

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

Imagine! SmartHomes

Public Workshop on Fostering Independence and Healthy
Aging through Technology
December 19, 2012
Greg Wellems

Imagine!

- } Established in 1963 in Boulder County, Colorado, United States
- } Community Centered Board (CCB)
- } Variety of Supportive Services
- } 85% Funding from Medicaid
- } Provided Support to 2,800 People in 2011

1963-2013
Imagine!
50 YEARS OF BUILDING
QUALITY LIVES

Imagine! SmartHomes



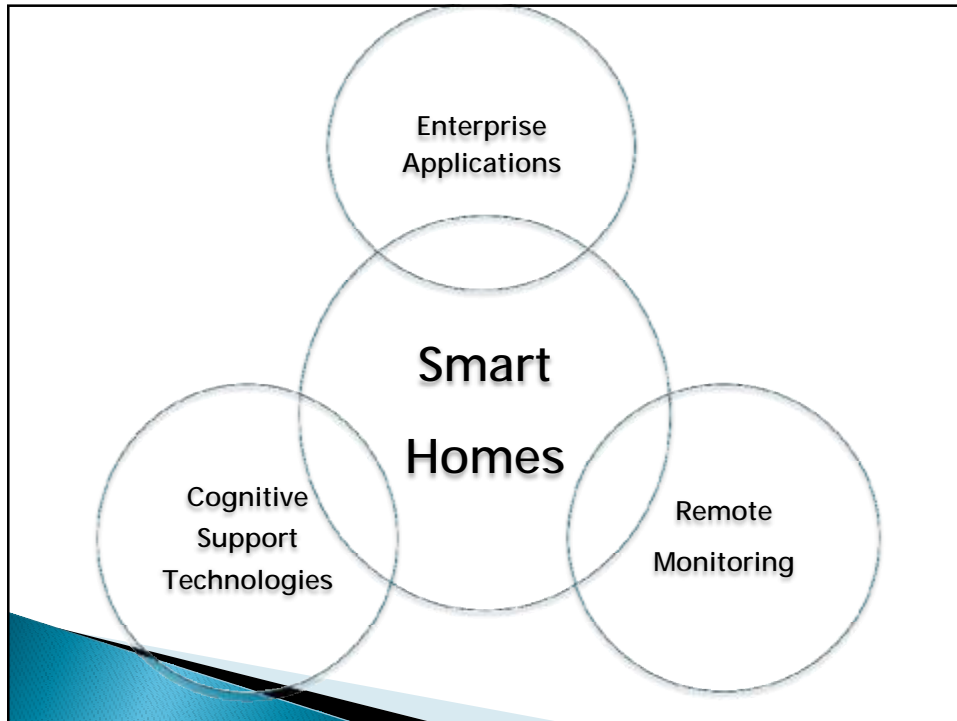
Bob and Judy Charles
SmartHome, Boulder, CO



Charles Family SmartHome,
Longmont, CO

Strategic Process

- } Education
 - Software and Application
 - Benefits of Technology
- } Prioritization
 - Analyze "pain" points
 - Greatest Impact
- } Planning
 - Cultural Change
- } Implementation
 - Project Management (DIGs)
- } Maintenance and Support



Environmental Design

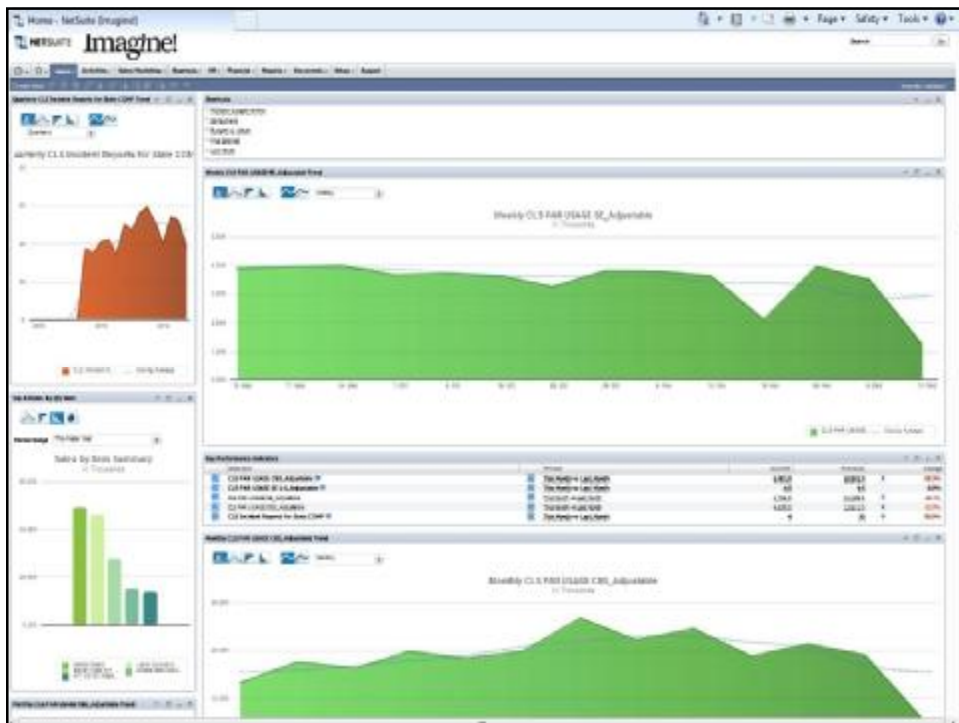
- ∅ Universal Design
 - ∅ Now Includes Technology
- ∅ Accessible Work Areas
- ∅ Home Automation
 - ∅ Low-voltage - PLC Panel
 - ∅ Call Buttons
 - ∅ Lights - Blinds
- ∅ Energy Efficient
 - ∅ PV Solar - Hot Water
 - ∅ Geothermal

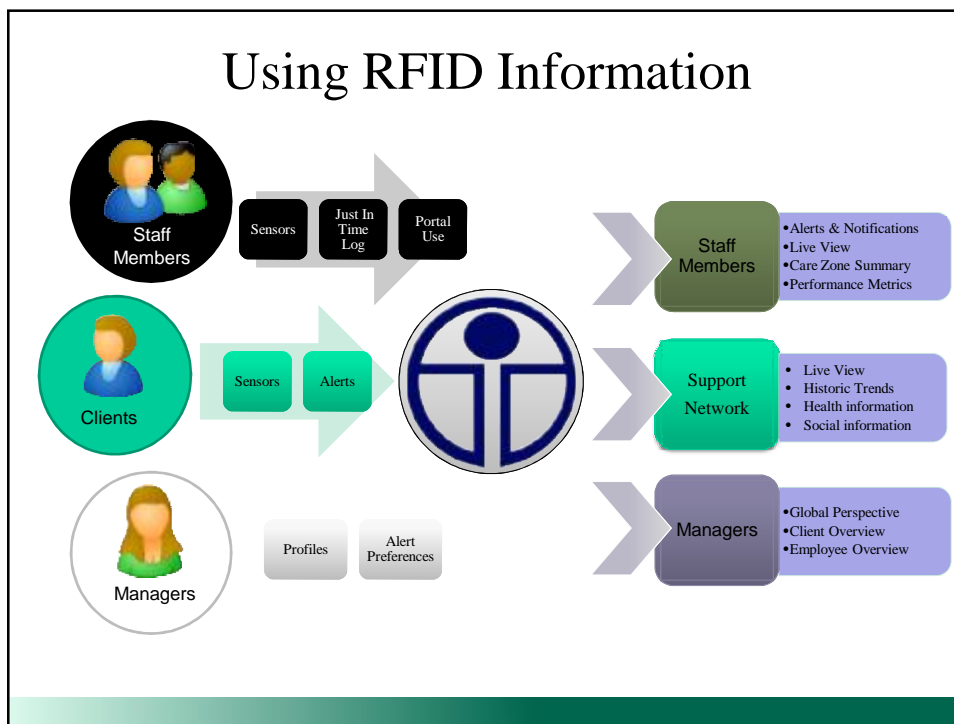


SmartHome
THE FUTURE OF RESIDENTIAL CARE









Prompt Sheet

Test Tester Client Number 1070028000009

Location	Test House 1	Task List
Agency	TRQA	11/01/2010 10:30 AM PT - Hand/Hips/Prone/Ext/End/low
Dist	Tan simple rubber, low fat, low-fluorine rollers	
Nurse Note	New RFID wear was implemented on November 15, 2010. Please refer to Client - 11/27/2010 8:30:00 PM	

05:19 PM

Staff Notes

Test case family visiting over the holidays. He responded with smiles and laughter during their visit. 11/27/2010 8:29:00 PM

Calendar Events

12/02/2010 10:30 AM PT Hand/Hips/Prone/Ext/End/low

Administer All Assessments

11/23/2010 06:33 AM	PT - Hand/Wrist/Finger Exercises PT - Hand/Wrist/Finger Exercises PT - ROM is done in a slow manner with a gentle stretch. Do not force pull or jerk extremity. 3-5 reps
11/23/2010 04:03 PM	Ability 10mg Ability 10mg Ability 10mg take 1 tablet QD pm
12/01/2010 06:33 AM	Central office visit Central office visit - A Phyllis hand/foot ready by 9 AM

Environmental Control Units



- .. The MEDIAAssistant Mobile is a portable system that uses both infrared transmission and Insteon™ radio transmission to operate up to 24 devices.

Remote Monitoring Systems

- Ø Motions Sensors
 - Ø Detect Falls/Proximity
- Ø Security/ Health and Safety Sensors
 - Ø Doors/Windows - Alarms
- Ø GPS- Community Navigation
- Ø Remote Health Monitoring
- Ø RFID – Specific Location
 - Ø Environmental Control
- Ø Data – Trends



GrandCare offers the very best in technology for individuals who want to remain safe, independent and healthy at home.

What is Cognitive Support Technology?



Needs-driven,
Person-centered technology



Simply, Good Design!



What is CST ?

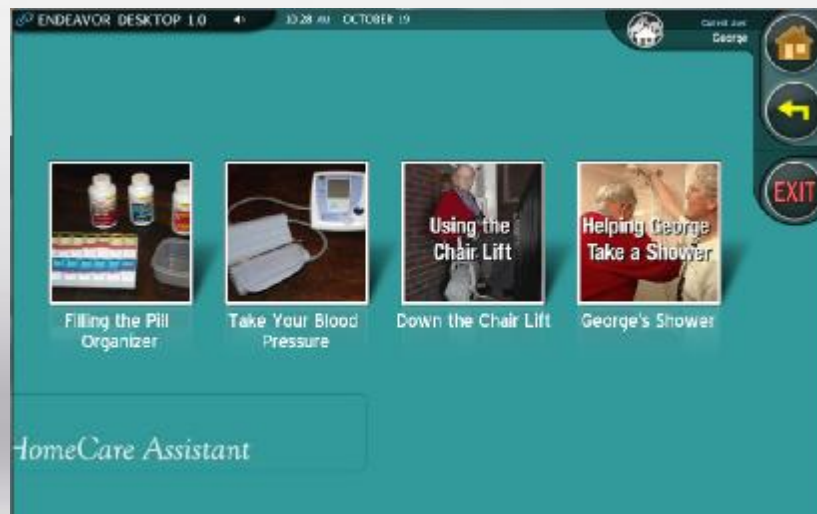


Here, cognitive support refers to the assistive aspects of technology that enhance the mental capabilities (and avoid the limitations) of users.

Wogalter, M.S. and Mayhew, C. E., (2005), Providing cognitive support with technology-based warning systems, Ergonomics, vol.48, No 5, April 2005, 522-533

ABLELINK TECHNOLOGIES Cognitive Support Technologies

Prompting Technologies for Task Support



Endeavor Desktop Environment – Task Prompter





Lessons Learned

- } Identify - "low hanging fruit"
- } Build Corporate Expertise
- } Seek Collaboration/Consulting
- } Evaluation Process and Feedback Loop
- } State Funding Systems do not to Recognize the Role of Technology
- } RFID Technology – Shelved for Now
- } Social Media – Unexpected Success

Lessons Learned

- } Incorporating Cognitive Support Technologies
 - Technology Screening
 - Individual Technology Plan
 - Build Processes for Replication
 - Job Expectations and Job Descriptions
 - Staff Training/Staff Training/Staff Training
 - Hiring and Recruitment
 - Curriculum Development

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