County of San Diego’s Business Process Re-Engineering

A success story in achieving workforce productivity by improving Operational Excellence

Helen Robbins-Meyer
Assistant Chief Administrative Officer
County of San Diego

Nick Macchione
Deputy Director
Health & Human Services Agency
Managing Technology 2006:
Policy, Politics and Leadership

“A Different Way of Working: Empowering the Mobile Workforce & Improving Public Health”

Agenda

Business Process Re-engineering        Helen Robbins-Meyer
Mobile Remote Workforce Project         Nick Macchione
Questions and Answers                  Helen and Nick
County Defined Circa 1997

- Population of 2.7 million
- Budget of $2.4 billion
- New CAO hired from Private Sector
- Success in Privatizing Solid Waste
- Launch of Managed Competition and Reengineering Program
IT Environment (Back Then…)

- Unclear responsibility for system failures
- Uneven distribution of technology across dept’s
- Need for standardization and integration
- Frustrated workers and managers
- Business info for decision-making often unavailable → Innovation handicap
- Difficulty recruiting & retaining IT staff
- Limited public access and e-business

Daily Technology Failures!
Decentralized IT
- 17 Separate Help Desks
- 5 disparate e-mail systems
- Multiple unprotected data centers and distributed servers
- No integrated security systems
- Every imaginable desktop configuration and operating system
- Multiple non-integrated networks
- No viable accounting for software licensing
- Limited sharing of hardware and software systems between business units
- No desktop computer and server refresh cycle (purchased as $ available)
- Distributed responsibility for IT
- Operational issues dominated IT managers time
- Fragmented approach to IT Investments
- Limited and Inaccurate hardware and software asset inventories

Centralized IT
- 1 Integrated e-mail system
- 1 Centralized Help Desk
- 21,000 standard and integrated phones
- 1 Integrated Network
- 1 Hardened and protected data center
- Integrated security monitoring and protection
- 12,000 standard state-of-the-art desktop computers with a single operating system
- 100% software licensing accuracy and accountability
- Enterprise (shared) servers and applications
- 36 month refresh on all desktop computers
- 60 month refresh on all servers
- 61% reduction in the # of trouble tickets
- Strategic IT planning consumes most of the IT managers time
• **First four - five years** of the outsourcing engagement were focused on getting a unified and predictable IT environment (Infrastructure) and governing with an enterprise focus…

• With the infrastructure solid we have shifted the focus to **renovating our business processes re-engineering (BPR) for delivering services utilizing information technology**. This is the place where we can actually improve services to our citizens.
The IT Roadmap

- The County’s Strategic Plan provides for Kids, Safe and Livable Communities and the Environment…
- We have an expanding population and declining budgets which demands…
  - IT initiatives that address making work less labor intensive…
  - Business Applications that focus on citizen centric government…
  - Information Technology human resources that are as state-of-the-art as our hardware…
BPR Imperative

• Continue to make additional services available via the Internet → e-gov’t
• Improve the total experience of building within the County
• Renovate all back office accounting functions

• Give mobile County workers more robust IT tools, including wireless capabilities, to allow more efficient use of human resources in the field
Mobile Remote Workforce
A State of the Art Solution

Putting Technology to Work!
Discussion

- Challenge → Mission → Objectives
- Business Process Reengineering
- Outcomes
- Return on Investment
- Next Steps
- Lessons Learned
BUSINESS PROCESS RE-ENGINEERING

Challenge
Mission

Achieving operational excellence by improving workforce productivity in county Public Health Centers
Objective

Increase the time public health nurses devote to helping customers by reducing time spent on administrative tasks.
Guiding Principles

- Technology follows function
- Active employee participation
- Value added for employees & customers
- Fiscally sustainable
- Uniform standards
- Transferable innovation
I'm beginning to wonder if our terms of reference may be just a little bit too broad...?
Strategic Planning
• Project Mgmt Team
• Deep Dive
• Process Mapping

Operational Planning
• Workflow Redesign
• Financial Analysis

Monitoring & Control
• Pilot/Control Group
  • Independent Evaluation

Motivation, Rewards, & Recognition
• Organizational Culture Change
• Stakeholder’s Benefit

Functional Threading
County Departments
BPR Elements in Action

Phase 1
Operational Assessment

Phase 2
Process Enhancement

Phase 3
Technological Enhancements

Pilot Evaluation

2/20/05  7/1/05  10/12/05  12/31/05
Phase 1: Operational Assessment

- **Referrals**
  - Incomplete/Inappropriate
  - Delay in assignment

- **Travel**
  - Time Consuming
  - Inefficient
  - Redundant

- **Administrative Tasks**
  - Office time required
  - Duplicate entries

= $
Phase 2: Process Enhancement

WE COULD DESIGN THE PRODUCT WITH A SIMPLE POINT-AND-CLICK INTERFACE...

OR WE COULD REQUIRE THE USER TO CHOOSE AMONG THOUSANDS OF POORLY DOCUMENTED COMMANDS, EACH OF WHICH MUST BE TYPED EXACTLY RIGHT ON THE FIRST TRY.

BEAR IN MIND, WE'LL NEVER MEET A CUSTOMER OURSELVES.

MAKE IT SO THEY HAVE TO REBOOT AFTER EVERY TYPO.
Phase 3: Technological Enhancements

- Web-Based Referral System
- Database
  Public Health Nurses
  in the Community
- Electronic Tablets
BUSINESS PROCESS RE-ENGINEERING
Ideas into Action

Public Health Nurses In the Community (PHIX) - Database
Step 1 - Referring Agency Procedure
Welcome to the County of San Diego Public Health Nursing pilot web referral site. This pilot site is limited in function to accept referrals for potential clients in the North Inland Public Health region only. The initial pilot period is from July 1, 2005 until December 31, 2005. To use this site you must first be registered by the North Inland Public Health region. If your agency’s name does not appear in the drop down box below then your agency is not registered. Please contact Kitty Roche, Public Health Nursing Supervisor for North Inland region at (760) 740-4020 for more information.

Select your Agency from the list: Palomar Medical Center

Password: **********
2nd pregnancy - history of drug abuse. 1st child was premature with complications. No ongoing prenatal care.
Your request has been received and will be reviewed by Public Health. The reference number for the request is **FD-190-11AF**.

A confirmation email will be sent to **gmcgrath@csc.com**.

Thank you for using referral registration service.
Steps 2 & 3 - Clerical Process
Step 4 - Supervisor Process
### Business Process Re-engineering

#### PHIX Server - Demo Supervisor (Supervisor)

<table>
<thead>
<tr>
<th>Clients Name</th>
<th>Referring Agency</th>
<th>Status</th>
<th>Assigned Nurse</th>
<th>DOB</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moncada, Maria</td>
<td>Tri-City Hospital</td>
<td>Pending</td>
<td>Nurse</td>
<td>3/14/87</td>
<td>10/07/05</td>
</tr>
<tr>
<td>Allee, Steve</td>
<td>Pomerado Heath S</td>
<td>Pending</td>
<td>Labelle</td>
<td>2/02/83</td>
<td>10/07/05 01:28</td>
</tr>
<tr>
<td>Archer, Anne</td>
<td>Pomerado Heath S</td>
<td>Pending</td>
<td>Nurse</td>
<td>3/02/60</td>
<td>10/07/05 01:57</td>
</tr>
<tr>
<td>Archer, Arnold</td>
<td>Pomerado Heath S</td>
<td>Pending</td>
<td>Nurse</td>
<td>10/10/65</td>
<td>10/07/05 01:58</td>
</tr>
<tr>
<td>Girl, Baby</td>
<td>Kaiser</td>
<td>Pending</td>
<td>Nurse</td>
<td>10/07/65</td>
<td>10/08/05 03:06</td>
</tr>
<tr>
<td>Griffin, James</td>
<td>County of San Dieg</td>
<td>Pending</td>
<td>Labelle</td>
<td>8/05/05</td>
<td>10/07/05 03:25</td>
</tr>
<tr>
<td>Griffin, Meredith</td>
<td>County of San Dieg</td>
<td>Pending</td>
<td>Labelle</td>
<td>10/25/65</td>
<td>10/07/05 03:28</td>
</tr>
<tr>
<td>Jessica Simpson</td>
<td>County of San Dieg</td>
<td>Pending</td>
<td>Nurse</td>
<td>9/10/65</td>
<td>10/07/05 10:18</td>
</tr>
<tr>
<td>Lincoln, Mary</td>
<td>Kaiser</td>
<td>Pending</td>
<td>Nurse</td>
<td>5/09/76</td>
<td>10/08/05 03:10</td>
</tr>
<tr>
<td>Lincoln, Todd</td>
<td>Kaiser</td>
<td>Pending</td>
<td>Nurse</td>
<td>6/09/76</td>
<td>10/08/05 03:10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Last Logon</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dorothy</td>
<td>Gillon</td>
<td>10/11/05</td>
<td>Escondido</td>
</tr>
<tr>
<td>Elizabeth</td>
<td>Inglis</td>
<td>10/11/05</td>
<td>Escondido</td>
</tr>
<tr>
<td>Hanna</td>
<td>Khozael</td>
<td>10/11/05</td>
<td>Escondido</td>
</tr>
<tr>
<td>Joanne</td>
<td>Klein</td>
<td>10/11/05</td>
<td>Escondido</td>
</tr>
<tr>
<td>Heather</td>
<td>Labelle</td>
<td>10/11/05</td>
<td>Escondido</td>
</tr>
<tr>
<td>Gisela</td>
<td>Lauer</td>
<td>10/11/05</td>
<td>Escondido</td>
</tr>
<tr>
<td>Deborah</td>
<td>McIntosh</td>
<td>10/11/05</td>
<td>Escondido</td>
</tr>
<tr>
<td>Carol</td>
<td>Nickles</td>
<td>10/11/05</td>
<td>Escondido</td>
</tr>
<tr>
<td>Dana</td>
<td>Nurse</td>
<td>11/01/05</td>
<td>Escondido</td>
</tr>
<tr>
<td>Julianna</td>
<td>Rhinehart</td>
<td>10/11/05</td>
<td>Oceanside</td>
</tr>
</tbody>
</table>

#### Cases/Households (both assigned Employees and Cases)

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Status</th>
<th>Gender</th>
<th>Relationship Type</th>
<th>Created Date</th>
<th>Birthday</th>
<th>Sex</th>
<th>Birthdate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maria</td>
<td>Moncada</td>
<td>Open</td>
<td>F</td>
<td>Head of Household</td>
<td>10/05/05 06:57:3</td>
<td>10/18/67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Martha</td>
<td>Monic</td>
<td>Open</td>
<td>F</td>
<td>Head of Household</td>
<td>10/05/05 05:57:3</td>
<td>11/21/66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ileen</td>
<td>Morales</td>
<td>Open</td>
<td>M</td>
<td>Head of Household</td>
<td>10/05/05 05:57:2</td>
<td>5/03/04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ventura</td>
<td>Morales</td>
<td>Open</td>
<td>M</td>
<td>Head of Household</td>
<td>10/05/05 05:57:3</td>
<td>9/11/03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disselle</td>
<td>Morales</td>
<td>Open</td>
<td>F</td>
<td>Head of Household</td>
<td>10/05/05 05:57:3</td>
<td>7/14/05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kanna</td>
<td>Morales</td>
<td>Open</td>
<td>F</td>
<td>Head of Household</td>
<td>10/05/05 05:57:3</td>
<td>10/14/68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Samuel</td>
<td>Morales</td>
<td>Open</td>
<td>M</td>
<td>Head of Household</td>
<td>10/05/05 05:57:3</td>
<td>11/02/05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Step 5 - Nurse Process
If this visit is complete, verify the following information and click OK.

Moncada.

Visit End Date/Time: 2/23/2006 3:30 PM
Next Visit Date: 4/30/2006

OK  Skip  Cancel
Outcomes
## Referral System

<table>
<thead>
<tr>
<th>Situation</th>
<th>Pre-Pilot</th>
<th>Post-Pilot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting referral to nurse</td>
<td>18 paper steps</td>
<td>5 electronic steps</td>
</tr>
<tr>
<td>Referrals were accurate and complete</td>
<td>2%</td>
<td>100%</td>
</tr>
<tr>
<td>Average # of days to 1st client contact by nurse</td>
<td>54</td>
<td>13*</td>
</tr>
</tbody>
</table>

*11% of customers were seen on the same day as the referral
### Client Service Time

#### Situation

<table>
<thead>
<tr>
<th>Situation</th>
<th>Pre-Pilot</th>
<th>Post-Pilot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visits resulting in “no service”</td>
<td>33%</td>
<td>11%</td>
</tr>
<tr>
<td>Average monthly # of 1st contacts per Center</td>
<td>132</td>
<td>165</td>
</tr>
</tbody>
</table>

Productivity
## Survey Results

<table>
<thead>
<tr>
<th>Referral Agencies</th>
<th>Public Health Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web-based referral utilization</td>
<td>Process involvement 4.4</td>
</tr>
<tr>
<td>Web-based referral training</td>
<td>Technical training 4.4</td>
</tr>
<tr>
<td>Technical support</td>
<td>Tablet referral process 3.8</td>
</tr>
<tr>
<td>Referral tracking (JAHCO)</td>
<td>Tablet scheduling 4.4</td>
</tr>
<tr>
<td>Overall Score 5.0</td>
<td>Tablet PHN forms 2.7</td>
</tr>
<tr>
<td></td>
<td>Technical support 3.8</td>
</tr>
<tr>
<td></td>
<td>Overall Score 3.9</td>
</tr>
</tbody>
</table>
## Summary of Key Performance Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Target</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase time available for direct services</td>
<td>20-25%</td>
<td>25%</td>
</tr>
<tr>
<td>Reduce time elapsed between case referral and customer contact</td>
<td>25%</td>
<td>75%</td>
</tr>
</tbody>
</table>
Return on Investment

IT LOOKS LIKE WE'LL RELEASE OUR NEW PRODUCT ON TIME, DESPITE ITS MANY DEFECTS.

WE'VE MINIMIZED THE ECONOMIC IMPACT OF THE DEFECTS VIA AN ADVANCED BUSINESS PROCESS CALLED "HOPING NOBODY NOTICES."

AND WE'VE DOUBLED OUR PROJECTED INCOME BY MODIFYING OUR ASSUMPTIONS!

A LOT OF THIS JOB IS MENTAL.
Methodology

• Utilizes the Pilot Project and roll out projections.
• Costs considered for Phases 1-3:
  – Information Technology
  – Staffing
  – Consultants
<table>
<thead>
<tr>
<th>Pilot Costs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IT Costs</strong></td>
<td></td>
</tr>
<tr>
<td>Labor (IT Vendor)</td>
<td>$756,470</td>
</tr>
<tr>
<td>Software</td>
<td>$28,050</td>
</tr>
<tr>
<td>Hardware</td>
<td>$39,680</td>
</tr>
<tr>
<td><strong>Evaluation/Consultant Costs</strong></td>
<td>$19,800</td>
</tr>
<tr>
<td><strong>TOTAL Pilot Costs =</strong></td>
<td><strong>$844,000</strong></td>
</tr>
</tbody>
</table>
Return on Investment – Summary

• Up front costs captured within 12 months
• Cost avoidance of $2,008,406 per FY
  – 25% increased productivity without BPR would require an additional 23 staff years (FTEs).
• Long-term savings
  – organizational
  – societal
Next Steps

I feel pretty!
Oh so pretty! ...

... Right, then.
Moving on ...

www.dilbert.com
scottedshee@aol.com
Next Steps

Phase 4 – Technology Enhancements

Agency-wide Rollout

Societal Impact Analysis
Lessons Learned
**Must Have:**

- Thorough planning process
- Zero-base operations
- Staff participation and buy-in
- Idea generation
- Flexibility and patience
- Budget in advance
Understand That:

- Technology enhancements are not the only solution in BPRs
- Return on investment will occur in out years
- Technology development phase requires sufficient time
- Other unforeseen benefits will be identified throughout the process
- BPR forces organizational culture change that sustains innovation and continuous improvement
For More Information

www.sandiego-mrw.org
Thank You.

QUESTIONS?