Smart Technology, Smarter Staff –
Mobile Technology in the Workplace

Clifford Chan
Manager of Water Treatment and Distribution
EBMUD
Benefits

- Supports operations and maintenance
- Access to operational data (e.g., SCADA)
- Realtime information exchange
- Availability of references
- Better and more consistent inspections
- Video conferencing
- Emergency response
Lessons Learned

- Match technology with the tasks
- Work with the users
- Perform pilot tests with different technologies
- Web-based tools vs custom apps
- Develop security standards
- Technology continues to improve
Ken Salmon
IT Director
San Francisco Water Power Sewer Services of the San Francisco Public Utilities Commission (SFPUC)
<table>
<thead>
<tr>
<th>Group</th>
<th>Software</th>
<th>Hardware</th>
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</thead>
<tbody>
<tr>
<td>Waste Water (WW) Warehouse</td>
<td>Datasplice</td>
<td>Intermec rugged PDA</td>
</tr>
<tr>
<td>WW Distributed Control System</td>
<td>Foxboro</td>
<td>iPad</td>
</tr>
<tr>
<td>WW Collections</td>
<td>Maximo</td>
<td>Panasonic Toughbook's</td>
</tr>
<tr>
<td>Water Automated Water Meters</td>
<td>Clevest, Aclara</td>
<td>Intermec rugged PDA</td>
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<tr>
<td>Customer Service</td>
<td>Clevest</td>
<td>Intermec rugged PDA</td>
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<tr>
<td>Commission</td>
<td>Directors Desk</td>
<td>iPad</td>
</tr>
<tr>
<td>Water SCADA</td>
<td>Wonderware, Netmotion</td>
<td>iPad, Motion Computing</td>
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<tr>
<td>Personal devices supported</td>
<td>email, calendar, contacts,</td>
<td>iPhone, iPad, Droid</td>
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Moving forward

Proof of concepts to Hetch Hetchy, Natural Resources

Motion Computing CL900 tablet Win 7
  Atom processor, Semi rugged, 2 lbs, 2 cameras

Motion Computing FV5 tablet Win 7
  Hot swap batt, rugged, cameras, RFID, barcode

iPad: Instant on, long battery life, cameras

SFPUC specific iPad, Droid, iPad app

Update our mobile strategy
RUNNING YOUR PLANT WITH HAND HELD DEVICES

Leonard Robb
Lead Operator and Operations Maintenance Coordinator
Littleton/Englewood Wastewater Treatment Plant
Establishing Design Criteria

- HIERARCHY OF DESIGN
- EASE OF USE
- TESTING THE SYSTEM PRIOR TO GO LIVE
- USER INPUT
- BRINGING THE SYSTEM ON IN STAGES
- REVIEW PERIODS
Learning the Hard Way

- WIRELESS VERSUS SYNCING
- EQUIPMENT WOES
- LEAVING YOURSELF A PROGRAMMING OUT
- CHECKING DATA QUALITY
- PROGRAMMING FOR MEANINGFUL REPORTS