

The Technology Behind the Brand: Driving Rewards, Service & Value at Discover Financial Services

Glenn Schneider

CIO, SVP – Business Technology

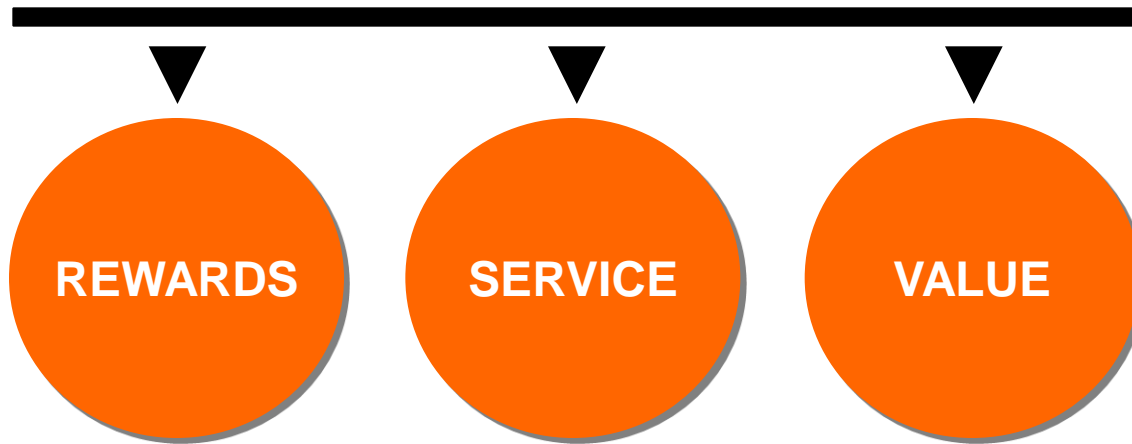
Discover Financial Services

September 14, 2011

Becoming the leading direct banking and payments company



It pays to **DISCOVER**



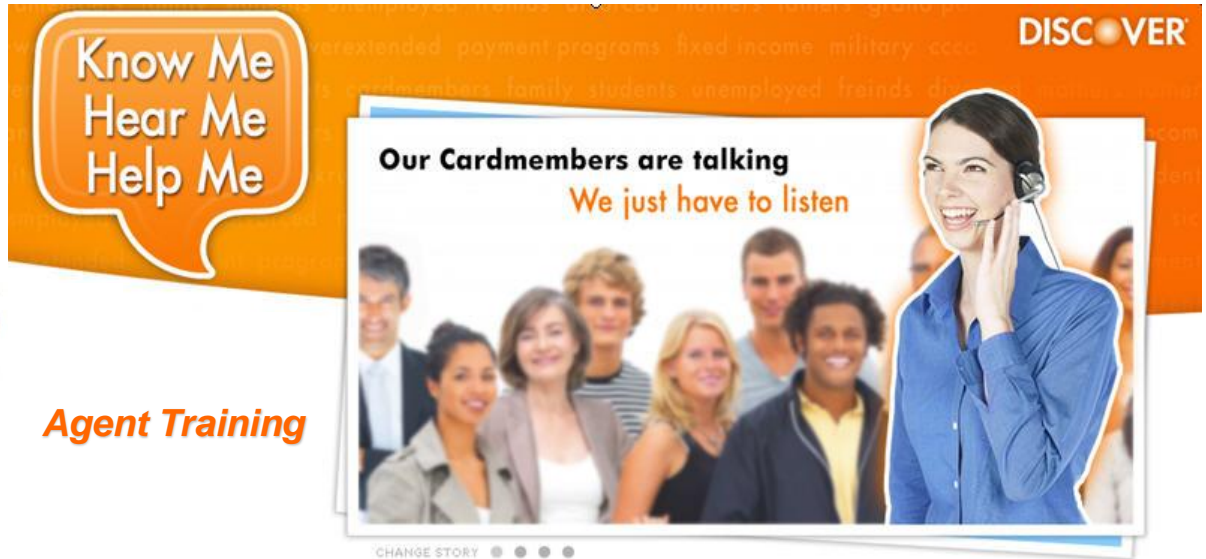
The Technology Behind the Brand



All **great change in America
begins at the dinner **table**.**

– Ronald Reagan

Key Role in Customer Assistance



- Developed customized solutions using data analytics
- Implemented situational agent training
- Expanded self-service channels

Innovations in Mobile

DISCOVER



**US Total
Consumer Spending
\$8.2 Trillion**

**US Annual
Ecommerce
Retail Sales
\$158 Billion**

**US Annual
Mobile Commerce
\$3.4 Billion**

Key Statistics

- US mobile payments are expected to grow to \$57 billion in 2015
- More than 50% of US consumers and 80% of those between 18 and 35 will use mobile financial services within 5 years
- Nearly 1/3 of current smartphone users access the internet solely through their phone
- Global mobile transactions will grow from \$241 billion in 2011 to more than \$1 trillion by 2015

The Technology Behind the Brand



**The will to win is important,
but the **will to prepare** is vital.**

– Joe Paterno

Credit Card Industry – The Goldilocks Syndrome **DISCOVER**



Optimal mix of risk and return.



1% increase in unemployment / bad debt
can erode industry profit by ~ \$4 Billion

The Agony of Choices

Short-term or
long-term?

Expense/resource
allocation?

Profitability
or growth?

Protect customer
base or grow
market share?

Usage vs. brand?
Customers vs. prospects?

Analyzing the Options

Sample Business Prioritization Report

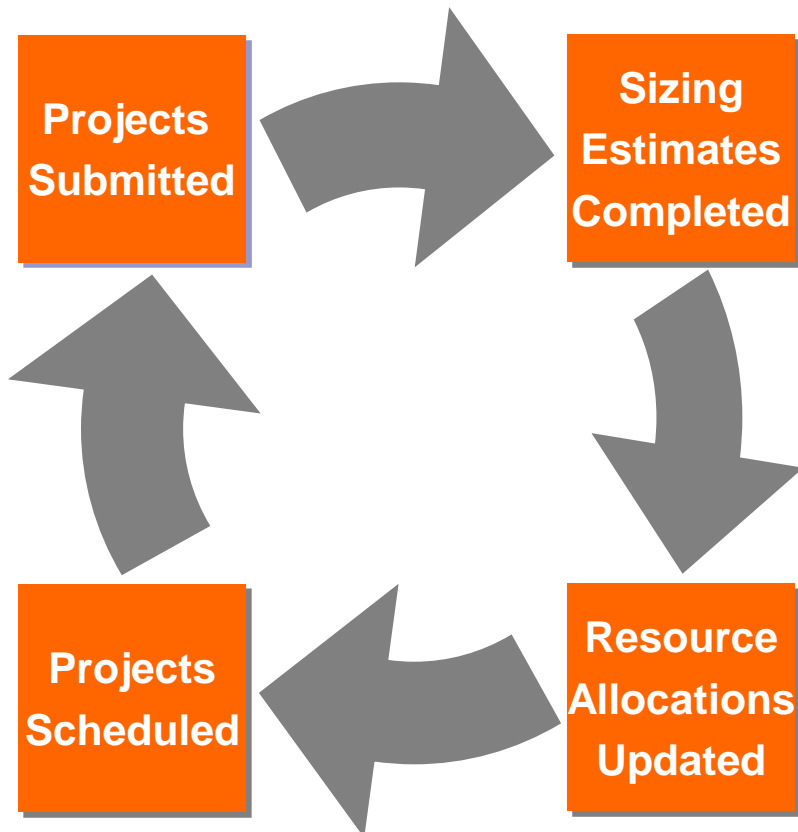
Project	Alignment to Priorities	Requested Date	Project Size	Start	Estimated Benefits			Priority
					Year 1	Year 2	Year 3	
Project A	New Customers	8/2011	Medium	2/2011	\$1,900,000	\$3,500,000	\$2,800,000	1
Project B	Increased Sales	10/2011	Large	1/2011	\$225,000	\$380,000	\$530,000	3
Project C	Compliance	7/2011	Small	4/2011	\$0	\$0	\$0	7

Business Factors

- Cost/Benefit
- Strategic goal alignment
- Regulatory
- Dependency on other projects
- Business resource availability



Continuous Project “Calendarization”



Technology Factors

- Technology resource availability
- Size and scope of project
- Applications impacted
- External party involvement

Sample Resource Availability Report

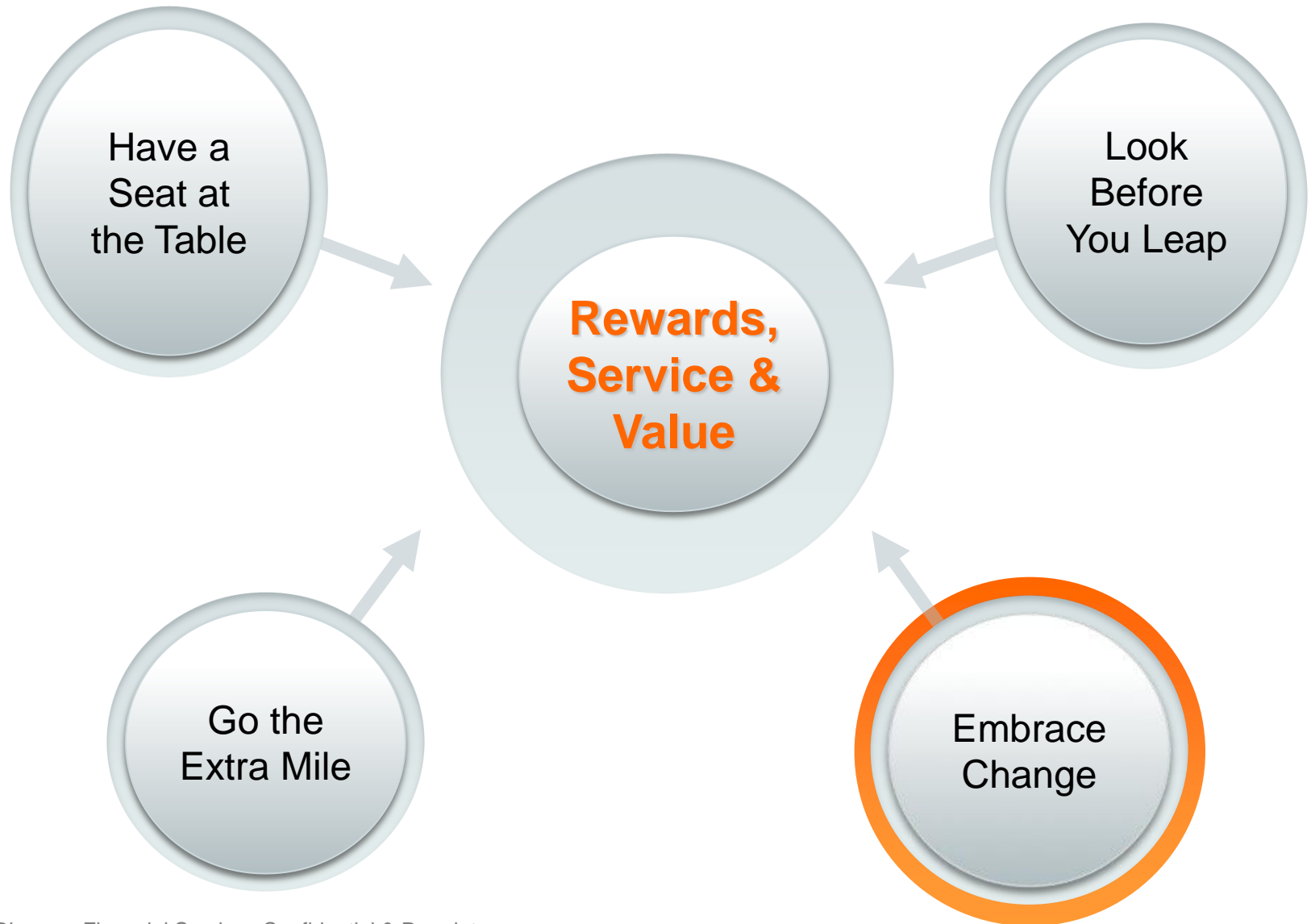
Team	Total	Sep	Oct	Nov	Dec
Team A	22.0	-3.00	-1.00	-1.00	11.00
Team B	11.0	-2.00	-1.00	0.00	0.00
Team C	15.0	0.00	1.00	1.00	9.00
Team D	12.0	0.50	1.00	2.00	7.00

Investment Council

- Corporate goal alignment
- Trade-off decisions
- Cross-functional communication

	Capital	2011	2012	2013
Revenue				
Cost Reduction				
Total Benefits				
Expense assoc. with Capital				
New Expense				
Net Incremental P&L				
Incremental Headcount				
Existing Asset Allocation				
Existing Comp Allocation				
Fully Loaded Project Costs				
Total Project P&L Impact				

The Technology Behind the Brand



**Give me six hours
to chop down a tree
and I will spend the first four
sharpening the axe.**

– Abraham Lincoln

Core Issue

Inexhaustible demand for new data sources

Traditional waterfall development not fast enough

Rapidly changing market conditions

Solution

Business and Technology time-boxed sprint sessions

Flexibility to add or drop requirements

Schedule and be ready

Prototype solution

Goal

- Meet stated business objectives
- Deliver 60 Data Attributes from 3 to 5 sources in one week timeframe
- No impact to production stability

Participants (8-10)

- Project Manager, Technology Business Analysts
- Business Partner/Subject Matter Experts
- DBA, Data Modeler, ETL Developer, Data Quality

Logistics

- Development starts Monday and ends Friday
- Implementation the following week
- Laptops, food, wikis

Benefits

- Clear goals
- Shared objective between Technology and Business
- No communication barriers
- Empowerment of the participants

Key Challenges

**Breaking momentum
of status quo**

**Business buy-in/
dedication of resources**

**Fear of
loss of quality**

**Right sizing
the process**

The Technology Behind the Brand



Growth is never
by mere chance;
it is the result of forces
working together.

– James Cash Penney

Core Issue

UAT completed by line staff
with down time

Delays due to instability of
resources

Inexperience with industry best
practices

Increase in defects related to
change

Solution

Develop structured
Center of Excellence

Utilize experienced testing
resources

Increase consistency at
every stage

Reduce rework and
increase automation



**13% increase
in change**



**36% decrease
in defects
due to change**


Standardization



Availability

1

Online Availability Metrics



BT/AVM

Collect.Measure.Distribute.

Search SC Tickets, Keywords, Action Items

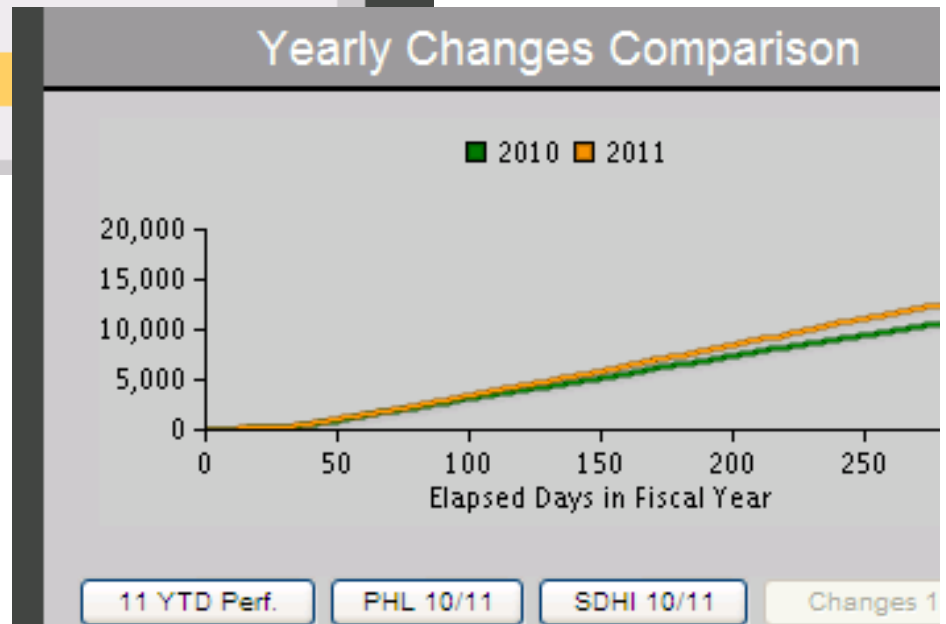
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Critical Applications ➔

POINT OF SALE -- 99.999%

APPLICATION	MTD AVAIL	YTD AVAIL	DOWNTIME REMAINING	YTD DOWNTIME
SAMPLE APP 1	●	●		
SAMPLE APP 2	●	●		
SAMPLE APP 3	●	●		
SAMPLE APP 4	●	●		



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