication® Systems with an IBM Business Process Management pattern helped the company optimize and consolidate its infrastructure, decreasing maintenance costs.

# Mobile References



# Big box appliance retailer hh gregg turned up the heat with its new Worklight based consumer mobile app



**Consistent User Experience**  
across multiple channels

**Save time and money** with code re-use across mobile and desktop platforms

**Emerging Device Capabilities**  
Such as “talking” shelf tags and mobile payments can be easily added

## Solution Components

- IBM Worklight



**Business Challenge:** hh Gregg is a publically traded retailer in the very competitive consumer electronics and home appliance sector located in the 18 states in the Midwest and Southeast United States. hh Gregg needed to add the mobile channel to stay competitive with retailers like WalMart and Best Buy.

**The Smarter Solution:** To speed time to market and to provide maximum flexibility in aligning its mobile apps with its web based eMarketing site and its print and television marketing initiatives, hh Gregg selected IBM Worklight and deployed the solution as an HTML5 / CSS3 mobile web application.

# Blue Cross Blue Shield of Tennessee stays financially healthy through cost effective delivery of policy information and claims using Worklight

**Hours not weeks** to introduce changes and fixes to the app releases

**Reduced Operating Costs** by promoting relevant products and services through the app

**Improved customer satisfaction** through a new mobility channel

## **Solution Components**

- IBM Worklight



**Business Challenge:** Health insurance providers in the U.S. are challenged by rising health care costs and the need to be price competitive when they negotiate annual premiums with the large businesses that buy health insurance as a key benefit for their employees. Health care insurers control costs by negotiating rates with doctors and hospitals and by encouraging patients to use “in-network” providers.

**The Smarter Solution:** Health insurance providers are making mobile apps available to customers so that they can make informed decisions in choosing “in-network” hospitals and doctors. As one of the largest health insurance providers in Tennessee, BCBS TN selected Worklight for its ability to quickly develop extensible mobile apps for use by its customers using existing in-house web development skills. Worklight’s ability to work as both a web app and a mobile device resident app that could stay current with the device capabilities made it the ideal solution for BCBS TN.

# Solution Examples



*“Based on IBM MessageSight, the Sprint Velocity Service Bus is a new communications architecture that lets smartphones, tablets and other devices communicate through the cloud.”<sup>1</sup>*

**3. Unlock command sent to car, door unlocks**



**Connected car**

*“Now, Sprint's newly announced partnership with IBM will allow connected vehicles to communicate with other connected devices while using far less bandwidth and power.” says Bob Johnson, director of connected vehicle development at Sprint*

**1. Owner pushes start button on app**



**2. Sprint authenticates user**



**“Key-job “response time  
&**

**Driver preferences in the cloud**

Press Release: <http://www-03.ibm.com/press/us/en/pressrelease/41441.wss>

<sup>1</sup> M2M Evolution Magazine: <http://bit.ly/1dCBA7M>  
[video](#)

# Internet of Things References

# The Municipality of Venice enables smarter tourism by tracking and directing crowds



## Improve tourist experience

by responding to moods quickly and accurately predicting and optimizing for future events and paths

## Improve quality of life

of both citizens and tourist by better managing tourist routes and lessening the impact to the city

## Solution Components

- IBM Global Services – GBS Business Analytics Optimization
- IBM WebSphere Process Server



**Business Challenge:** The city of Venice, Italy, wanted to improve the experience of its many tourists, while enhancing the lives of its citizens. It wanted to find a cost-effective way to use existing technology to guide tourists throughout the city, and into less trafficked areas to stimulate business there, and better manage the flow of tourists in the city.

**The Smarter Solution:** IBM launched a pilot of a solution called The TagMyLagoon. It is based on IBM Human Centric Solutions open architecture framework that allows users anywhere, anytime to access information about tourist destinations, traffic, accommodations etc., using their own wireless devices, and on the city's existing WiFi network. The Passive sensors were placed on select locations around the city, denoting points of interest. A user simply takes a picture of a place of interest using his or her mobile phone and the system automatically pushes contextual information and prompts to the user.

***“We anticipate that the solution will help the Municipality propel tourism and improve the quality of life for both citizens and tourists of Venice.”***

***~ Michele Vianello, Deputy Mayor, Municipality of Venice***

# A Dutch flood-protection organization uses a network of sensors to gather and analyze information about the country's levees

**Improves Safety** by providing early warning signals of levee breaching which were not previously possible

**Multi-millions in Euro savings** by reducing over-design of new levees and providing more accurate information before costly repairs are undertaken

## Solution Components

- IBM Global Services
- IBM WebSphere: WebSphere Application Server Network Deployment; WebSphere Process Server; WebSphere on Linux
- IBM Solutions: Sensors & Actuators: RFID-- Mobile Asset Management
- Business Partners: Deltares (Delta technology experts) and TNO (a scientific research organization)



**Business Challenge:** Smarter levee management is needed to increase the flood protection level and to become more cost effective. A holistic view of the levee system is needed. If a levee breaks in one region, it may very well affect other regions as well. Sharing of information is needed for well informed decision making, for example for engineering, financial, maintenance and policy decisions. The information also needs to be more accurate, based on actual measurements (sensors) and become available faster to make better decisions. Smarter levee management leads to focused and more cost-effective levee management

**The Smarter Solution:** Government investment in technology that provides clear, accurate information about the country's levees now helps ensure that the people and industries of the Netherlands are better protected from flooding. Stichting Flood Control has implemented a network of sensors that provide a constantly updated, real-time flow of detailed information about the country's levees. Analysis of that information helps detect possible weaknesses, and enables the implementation of countermeasures to prevent levee breaks. The extensive knowledge base gained from the levee information will also lead to better levee design in the future.



# Big Data References



# A medication management firm exploits DNA analyses to dispense safe medications and doses tailored to a patient's genetic makeup

**>80% of patients** screened realized at least one actionable result

**Billions of dollars** potentially saved by avoiding hospital readmissions, ADE care and litigation costs

**Helps predict** drug efficacies based on patients

## Solution Components

- SoftLayer® Cloud
- IBM® WebSphere® Business Process Management Services
- IBM DB2®
- IBM Tivoli® Directory Services
- IBM Integration Bus
- IBM Business Partner Coriell Life Sciences



**Business Challenge:** Adverse drug events (ADEs) are the fifth-leading cause of death in the United States. However, lacking any decision-support tools when prescribing drugs, the complexity facing physicians when treating patients on multiple medications can be overwhelming, putting patients at risk. For this United States-based pharmacy that caters to at-risk adults, ADEs were a major concern.

**The Smarter Solution:** The distribution pharmacy is using a revolutionary new system enabling a new era of personalized care by predicting how patients will respond to common drugs based on their genetic profiles. After a patient's DNA is collected and sequenced, the solution analyzes the raw data, extracting the relevant genes that would relate to drug response. It then correlates those results against a massive database of medical journals to identify potential drug efficacies and health hazards, and makes its findings available for physicians' use.

***When physicians are empowered with genetic analyses intelligence at the point of care, they can more safely prescribe the right drugs to their patients.***

# An airline in Canada uses predictive modeling to bring a new level of precision to discretionary fuel planning and save millions per year



>\$2M CA savings expected in annual discretionary fuel costs through more precise, data-driven forecasts of consumption

Lowers carbon emissions, supporting long-term sustainability goals

More productive interactions between pilots and dispatchers regarding discretionary fuel planning

## Solution Components

- SoftLayer® Cloud
- IBM® SPSS® Statistics
- IBM DB2® for AIX
- IBM WebSphere® MQ
- IBM WebSphere Application Server Enterprise
- IBM Rational® Software Architect
- IBM Research
- IBM Global Business Services® – Application Innovation Services



**Business Challenge:** This airline knew that it had the ingredients for optimizing its discretionary fueling decisions embedded in layers of flight operations data. The question was how to translate years of complex operational data relationships into a tool for dispatchers to accurately predict the fuel needs of every flight..

**The Smarter Solution:** The airline's First-of-a-Kind predictive fuel-planning solution uses statistical algorithms to analyze the fuel impacts of hundreds of factors, tracked over years, to create highly granular consumption scenarios. The self-service tool enables dispatchers to vary key inputs—such as expected weather or time spent taxiing—to fine-tune their decisions, thus avoiding costly over-fueling.

***“We are committed to reducing emissions by 50 percent by 2050. Analytics should make achieving that ambitious target easier by helping us take into account the complex relationships between all the factors affecting our operations to make even smarter decisions that maximize efficiency.”***

**~ Chief Executive Officer**

# A bank in Bulgaria uses analytics to enhance cross-selling opportunities, expand its customer base and increase sales

**20% increase** in sales through alternative banking channels

**15% boost** in customer satisfaction through more efficient transaction processing

**3 - 5% improvement** in cross-selling of value-added services

## Solution Components

- IBM® Rational® Studio Asset Analyzer
- IBM WebSphere® Application Server
- IBM WebSphere MQ
- IBM DB2® V9.5
- IBM z/OS®
- IBM z/VM®
- IBM System Storage® DS8000®
- IBM System z® Integrated Facility for Linux
- IBM Global Technology Services® – Integrated Technology Services



**Business Challenge:** By processing hundreds of thousands of transactions for third-party utility service providers, this bank in Bulgaria maintains a steady, reliable source of inbound cash flow. The bank wanted to capitalize on the vast trove of data held in customer transaction records to improve cross-selling opportunities and increase revenue.

**The Smarter Solution:** The bank implemented an analytics component that mines transaction data for more sophisticated insight about customer behavior, detecting likely candidates for cross-selling opportunities. The solution enables the bank to segment its customer base for more effective marketing initiatives.

***The cloud-based, integrated payment-processing and analytics component enables the bank to process customer transactions and gather and aggregate data simultaneously to gain a deeper understanding of customer behavior in near-real time.***

# Social References



# NS Shopping Co. Ltd. uses analytics and interactive mobile apps to help increase revenue with a personalized customer experience



**USD19.7 million** increase in profits over three years by expanding into mobile arena

**USD2.2 million** reduction in operating costs through improved efficiency resulting from a single view of the company's customer

**Boost sales** and customer retention rates with targeted offers

## Solution Components

- IBM® Global Business Services® – Business Consulting Services
- IBM Global Business Services – Application Innovation Services
- IBM System x3650 M4
- IBM Power® 770
- IBM System Storage® DS8870
- IBM WebSphere® Commerce Express
- IBM Worklight



**Business Challenge:** Although South Korea-based NS Shopping operated an e-commerce site, it was static and limited in product scope. The retailer was also missing out on significant opportunities from mobile sales channels.

**The Smarter Solution:** NS Shopping is transforming its e-commerce platform to personalize customer experiences and reach shoppers wherever they choose to purchase products. Analytics provide insight into individual consumer preferences by actively tracking shoppers' buying patterns and purchase histories on both the website and mobile interfaces. NS Shopping can use this insight to provide customers with a customized home page, automatic product recommendations and tailored promotions to personalize their shopping experience.

***“Retailers like NS Shopping are increasingly using advanced analytics to deliver a smarter, more personalized customer experience.”***

***~HeungKook Kim, president***

# A retailer in North America boosts sales by using mobile-driven insights to deliver targeted offers to shoppers at the point of decision

~15% increase in weekly sales revenue driven by online ads distributed through web and mobile channels

Reduced costs in marketing by shifting from print-based to digital ads

Improved in-store marketing conversion rates with near-real-time electronic coupons

## Solution Components

- IBM® WebSphere® Application Server
- IBM Worklight®
- IBM BladeCenter®
- IBM Self Checkout System
- IBM Business Partner BestFit Media LLC



**Business Challenge:** This large retailer in North America wanted to reach a younger audience and increase sales using digital avenues. It also sought deeper insight into shoppers' behaviors and preferences so that it could better target marketing investments and create more personalized shopping experiences.

**The Smarter Solution:** The retailer launched a customer-facing mobile app that delivers electronic coupons to in-store shoppers for products on nearby shelves. Wireless sensors interact with the app to track shoppers' traffic patterns to within inches and record how long they dwell in each spot. Advanced analytics use the data to determine in near-real time how best to target each shopper and also test which offers result in the greatest ROI. The retailer also uses a new content management system to create online ads for web and mobile channels.

***Using mobile devices to push personalized offerings to tech-savvy customers at the point of purchase, the retailer can strengthen its unique in-store experience and drive new sales.***