

CIO

PERSPECTIVES

Fueling Global Business Transformation at First Data

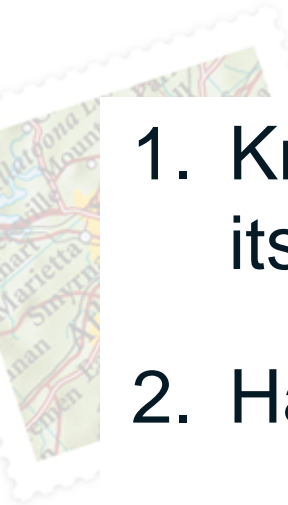


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EVP and CTO,
Global Operations and Technology



March 20, 2012

Transformation Warrior Rules

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1. Know your environment (industry, company) and its appetite for change
 2. Have a roadmap...with a destination
 3. Fully understand your capabilities and capacity to deliver on customer expectations

About First Data

First Data drives the world's largest transaction engine with a high degree of innovation, predictability and reliability in a global environment that is both complex and highly regulated.



1. Scale

Large Global Business

- \$10.7 Billion in 2011 Revenue
- No. 236 on 2011 *FORTUNE* 500
- 24,000 Employees / 34 Countries

Leading Transaction Processor

- \$1.5 Trillion U.S. Transaction Volume Settled
- 53 Billion Transactions Globally
- 11,000 Transactions Per Second (peak season)

Large Customer Base

- Over 6 Million Merchant Locations
- 4,000 Financial Institutions

2. Complex

Industry Complexity

- Rapidly-Evolving Global Industry
- Emerging Technologies

Business Complexity

- 500 Products Across 20 Categories
- Numerous Acquisitions

Data and Information

- Custodian of Billions of Data Points
- Sensitive and Critical Consumer Data

Operations and Technology

- Multiple Legacy Platforms
- Multiple Development Languages

3. Highly-Regulated

Regulatory Requirements

- Dodd-Frank Act (Durbin Amendment)
- U.S. State Regulations
- European Union Data Protection Directive
- Gramm-Leach-Bliley Act
- Federal Information Security Mgmt. Act

Industry Standards

- Payment Card Industry (PCI)
- ISO Standards Organizations

Contractual Commitments

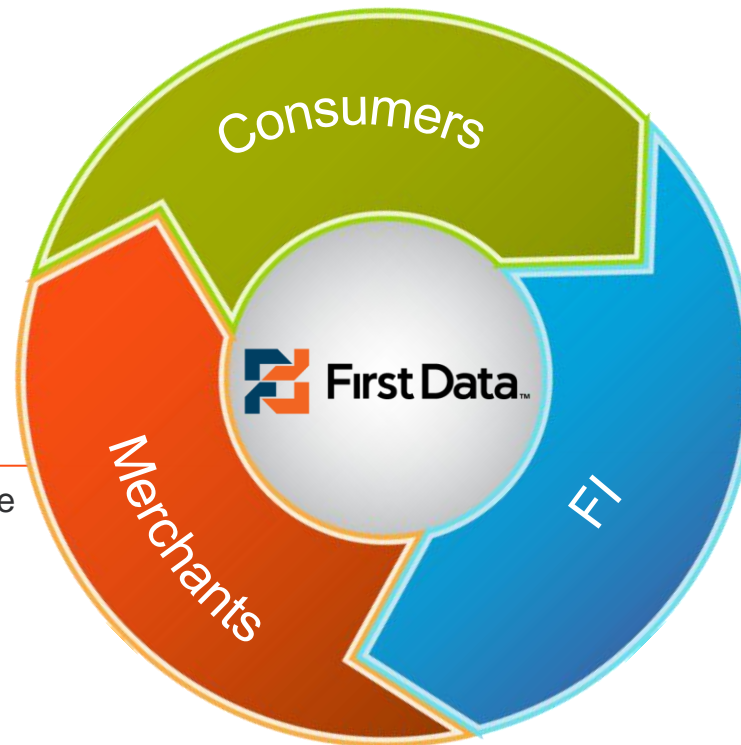
- Client-Specific Contract Obligations

The World We Serve Is Changing



Consumer Needs

- Anytime, anywhere access
- Consistent experience across technologies
- Simpler ways to manage accounts, offers, payments



Merchant Needs

- Tools to better integrate online and offline experience securely
- Improved information to drive marketing efficiency and personalization

Financial Institution Needs

- Ability to successfully compete against new market entrants
- Tools to keep payment cards “top of wallet” in a virtual world
- Cost-effective ways to maintain cardholder security

Introducing Universal Commerce



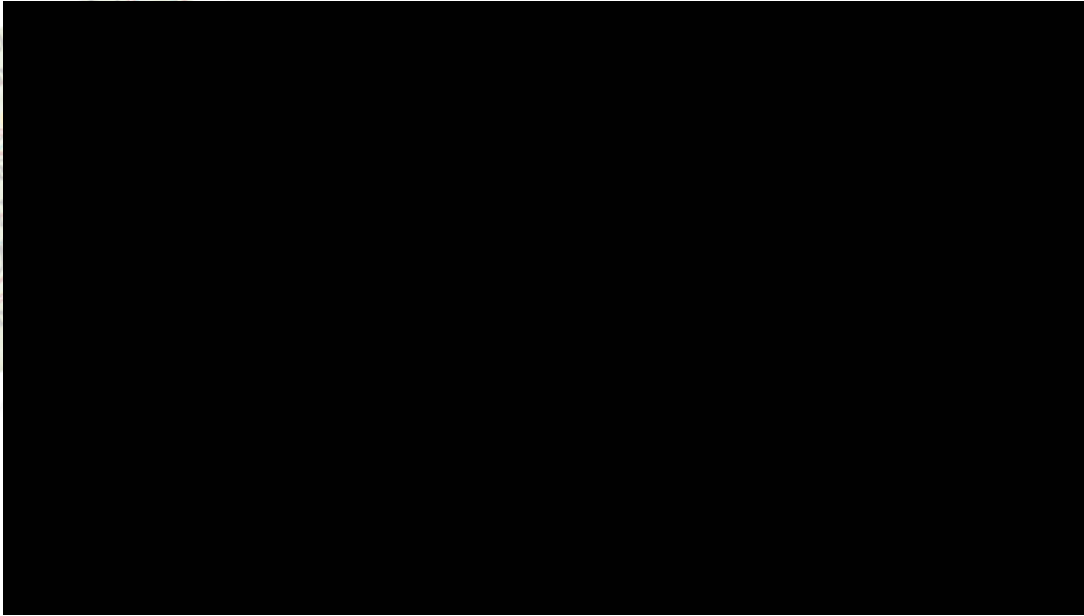
**UNIVERSAL
COMMERCE IS HERE**

Convergence:
in-store commerce, eCommerce,
and mobile commerce.

Consumers expect a more
integrated buying experience

PLAY UCOMMERCE VISION VIDEO

Introducing Universal Commerce



First Data must meet consumers'—and our customers'—expectations in a way that is **safe, secure and reliable**

Universal Commerce: Five Enablers




Enabling Infrastructure
Open, scalable and secure to create a
timely, consistent experience

Smart Devices
Connect consumers anywhere,
anytime to the things they
need and want

Integrated Applications
Deliver a seamless experience
across channels and functions


Partner Ecosystem
Innovative collaboration to satisfy
consumer expectations

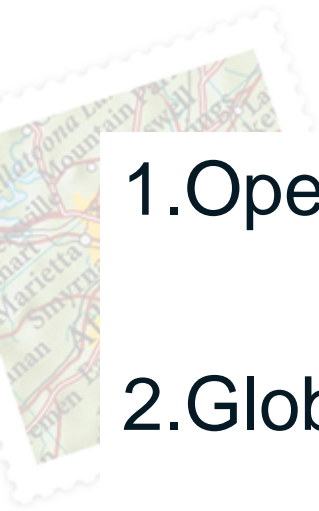

Actionable Intelligence
Valuable data to drive new levels
of targeting, personalization, and
measurement

First Data TransArmor® solution (RSA)
First Data Trusted Service Manager solution (CorFire)
First Data OfferWise^(sm) solution (CardSpring)





Global O&T: Fueling Business Transformation



1. Operating Environment
2. Global Technology Enablement
3. Customer Service Quality and Security
4. Revenue Enablement and Acceleration

Matrix Environment to Increase Agility, Velocity and Meet Customer Expectations

Global Technology and Product Solutions	Global Infrastructure	Global Service Delivery	Global Sourcing and Supply Chain Operations	Global Product Development	Enterprise Security, Risk and Compliance
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The **best people** and the **best leadership** to drive growth

Project **prioritization** and resource **optimization**

Product Development **tightly linked** Global Product Management and Innovation

Global client delivery linked to **local** leaders

Clear **ownership** and **accountability** for transformation initiatives

Operating discipline: service quality and **financial accountability**

Global Investments Supporting and Driving Structural, Sustainable Value

O&T Strategic Tenets

1. High availability
2. Differentiated customer service
3. Differentiate in security and risk management
4. Enable and accelerate revenue and growth
5. Increase productivity and efficiencies
6. Deliver world class client conversions
7. Build and leverage global talent

Strategic Enablers

- **High Availability** and Configuration Management Database (CMDB)
 - Global Command Center
 - **Defense-in-Depth**
 - Customer Care Workplace
-
- Global Technology Enablement Framework
 - First Data uCommerce^(sm) solutions
 - Google Wallet
 - First Data TransArmor® solution
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- Key Client Conversions
 - Key Projects: Integrated Managed Services
 - Regional Expansion
-
- **Optimize Cost Drivers**
 - **EMEA Data Center Consolidation**
 - Labor Arbitrage / Global Sourcing

O&T Destination

Customer Service Quality and Security

- Global parity
- Zero material security incidents

Global Technology Enablement

- Expand investments in core assets and products
- uCommerce phased deployment

Revenue Enablement and Acceleration

- Re-usability
- Speed-to-revenue

Cost Discipline and Productivity

- EBITDA growth
- Productivity & efficiency

Global Technology Enablement

Invest and expand strategic core assets; grow surrounds and product solutions → revenue acceleration

1 – The Core

Infrastructure

- High Availability
- Defense-in-Depth
- European Data Center Consolidation
- Global Information Transformation
- Configuration Management Database

Core Product Development

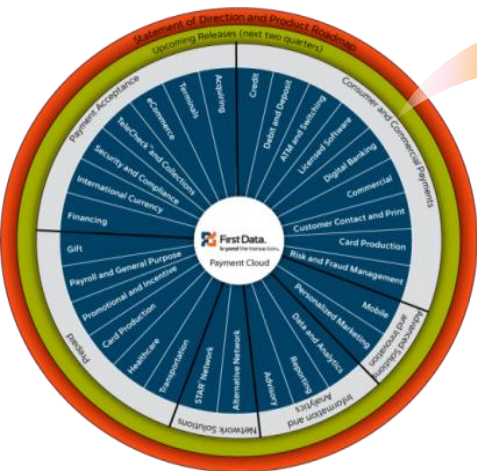
2 – Core Expansion

- ICICI – India
- Brazil market entry
- TeleCash – Germany

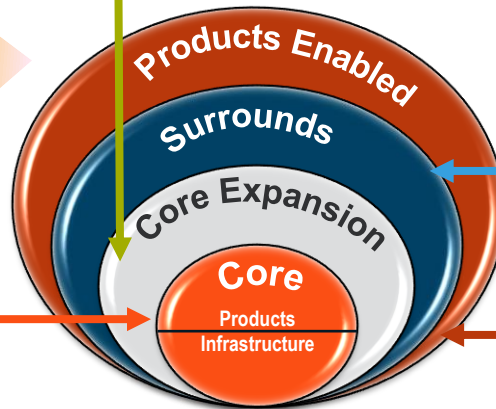
3 – Surround Modules – Extra Value Add Investments

- Sales
- Credit/Risk
- **Boarding**
- Activation
- **Fraud**
- Servicing
- Authentication
- **Authorization**
- Settlement
- Output Management
- **Reporting/Analytics**
- **Mobility**

FD Solutions Maps



Aligned



4 – Products Enabled

- Trusted Service Management
- **First Data TransArmor® solution**
- **Business Intelligence/Analytics**
- Smart Routing
- **First Data uCommerce(sm) solutions**
- RapidConnect
- EMV
- **Real-Time Offers**

High Availability and Consistent Service Quality



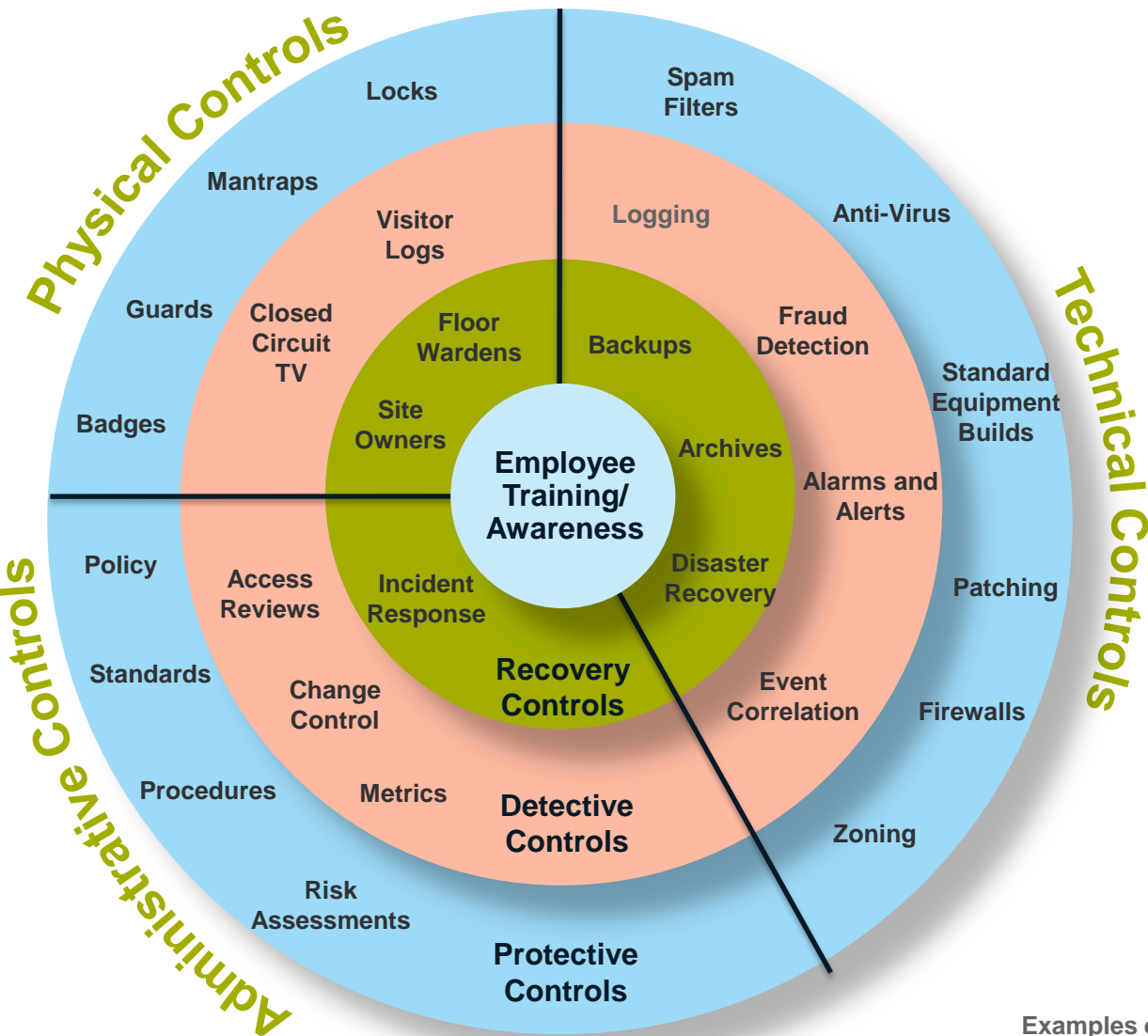
2012 Investments Underway

- ✓ **EMEA Data Center Consolidation**
- ✓ **100% of business services captured in CMDB** i.e. Acquiring, Authorization, Settlement, Fraud, Reporting
- ✓ **Bratislava Global Command Center leveraging U.S. infrastructure and CMDB:** monitoring, alerting, advanced event correlation, business transaction monitoring
- ✓ Global implementation of Service Desk integrated with CMDB **consistency in service quality and workforce efficiency**
- ✓ Enhance **global failover capabilities**

2011 Key Performance Indicators

- ✓ **Zero** material incidents
- ✓ Critical system availability: **US:99.98% Int'l: 99.97%**
- ✓ **73% Reduction** of Incidents Caused by Change (ICBC)
- ✓ **62% reduction** in Severity 1 and 2 incidents

First Data's Defense-in-Depth Investments



Use Case: Apache Killer

- Emerging threat exploited Apache vulnerability
- First Data received credible intel two weeks prior to activation
- 983 Apache servers patched in 14 days
- Patches completed prior to reported attacks

Global Technology Framework: Build Once, Deploy Many



Core Payment Processing Capabilities

Enabling Applications – Enterprise Portal, Enterprise Data, Prepaid Mobile Enablement

Core Surround Systems – Data Analytics, Gateways, Business Track Portal, Smart Routing Capabilities, Fraud

Product and Service Enablement – Rapid Connect, Trusted Service Manager, TransArmor, Outbound Retention Services, Offers, Internet Payment Gateway (others TBD)

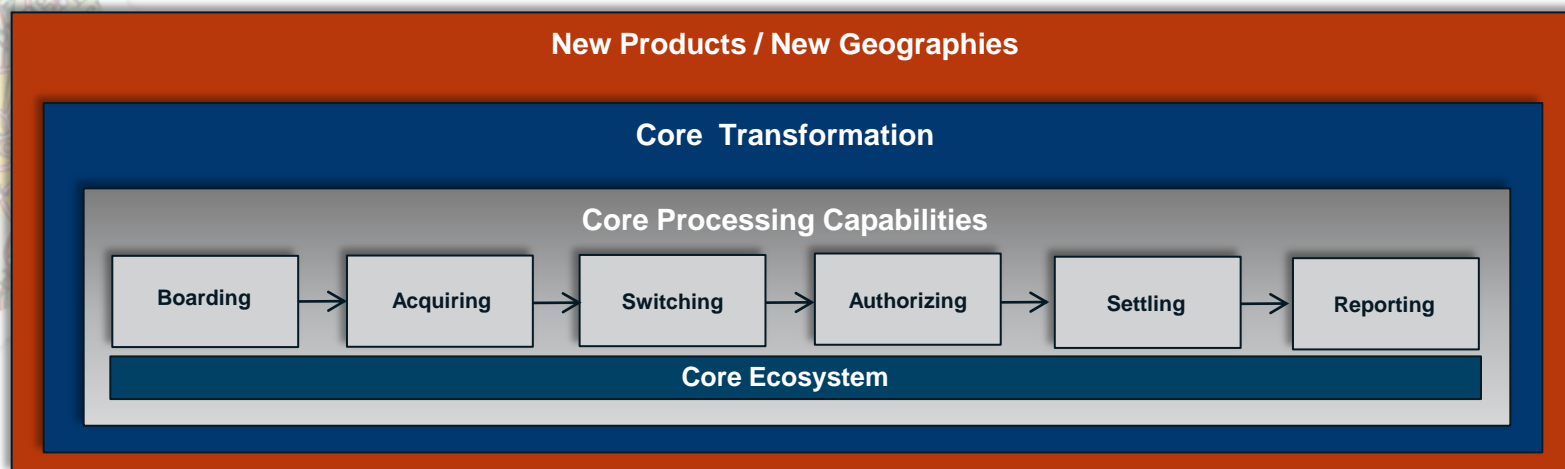
Architecture and Technology Advancements:
TERA, SOA, Published Standards, Technology Roadmaps, E2, GCC

Use Case: Trusted Service Manager and Prepaid Deployment in Google Wallet



- App that securely stores credit cards, offers and gift cards on mobile phone
- Partnership between First Data, Google, Mastercard, Citibank and Sprint
- Wallet powered by First Data Trusted Service Manager solution
- Google Prepaid Card powered by First Data's Money Network
- Open, scalable and secure

First Data Re-Usability: Google Wallet



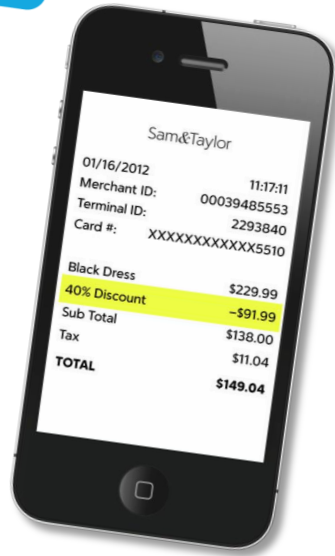
SOA and re-use of existing capabilities significantly increased speed of delivery by 63%

Re-using **Mobile Gateway** increased speed of delivery; provided off-the-shelf solution for integrating back-end services, routing and formatting messages, and data preparation for audit and compliance

Developed re-usable **Trusted Service Manager** capabilities (with CorFire) for over-the-air card provisioning, encryption and digital signature capabilities, and a web-enabled real-time data preparation engine

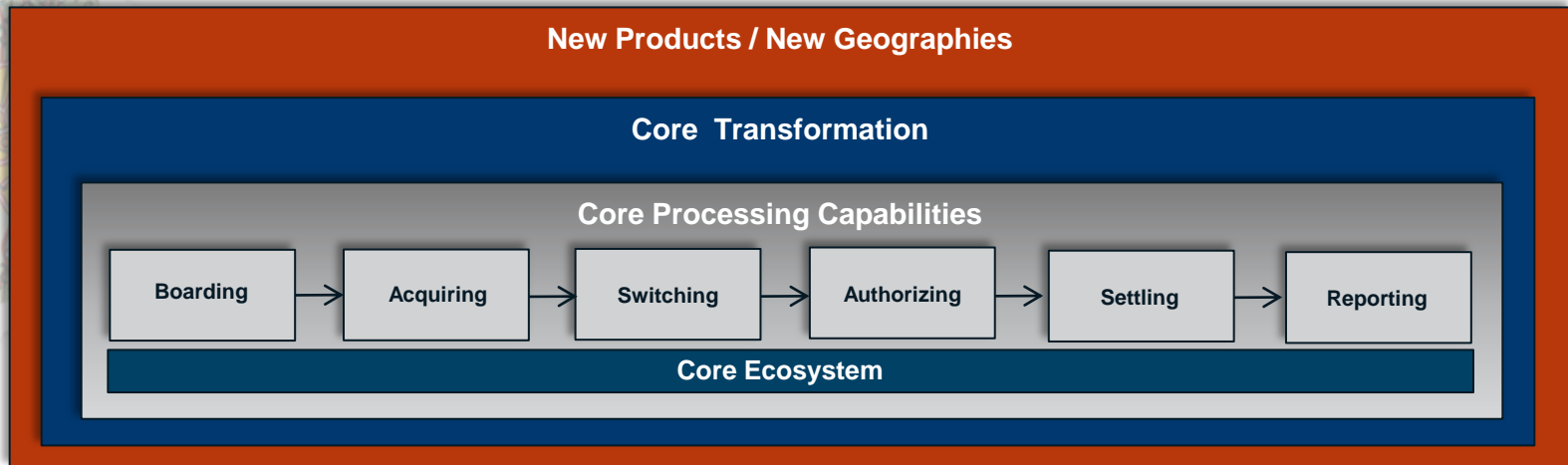
Prepaid solutions included in the initial release. Reusable services provided by First Data's Mobile Gateway enabled seamless integration for prepaid cards in wallet

Use Case: Real-Time-Offers



- Simplifies offer redemption process for merchants
- Electronically attaches deals, eCoupons and loyalty programs to payment cards or mobile wallet
- Automatic redemption at the point-of-sale
- CardSpring API enables integration with multiple publishers
- Open, scalable and secure

First Data Re-Usability: Real-Time-Offers



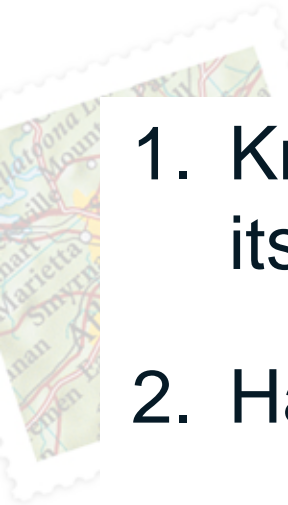
SOA and reuse of existing **Data Power** and **Secure Web Services** capabilities significantly increased speed of delivery

Reuse of **First Data TransArmor®** solution increased speed and quality of delivery and provided a solution for tokenization and cryptography services to secure transactional data

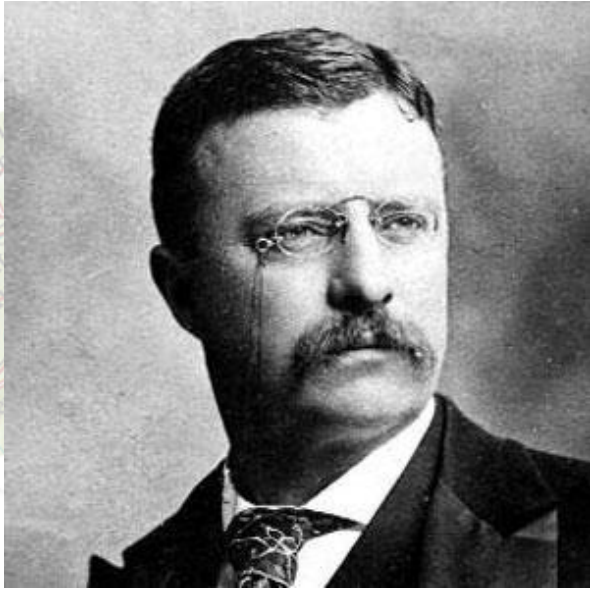
Developed **New Java Connectivity Architecture (JCA)** based capability for OfferWise, which can be reused by future applications

Standard Web Service APIs position OfferWise alongside legacy FEs facilitating rapid product expansion and adoption

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Roosevelt Said it Best...



*“The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who errs, **who comes short again and again**, because there is no effort without error and shortcoming who at the best knows in the end **the triumph of high achievement**, and who at the worst, if he fails, at least fails while **daring greatly**, so that his place shall never be with those cold and timid souls who neither know victory nor defeat.”*