Transformation at Bank of America
An Enterprise Systems Analysis

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Daniel Wallance
System Design & Management Fellow
Massachusetts Institute of Technology
MIT System Design & Management (SDM) Program

• Sloan School of Management
  – #3 for business, 2010 (US News)

• MIT School of Engineering
  – #1 for engineering, 2010 (US News)

• 13 to 24 month master’s program
  – Management & engineering
  – Systems thinking focus
  – Students have extensive industry experience

• SDM Master’s thesis
  – Focus is on large scale systems – i.e. enterprises
  – Involves outside companies and are advised by MIT Professors

Sources:
Assorted SDM marketing material
System Design and Management Program, 2011
U.S. News & World Report LP., Best Engineering Schools, 2010
U.S. News & World Report LP., Best Business Schools, 2010

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Professional Backgrounds

Daniel Wallance – SDM Fellow

- Four years experience in the financial industry
- Most recently Director of Operations & Investment Analyst at BGS Investments LLC, hedge fund
- Previously consultant to Honeybee Robotics, NASA contractor

- M.S. degree, 2011 - Massachusetts Institute of Technology
- B.S. degree, 2004 - Worcester Polytechnic Institute

Professor Nightingale – Professor of the Practice

- Co-Director MIT Lean Advancement Initiative (LAI)
- Research is focused on lean enterprise integration, enterprise architecting, and organizational transformation
- 35+ years experience in academia, government, private sector
- Led multiple lean transformation initiatives in industry & government
- Prior to MIT, held executive positions in operations, engineering, and program management at Allied Signal
Bank of America Corporation (BAC)

- Fortune 500 – listed in 5th place in 2010
- One of the largest financial institutions in the world
- Operations in 40+ countries

- Deals with 98% of the Fortune 1,000 companies in the U.S.
- 50% of all households in the United States use Bank of America services
- 80% of the U.S. has access to BAC retail service locations

Sources:
Bank of America Corporation - Key Facts

- 59 million deposit consumers and small businesses
- 5,900 retail branch offices
- 18,000+ ATMs
- 29+ million online users in 2009
- $419.6 billion in consumer deposits (2009)

Sources:

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California Northwest (CANW) Region

Geography
- California
- Idaho
- Washington

Accounts
- 3.6 million in Northwest
- 15.6 million in California

Deposits
- $141 billion in California
- $22.6 billion in Northwest

Banking center locations
- California: 976
- Northwest: 254

Banking Center Associates: 16,620
Customer Support Associates: 10,000

CANW has 29% of all retail consumer deposit accounts

Sources:
Gerringer, 2010, p. 2; Executive Framework Review, 2010, p. 4
CANW Transformation

- California, Idaho, and Washington
  - Essential systems were integrated during the NationsBank and BankAmerica merger
  - CANW’s banking platform remains a legacy system

  - Focus is now on transforming the legacy retail banking platform and converting deposit accounts to the rest of Bank of America’s Model environment

  - Current CANW transformation is the 3rd attempt

Sources:
Skvoretz, September - November 2010
Research Questions & Approach

Research Objective
- To evaluate the effectiveness of, from an enterprise system perspective, the transformation process that Bank of America is using for the CANW initiative

Questions
- Is the process used for transition also truly applicable to transformation?
- Are BAC’s transformation processes and procedures “complete and effective”?
- What additional factors need to be considered?

Approach
- Use the California Northwest transformation as a case study for research
Research Questions & Approach

**Information**
- California Northwest transformation assessment documents
- Meetings and interviews with change management executives
  - Tracie Davis - SVP, Senior Change Consultant
  - Karen McKinney - SVP, Change Management Executive
  - Bryan McNeill – VP, Senior Change Manager
  - Jonathan Skvoretz (Executive Sponsor) - SVP, Change Management Executive
- Public documents including SEC filings, investor material, and press releases

**Limitations**
- Access to a limited set of California Northwest documents and executives
- CANW initiative is ongoing – not all aspects exist or are complete, i.e. metrics
- Conclusions and recommendations are therefore based on material reviewed

Sources:
Skvoretz, September 8, 2010
## Transition vs. Transformation

### Two Types of Change at Bank of America

<table>
<thead>
<tr>
<th>Transition</th>
<th>Transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>− Integration of an acquired business</td>
<td>≠ − Internal system conversion &amp; enterprise improvement</td>
</tr>
<tr>
<td>− An “all hands on deck” mentality exists across the Bank</td>
<td>≠ − No significant transformation mandate appears to exist</td>
</tr>
<tr>
<td>− Stockholder and public awareness is significant</td>
<td>≠ − Limited awareness by stockholders and the public</td>
</tr>
<tr>
<td>− Verbal commitment to investors on synergy cost savings from a specific transition</td>
<td>≠ − Investors informed of intended outcome from aggregate transformation initiatives</td>
</tr>
<tr>
<td>− Hard stop date and defined budget</td>
<td>≠ − No specific completion date and set budget</td>
</tr>
<tr>
<td>− Transition process used</td>
<td>= − Transition process used</td>
</tr>
</tbody>
</table>

Sources: Skvoretz, September - November 2010; BAC Discussion, 2011

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Transition vs. Transformation

- Bank of America historically has focused on transition
- Merrill Lynch represents the end of transition
- Focus shifting to internal transformation, enterprise improvement

Adapted from Bank of America Corp., How Change Has Evolved, p. 3
ESAT: Enterprise Strategic Analysis and Transformation

- Developed by the MIT Lean Advancement Initiative (LAI)
  - Government and industry provided testing

- Methodology for enterprise transformation
  - Takes a holistic view of the enterprise
  - Focuses on enterprise-wide processes and end-to-end value streams
  - Considers all stakeholders and their needs

- Reveals areas for improvement and waste elimination
  - Completing ESAT produces an enterprise transformation plan

ESAT Transformation Roadmap

0. Leadership Engagement
1. Define the Enterprise
2. Collect Data
3. Construct Current State Perspectives
4. Identify Enterprise Opportunities
5. Describe Future State Vision
6. Create Transformation Plans
7. Create Actionable Projects
8. Create Deployment Plan

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Sources:
Nightingale, Stanke, and Bryan, 2008, p. 3, 6-9, 15, 17-19
## ESAT vs. BAC CANW Transformation

<table>
<thead>
<tr>
<th>ESAT</th>
<th>BAC Transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Considers all stakeholders and their needs</td>
<td>• Limited focus on selection of few key stakeholders to drive benefits</td>
</tr>
<tr>
<td>• Focus on end to end value stream mapping and waste elimination</td>
<td>• Focus on individual tasks and projects</td>
</tr>
<tr>
<td>• Future state vision unknown upon commencement</td>
<td>• Target environment is know at the start of the transformation</td>
</tr>
<tr>
<td>• Holistic enterprise view - value stream and supporting processes</td>
<td>• Considers all processes (primary and supporting)</td>
</tr>
<tr>
<td>• “Develop exit strategy for each project proposed”</td>
<td>• Significant consideration of when to turn over a project to BAU</td>
</tr>
<tr>
<td>• Strong focus on use of metrics to track enterprise performance</td>
<td>• Metrics used to track transformation progress</td>
</tr>
</tbody>
</table>

Sources:
Nightingale, Stanke, and Bryan, 2008, p. 10-11, 17-19, 30
Research & analysis based on the ESAT methodology

- Stakeholder analysis
- Enterprise goals, processes, metrics
- X-Matrix alignment evaluation
Stakeholder Analysis

Processing Improvement Views

• Stakeholder-focused analysis
  – Seek to maximize value for all stakeholders
  – Provide value to stakeholders based on individual importance to the enterprise
  – Target needs a stakeholder places high value upon but are not delivering sufficient value

• CANW transformation approach
  – “Reduce BAC’s operational risk” appears to be the primary justification for the investment in the transformation initiative
  – Bank of America stockholders receive the benefit of decreased operational risk
  – Other stakeholders and needs appear to be of secondary consideration
## CANW Stakeholders: Identified by BAC

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Customers &amp; clients</strong></td>
<td>Consistent banking experience</td>
</tr>
<tr>
<td></td>
<td>Best products, advice, and service</td>
</tr>
<tr>
<td></td>
<td>Additional features and services</td>
</tr>
<tr>
<td></td>
<td>Receipt of debit cards for out of state accounts</td>
</tr>
<tr>
<td></td>
<td>Nationwide linking and servicing of accounts</td>
</tr>
<tr>
<td></td>
<td>Single point access to bank and brokerage statements and accounts</td>
</tr>
<tr>
<td></td>
<td>Combined California banking statements</td>
</tr>
<tr>
<td></td>
<td>“Relationship pricing” across all BAC states</td>
</tr>
<tr>
<td></td>
<td>Combined overdraft protection from savings and checking</td>
</tr>
<tr>
<td></td>
<td>Little to no impact felt during system conversion</td>
</tr>
<tr>
<td><strong>Associates</strong></td>
<td>Simplified service platform</td>
</tr>
<tr>
<td></td>
<td>Single set of processes and procedures across the banking system</td>
</tr>
<tr>
<td></td>
<td>Minimal amount of complex training</td>
</tr>
<tr>
<td></td>
<td>Quality online experience</td>
</tr>
<tr>
<td><strong>Compliance Officers &amp; Risk Managers</strong></td>
<td>Simplified ability to make system changes in fluctuating regulatory environment</td>
</tr>
<tr>
<td></td>
<td>Reduction in operational risk</td>
</tr>
<tr>
<td><strong>Technology Associates</strong></td>
<td>IT support cost reduction</td>
</tr>
<tr>
<td></td>
<td>Decrease in custom infrastructure</td>
</tr>
<tr>
<td></td>
<td>Reduced development costs</td>
</tr>
<tr>
<td><strong>Marketing Executives</strong></td>
<td>Single marketable platform</td>
</tr>
<tr>
<td></td>
<td>Ability to offer “advanced features and services”</td>
</tr>
<tr>
<td></td>
<td>Flexibility to respond to changing market demand</td>
</tr>
<tr>
<td><strong>Stockholders</strong></td>
<td>Long-term, consistent returns (dividends, capital appreciation)</td>
</tr>
<tr>
<td></td>
<td>Quality balance sheet</td>
</tr>
<tr>
<td></td>
<td>Risk management</td>
</tr>
</tbody>
</table>

Sources:
- Executive Framework Review, 2010, p. 6; Steering Committee, August 2010, p. 14; Steering Committee, September 2010, p. 5-6, 12;
# CANW Stakeholders: Other

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ratings agencies</strong></td>
<td>Revenue and service fees&lt;br&gt;Source of work for its employees&lt;br&gt;Sufficient access to Bank documents, associates, and executives</td>
</tr>
<tr>
<td><strong>The public</strong></td>
<td>Economic stability and growth; Access to capital&lt;br&gt;Stability of banks, financial institutions, and financial markets&lt;br&gt;Government receipt of corporate taxes</td>
</tr>
<tr>
<td><strong>Local communities</strong></td>
<td>Regional employment&lt;br&gt;Municipal (local) taxes&lt;br&gt;Access to cash&lt;br&gt;Community support: local philanthropic and environmental initiatives</td>
</tr>
<tr>
<td><strong>Change execution team</strong></td>
<td>Senior management / C-level support&lt;br&gt;Change execution mandate / backing&lt;br&gt;Resources (monetary &amp; non-monetary)&lt;br&gt;Employment and job satisfaction&lt;br&gt;Monetary and non-monetary compensation&lt;br&gt;Professional development and career advancement</td>
</tr>
<tr>
<td><strong>Debit-Card partners</strong></td>
<td>Service advertising platform&lt;br&gt;Customer retention and new customer acquisition</td>
</tr>
<tr>
<td><strong>Endorsing organizations</strong></td>
<td>Royalty payments&lt;br&gt;Reputable products to endorse&lt;br&gt;Retention of individuals on its member lists</td>
</tr>
<tr>
<td><strong>Regulatory bodies</strong></td>
<td>Compliance with applicable regulations&lt;br&gt;Simple banking platforms &amp; systems to oversee financial market stability&lt;br&gt;Action taken in the public’s best interest&lt;br&gt;FDIC insurance fund, other banking industry, and non-compliance fees</td>
</tr>
</tbody>
</table>

Sources:

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Stakeholder Value Comparison: Key Insights

• Associates / employees
  – Balance between value received from and importance to the enterprise

• Outliers
  – Stockholders
    • Critical to Bank of America -- often viewed as #1 stakeholder
    • To stockholders, BAC is just one of a series of investments
  – The Public
    • Receives significant value – i.e. financial market stability and functioning capital markets
    • BAC receives little value from the public as a whole (non-customers)

• Stakeholder need / value charts located in Appendix

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Overview: Goals, Metrics, Processes

• Research
  – Reviewed assessment material for CANW metrics, goals, and processes, either stated or implied
  – Condensed lists to 20 key metrics, goals, and processes
  – Reviewed lists with change management executives

• Analysis
  – Evaluated CANW goals using industry standard framework
  – Assessed alignment of goals, metrics, processes, and stakeholder values using X-Matrix ESAT tool
  – Recommended consideration of additional metrics, processes, values, and goals
## Enterprise System Requirements

<table>
<thead>
<tr>
<th></th>
<th>Necessary</th>
<th>Clear &amp; Concise</th>
<th>Measurable</th>
<th>Achievable</th>
<th>Verifiable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nationwide Consistency</td>
<td>✓</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Nationwide Product Rollout</td>
<td>?</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Standard Enterprise-wide Processes and Technology</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Enhanced Customer and Client Experience</td>
<td>?</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Decreased Operating Complexity for Associates</td>
<td>?</td>
<td>✗</td>
<td>?</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Maintain BAC’s Reputation</td>
<td>✓</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Decreased Operational Risk</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
<td>?</td>
</tr>
<tr>
<td>Greater Number of Products and Services Offered</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Sources:
- Steering Committee, September 2010, p. 8; Steering Committee, August 2010, p. 4, 8, 13; Gerringer, 2010, p. 2-3;
### Enterprise System Requirements

<table>
<thead>
<tr>
<th>Necessary</th>
<th>Clear &amp; Concise</th>
<th>Measurable</th>
<th>Achievable</th>
<th>Verifiable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimize Conversion Adverse Customer &amp; Associate Issues</td>
<td>✓</td>
<td>✓</td>
<td>?</td>
<td>✓</td>
</tr>
<tr>
<td>Decreased Risk of Compliance Failure</td>
<td>✓</td>
<td>✓</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>Reduce Operating Costs by (x) to (x) Million by 20xx</td>
<td>?</td>
<td>✓</td>
<td>✓</td>
<td>?</td>
</tr>
<tr>
<td>Facilitate Revenue Growth</td>
<td>×</td>
<td>?</td>
<td>×</td>
<td>?</td>
</tr>
<tr>
<td>Decreased Technology Complexity</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Decreased Potential for Technology Problems</td>
<td>✓</td>
<td>✓</td>
<td>?</td>
<td>✓</td>
</tr>
<tr>
<td>Decreased Technology Dev. &amp; Deployment Time and Cost</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Sources:
- Steering Committee, August 2010, p. 4, 13; Gerringer, 2010, p. 3; Executive Framework Review, 2010, p. 3, 5;
- International Council on Systems Engineering, 2010, p. 76-77

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ESAT Tool: X-Matrix

- Analyzes internal enterprise alignment
- Answers “does an enterprise’s metrics, processes, strategic objectives, and stakeholder values align?”
- Are there processes that do not deliver value to stakeholders?

- Three possibilities
  - Blue = strong alignment
  - Yellow = weak alignment
  - White = no alignment

  - The more blue and yellow, the better!

- Where attributes are not aligned, elements need to be recognized or developed

Sources:
Nightingale, Stanke, and Bryan, 2008, p. 47-48

Source: ESAT X-Matrix template, MIT Lean Advancement Initiative (LAI)

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X-Matrix Results

**Strategic Objectives vs. Stakeholder Values**

- Map to “Minimize conversion adverse customer and associate issues” by adding
  - Uninterrupted consumer retail deposit access
  - Uninterrupted consumer services
  - Continuous access to consumer accounts
  - Uncompromised ability to service customers

- This is the most complete quadrant
X-Matrix Results

Stakeholder Values vs. Key Processes

- Communication and training processes -- add values
  - Execution of communication responsibilities
  - Knowledge of service offerings
  - Awareness of product and service changes
  - Successfully perform one's day to day duties
  - Successfully offer and deliver quality service

- Eliminate secondary values uncritical to transformation
  - Return on investment
  - Long-term, consistent returns

- Add processes to monitor and mitigate risk to BAU
  - Transformation risk monitoring
  - Transformation risk mitigation
  - Resolve undesirable emergent issues

### Key Processes

<table>
<thead>
<tr>
<th>Stakeholder Values</th>
<th>Key Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop communication plan</td>
<td>Return on investment</td>
</tr>
<tr>
<td>Develop training plan</td>
<td>Long-term, consistent returns</td>
</tr>
<tr>
<td>Train associates</td>
<td>Uninterrupted consumer retail access</td>
</tr>
<tr>
<td>Communicate changes to associates</td>
<td>Uninterrupted consumer deposit access</td>
</tr>
<tr>
<td>Inform customers</td>
<td>Continuous access to customer accounts</td>
</tr>
<tr>
<td>Transformation risk monitoring</td>
<td>Uncompromised ability to service customers</td>
</tr>
<tr>
<td>Transformation risk mitigation</td>
<td>Execution of communication responsibilities</td>
</tr>
<tr>
<td>Resolve undesirable emergent issues</td>
<td>Knowledge of product and service changes</td>
</tr>
<tr>
<td>Successfully perform one's day to day duties</td>
<td>Successfully offer and deliver quality service</td>
</tr>
</tbody>
</table>

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X-Matrix Results

Key Processes vs. Metrics

- Communication and training processes -- add metrics
  - Associates trained
  - Customers notified
  - Customer satisfaction level

- Add metrics to track monitoring and mitigation of BAU transformation risk
  - Incident resolution time
  - Transformation operational risk incident & severity
  - System uptime for customer access

Note: number of incidents is not indicative of incident severity

<table>
<thead>
<tr>
<th>Metrics</th>
<th>Key Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of systems monitored</td>
<td>Develop communication plan</td>
</tr>
<tr>
<td>Technology deployment cost</td>
<td>Develop training plan</td>
</tr>
<tr>
<td>Average technology system</td>
<td>Train associates</td>
</tr>
<tr>
<td>deployment time</td>
<td>Communicate changes to associates</td>
</tr>
<tr>
<td>A measure of technology risk</td>
<td>Upgrade IT</td>
</tr>
<tr>
<td>A measure of operational risk</td>
<td>Update contact centers</td>
</tr>
<tr>
<td>Compliance faults &amp; severity</td>
<td>Transfer legacy products and processes</td>
</tr>
<tr>
<td>Incident resolution time</td>
<td>Convert deposit apps</td>
</tr>
<tr>
<td>Transformation operational</td>
<td>Decommission legacy applications and hardware</td>
</tr>
<tr>
<td>risk incident &amp; severity</td>
<td>Transformation risk monitoring</td>
</tr>
<tr>
<td>System uptime for customer</td>
<td>Transformation risk mitigation</td>
</tr>
<tr>
<td>access</td>
<td>Resolve undesirable emergent issues</td>
</tr>
<tr>
<td>Customer satisfaction level</td>
<td>Develop test plans</td>
</tr>
<tr>
<td>Customers notified</td>
<td>Implement test plans</td>
</tr>
<tr>
<td>Associates trained</td>
<td>Complete dress rehearsal</td>
</tr>
</tbody>
</table>

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X-Matrix Results

Metrics vs. Strategic Objectives

- Strategic objectives to map to metrics
  - Decreased risk of compliance failure → Compliance faults & severity (add)
  - Decreased operational risk → A measure of operational risk (add)
    - Note: a lack of incidents / problems does not equate to a low operational risk

- Technology objectives add metrics
  - Number of systems monitored
  - Technology deployment cost
  - Average technology system deployment time
  - A measure of technology risk
    - Note: a lack of realized problems does not indicate low risk potential

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Recommendations & Conclusion
Recommendations

Identify and understand needs of all stakeholders

• Look beyond the usual suspects
  – Customers, associates, stockholders

• Also strongly consider
  – Ratings agencies, the public, change execution team, etc.
    • Is the change management team able to carry out the transformation?
    • Have ratings agencies been informed to provide a favorable view?
Recommendations

Adoption of a stakeholder centric view

• Two transformation justification views
  – Benefit a single stakeholder need ✗
  – Address the needs of multiple stakeholders ✓

• An “all hands on deck” mentality does not appear to exist with transformation

• To succeed need stakeholder buy-in
  – All stakeholders must receive value and be aware of that value

• Underlying transformation justification must not be forgotten
  – i.e. spending $X hundred million on CANW to decrease operational risk
Recommendations

- **GOAL:** external accountability and internal mandate

- **Format and contents**
  - Press release to media & investors and / or conference call
  - Detail goals, objectives, and expected benefits

- **Timing**
  - Start of assessment (preferable)
  - Delay if benefit unknown or resources not allocated

- Repeated status announcements during earnings calls and in SEC filings
Recommendations

**Awareness of objectives and back-checking by all parties**

- Currently executives
  - Familiar with only one transformation segment each
  - Grasp what needs to be done but not necessarily why

- Potential exists for missed opportunities, prevention of full value creation, unintended outcomes

- Decisions appear to be based on limited knowledge set
  - May result in misalignment between one’s intentions / objectives and one’s actions
Recommendations

Awareness of objectives and back-checking by all parties

• Executives should have a clear understanding of
  – All transformation objectives
  – All stakeholder values and needs
  – Current performance and ranking of importance

• Based on known research not on anecdotal observations
• Understood by all parties from assessment through execution

• Executives must trace decisions made to specific stakeholder values
• All actions must point to original analysis or research
  – Tasks that cannot should be restructured or eliminated

“The transformation planning process is linked directly to the data and analyses that form the basis for defining and executing transformation projects, and the plan must be traceable to those data”

-- Nightingale and Srinivasan, 2010, p. 114
Recommendations

Adoption of a standardization vs. transformation mindset

- Ask if the goal is transformation or standardization

- California Northwest is really a standardization initiative
  - Goal is to equate California, Idaho, and Washington to the Bank’s Model states
  - Focus does not appear to be process improvement or increasing system efficiency

Sources:
Dorey, 2010
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Modified from Executive Framework Review, 2010, p. 4

Recommendations

Adoption of a standardization vs. transformation mindset

- **Non-standardization transformations**
  - Analyze and seek out areas for improving efficiency
  - Initially future state is unknown – *should be no preconceived notions*
  - Goal is improve systems and processes NOT make A = B

- **Standardization transformations**
  - Focus is on making one system or set of processes equal to another
  - Future state is known
  - Improvement should not be the primary focus of the initiative

Sources:
Dorey, 2010
Recommendations

Clarity of enterprise goals

• California Northwest strategic objectives are complete
• Modify wording to ensure clarity and remove ambiguity

• International Council on Systems Engineering (INCOSE) framework recommends
  – Necessary, clear & concise, measurable, achievable, and verifiable

• Indication of importance and significance in wording recommended
  – INCOSE: “Shall” (hard fast req.), “must” (desire), “will” (operating)

“Goals should indicate importance and rigidity”

-- Crawley, October 2009, p. 123

Sources:
International Council on Systems Engineering, 2010, p. 76-78

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Conclusion and Key Takeaways

• The transition process is potentially usable for transformation

• Only applying the transition process to transformation is insufficient
  – Two completely different enterprise states exist

• Need to also develop a “transition environment” for transformation
  – Consider needs of all stakeholders to gain “buy-in” from all supporting parties
  – Develop an “all hands” mentality through a culture of open communication
  – Back-check assumptions to justify actions and stay on message
Acknowledgements

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– Bryan McNeill - VP, Senior Change Manager
– Jonathan Skvoretz (Executive Sponsor) - SVP, Change Management Executive
– Shayne Stetsky - SVP, Quality & Change Delivery Manager

Massachusetts Institute of Technology

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– Professor Deborah Nightingale - Professor of the Practice, Aeronautics & Astronautics and Engineering System Division

– Charles Atencio - SDM Alum
– Major Sean Dorey - MIT Graduate Student
– Commander Dennis Evans - SDM Fellow
Questions / Comments
Appendix

• Stakeholders
  – Retail Deposit Customer / Client
  – Associate (Retail Consumer Banking in CANW)
  – Stockholder

• Key Metrics
• Key Processes
• Key Enterprise Goals
• X-Matrix
Retail Deposit Customer / Client

Current Performance

Relative Importance to Stakeholder

Additional features and services
Consistent Customer Experience
Combined California banking statements
Single point access to bank and brokerage statements and accounts
Issuing of debit cards for out of state accounts

Combined overdraft protection from savings and checking
“Relationship pricing” across all BAC states
Nationwide linking and servicing of accounts

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Sources:
Positions provided by Jonathan Skvoretz, November 2010

*Obtained template from MIT Lean Advancement Initiative
Associate (Retail Consumer Banking in CANW)

Current Performance vs. Relative Importance to Stakeholder

- Quality online experience
- Minimal amount of complex training
- Simplified service platform
- Single set of processes and procedures across the banking system

Sources: Positions provided by Tracie Davis, December 2010

*Obtained template from MIT Lean Advancement Initiative
Stockholder

High

Low

Relative Importance to Stakeholder

Current Performance

Operational Stability / Protection of Bank Assets

Ethical behavior

Organizational flexibility

Growth potential

Meet regulatory requirements in a cost effective manner

Transparency in revenue / cost profit capabilities

Return on Investment

Low operational cost

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*Obtained template from MIT Lean Advancement Initiative

Sources:
Positions provided by Tracie Davis, December 2010
## Key Metrics

<table>
<thead>
<tr>
<th>Enterprise Metric</th>
<th>Measured</th>
<th>Target Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM/POS Transaction Volumes</td>
<td>Volume of transactions at ATMs and card swipe terminals</td>
<td>( \geq ) volume prior to transformation</td>
</tr>
<tr>
<td>ATM/POS Declines</td>
<td>Failed transactions at ATMs and card swipe terminals</td>
<td>= volume prior to transformation</td>
</tr>
<tr>
<td>Fraud Losses</td>
<td>Dollar value lost due to fraudulent account transactions</td>
<td>Unchanged</td>
</tr>
<tr>
<td>Claims COE: Service Levels</td>
<td>Quality of support provided by call center associates</td>
<td>= Model system value</td>
</tr>
<tr>
<td>Claims COE: Payment Research Timeliness</td>
<td>Time required to investigate a bill payment issue</td>
<td>= Model system value</td>
</tr>
<tr>
<td>Deposit Accounts</td>
<td>Quantity of accounts converted to the new system</td>
<td>3.6 million in NW and 15.6 million in CA</td>
</tr>
<tr>
<td>Debit Card (CA &amp; NW)</td>
<td>Number of issued debit cards required to be converted</td>
<td>4 million unlinked cards</td>
</tr>
<tr>
<td>Debit Card (NW)</td>
<td>Family member cards and 18 digit savings only cards that will be reissued</td>
<td>650,000 and 38,000 (respectively)</td>
</tr>
<tr>
<td>Online Banking Conversion</td>
<td>Number of users transferred to target platform</td>
<td>720k users; 300k CheckFree customers</td>
</tr>
<tr>
<td>Contact Center: Sales, Service, Operations, NS&amp;S</td>
<td>Transforming service support centers to target platform</td>
<td>Unchanged</td>
</tr>
</tbody>
</table>

Sources:
Cross, p. 3; Hanson and Sorkine, p. 3, 4; Davis and Rohrwasser, p. 3; Steering Committee, September 2010, p. 15, 16
Template provided by MIT Lean Advancement Initiative

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### Key Processes

<table>
<thead>
<tr>
<th>Process</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop communication plan</td>
<td>A communication plan is critical for notifying customers and associates regarding banking changes as a result of the transformation.</td>
</tr>
<tr>
<td>Develop training plan</td>
<td>The development of a plan for training associates.</td>
</tr>
<tr>
<td>Train associates</td>
<td>Train associates in new systems and processes.</td>
</tr>
<tr>
<td>Communicate changes to associates</td>
<td>Communicate changes to associates regarding the transformation.</td>
</tr>
<tr>
<td>Inform customers</td>
<td>Customers must be informed regarding planned transformation initiatives, including those that affect online banking and mobile offerings.</td>
</tr>
<tr>
<td>Convert consumer deposit accounts</td>
<td>Deposit accounts in California, Idaho, and Washington must be converted to the target platform.</td>
</tr>
<tr>
<td>Update online banking</td>
<td>Update WA, CA, and ID online banking including bill payment, mobile banking, etc. and remove of region specific references.</td>
</tr>
<tr>
<td>Update ATMs</td>
<td>Update ATMs in ID, WA, and CA including the removal of region specific references.</td>
</tr>
<tr>
<td>Establish nationwide customer authentication</td>
<td>CANW customer authentication is to be converted to that of the target banking platform for ATMs, voice transaction systems, online banking, etc.</td>
</tr>
<tr>
<td>Convert debit cards</td>
<td>Debit cards tied to California, Idaho, and Washington legacy systems must be transitioned to the target system.</td>
</tr>
<tr>
<td>Reissue NW debit cards</td>
<td>Debit cards with 18 digits in Idaho and Washington must be reissued to meet the target platform, which is limited to 16 digits.</td>
</tr>
<tr>
<td>Prefix account numbers</td>
<td>Account numbers less than 12 digits long in California, Idaho, and Washington must be converted to the target 12 digit length by adding zeros.</td>
</tr>
</tbody>
</table>

Sources:
- Steering Committee, September 2010, p. 10
- Hanson and Sorkine, p. 3-4
- Cross, p. 3-6
- Davis, December 2010

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### Key Processes cont.

<table>
<thead>
<tr>
<th>Process</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update telephone numbers</td>
<td>Telephone numbers on customer checks and statements and in the yellow pages must be updated.</td>
</tr>
<tr>
<td>Upgrade IT</td>
<td>IT infrastructure and electronic systems in CA, ID, and WA must be updated to meet the target platform standards.</td>
</tr>
<tr>
<td>Update Contact Centers</td>
<td>To meet the target operating environment, existing contact centers in CA, WA, and ID must be upgraded.</td>
</tr>
<tr>
<td>Transfer legacy products and processes</td>
<td>In California, Idaho, and Washington, legacy deposit processes and products not discontinued must be transferred to the target system. Select systems will be updated to meet target standards including the money transfer system in WA and ID.</td>
</tr>
<tr>
<td>Convert deposit applications</td>
<td>Deposit applications must be converted to the target system; examples include IMPACS, S/T, FAST, etc.</td>
</tr>
<tr>
<td>Decommission legacy applications and hardware</td>
<td>Legacy system applications not transferred must be closed, which includes channel applications, Pay By Phone, and other WA, ID, and CA applications.</td>
</tr>
<tr>
<td>Develop test plans</td>
<td>Test plans must be developed, which includes specifying the testing environment, timeline, resources, people, and data required to successfully execute the test plans, etc.</td>
</tr>
<tr>
<td>Implement test plans</td>
<td>Tests run include component and system integration testing and user acceptance testing, which ensure that the developed software code is inline with the specified functional requirements.</td>
</tr>
<tr>
<td>Complete dress rehearsal</td>
<td>The focus of the transformation dress rehearsal is customer and account conversion. A simulation of the transformation execution tasks is run with bank customers to mimic the actual transformation implementation phase.</td>
</tr>
<tr>
<td>Goal</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Nationwide Consistency</strong></td>
<td>Across all the states where Bank of America operates, customers and clients will have access to a consistent set of products and services and will experience the same quality and level of service.</td>
</tr>
<tr>
<td><strong>Nationwide Product Rollout</strong></td>
<td>Products and services are separately released in individual regions at Bank of America. The CANW transformation will facilitate the nationwide deployment of products and services.</td>
</tr>
<tr>
<td><strong>Standard Enterprise-wide Processes and Technology</strong></td>
<td>Internally, Bank of America will have a single retail banking technology platform and a consistent set of processes across its entire enterprise, where the enterprise boundary is that of Bank of America Corporation.</td>
</tr>
<tr>
<td><strong>Enhanced Customer and Client Experience</strong></td>
<td>Bank of America will seek to provide its customers and clients with an improved experience when conducting business with the Bank.</td>
</tr>
<tr>
<td><strong>Decreased Operating Complexity for Associates</strong></td>
<td>In transforming the California Northwest sector, Bank of America seeks a simplified and streamlined operating environment for its associates to work in and serve the Bank’s customers.</td>
</tr>
<tr>
<td><strong>Maintain BAC’s Reputation</strong></td>
<td>Both during the transformation and continuing after, BAC will maintain its enterprise-wide reputation at the current level.</td>
</tr>
<tr>
<td><strong>Decreased Operational Risk</strong></td>
<td>Bank of America seeks a state of lower operational risk across its enterprise.</td>
</tr>
<tr>
<td><strong>Greater number of products and services offered</strong></td>
<td>Customers and clients across the enterprise and especially in the Northwest region will be offered and have access to a larger quantity of services and products.</td>
</tr>
</tbody>
</table>

Sources:
Steering Committee, September 2010, p. 8; Steering Committee, August 2010, p. 4, 8, 13; Executive Framework Review, 2010, p. 5; Gerringer, 2010, p. 2-3
### Key Enterprise Goals cont.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimize conversion adverse customer and associate issues</strong></td>
<td>As the actual conversion unfolds, BAC seeks to “minimize negative impacts” on customers, clients, associates, and other such stakeholders.</td>
</tr>
<tr>
<td><strong>Decreased risk of compliance failure</strong></td>
<td>The California Northwest transformation will result in streamlined operations across the entire corporation as the enterprise. BAC believes that streamlining its operations will decrease the potential for future adverse compliance issues.</td>
</tr>
<tr>
<td><strong>Reduce operating costs by $x to $x million by 20xx</strong></td>
<td>Bank of America, through its California Northwest transformation is seeking operating cost savings of $x to $x million by 20xx.</td>
</tr>
<tr>
<td><strong>Facilitate revenue growth</strong></td>
<td>BAC seeks to facilitate revenue growth as part of the California Northwest transformation.</td>
</tr>
<tr>
<td><strong>Decreased Technology Complexity</strong></td>
<td>The end state of the California Northwest transformation is a retail banking platform reduced in complexity.</td>
</tr>
<tr>
<td><strong>Decreased Potential for Technology Problems</strong></td>
<td>Upon completion of the CANW transformation, the resulting enterprise IT system state should provide for a decrease in the potential for the emergence of problems related to technology.</td>
</tr>
<tr>
<td><strong>Decreased technology development and deployment time and cost</strong></td>
<td>The California Northwest transformation will result in a single, nationwide platform, which decreases the time required to deploy and the cost to develop technology products and services.</td>
</tr>
</tbody>
</table>

**Sources:**

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### Strategic Objectives vs. Stakeholder Values

<table>
<thead>
<tr>
<th>Stakeholder Values</th>
<th>Strategic Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain BAC’s Reputation</td>
<td>Nationwide Consistency</td>
</tr>
<tr>
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<td>Decreased Operating Complexity for Associates</td>
</tr>
<tr>
<td>Reduce Operating Costs by $x to $x Million by 20xx</td>
<td>Reduced Technology Complexity</td>
</tr>
<tr>
<td>Decreased Potential for Technology Problems</td>
<td>Decreased Technology Dev. &amp; Deployment Time and Cost</td>
</tr>
<tr>
<td>Decreased Risk of Compliance Failure</td>
<td>Single point access to statements and accounts</td>
</tr>
<tr>
<td>Decrease in operational risk</td>
<td>Additional features and services</td>
</tr>
<tr>
<td>Ability to offer “advanced features and services”</td>
<td>Issuing of debit cards for out of state accounts</td>
</tr>
<tr>
<td>Flexibility to respond to changing market demand</td>
<td>Nationwide linking and servicing of accounts</td>
</tr>
<tr>
<td>IT support cost reduction</td>
<td>Single point access to savings and checking</td>
</tr>
<tr>
<td>Decrease in custom infrastructure</td>
<td>Combined California banking statements</td>
</tr>
<tr>
<td>Return on investment</td>
<td>“Relationship pricing” across all BAC sales</td>
</tr>
<tr>
<td>Flexibility to respond to changing market demand</td>
<td>Simplified service platform</td>
</tr>
<tr>
<td>Single marketable platform</td>
<td>Simplified ability to make sys changes in fluctuating reg.</td>
</tr>
<tr>
<td>Long-term, consistent returns (dividends, capital)</td>
<td>Quality online experience</td>
</tr>
<tr>
<td>Management of risk</td>
<td>Flexibility to respond to changing market demand</td>
</tr>
</tbody>
</table>

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Customer & Associate Communication
Key Processes vs. Metrics

- No metrics appear to monitor customer and associate communication

- No metrics identified to measure test and dress rehearsal success

- Limited one metric to one process tracking
  - Convert Deposit Accounts
  - Reissue Debit Cards

- Additional metrics needed
Metrics vs. Strategic Objectives

- “Nationwide Consistency” adequately tracked
- Decreased Operational Risk & Risk of Compliance Failure
  - Key BAC objectives
  - Few if any metrics located
- Technology objectives
  - Almost no metrics identified

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