NextGen Technology & Wellness Assessment (Integrating Data)

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COLLAGE Symposium

September 28, 2010

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A New Technology Context

- **Emergence of the Mobile/Social Web**
  - Previous Technology Generations
    - Mainframe
    - Minicomputer
    - Desktop
    - Desktop Internet
  - Each Generation Increases Users and Decreases Costs by an order of Magnitude
- **Super-Characteristics**
  - Real-time
  - Accessible
  - Cheap

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Seven Capabilities

- **Wireless**
  - Ubiquitous, Fast Connectivity
- **Devices**
  - Powerful, Person Scaled, Purpose Built Mobile Devices
- **Context**
  - Smart Environments, Sensors and Data Streams
- **Social**
  - The Web is a People Web
- **Clouds**
  - Accessible, Available, Comprehensive Data Clouds
- **Analytics**
  - Complex Analytics and Interpretive Visualization
- **Apps**
  - There's an App for That

Wireless: Ubiquitous & Fast

- Not just wireless/evolving standards
    - Fiber to the home/business
    - 3G to 4G networks in the mobile space
    - WIFI within public & private spaces (802.11n)
        - community, coffee shop, home, car & personal hotspots
    - FCC has approved "WIFI on Steroids" <whitespace>
- Inexpensive
    - 15-25 MB/s at $40-60/month
    - Mobile services $25-50/month
    - Phone & TV charges are being subsumed
- But Just Getting Started
    - National Broadband Plan 100/100
        - 100 million homes with 100 mb/s by 2020 <Chattanooga 1gb/s>
        - Towns & Communities (schools) with 1 gb/s
        - Free tier of lowcost wireless for those who can't afford
- No longer an obstacle, an enabler, uses not yet imagined

MIFI

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Devices: Human Scale/Purpose Built

- **Purpose built, Powerful, Connected Devices**
  - Handhelds
    - 2010 smart phones same specs as 2004 pc
    - New Ipod touch at $229
    - Over 300,000 smart phones being activated every day
  - Tablets
    - Ipad came out April 3 with aggressive $499 price
    - 30 Ipad competitors in next six months
    - 3-12" tablets will range from $200 - $800
  - Other Devices
    - Uses simultaneously converging & diverging
    - E-readers, Kiosks, Netbooks
  - Screens
  - Touch, Gesture, Voice & Context Inputs
    - Significantly simpler to use
  - 30-70% Lower Total Cost of Ownership vs PC

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Context: Smart Environments

- **Sensors & Cameras**
  - Environmental Indicators
  - Activity Indicators
  - Location Data
  - Assets & Entitities
- **Enabling**
  - Automatic Self Service Checkout
  - Asset Location
  - Environmental Monitoring
  - Traffic Monitoring
  - Location Monitoring
  - Health Status Monitoring

Social: Web is a People Web

- **Social Media:**
  - Social Networking
    - Facebook, Twitter, LinkedIn, Buzz
  - Social Content
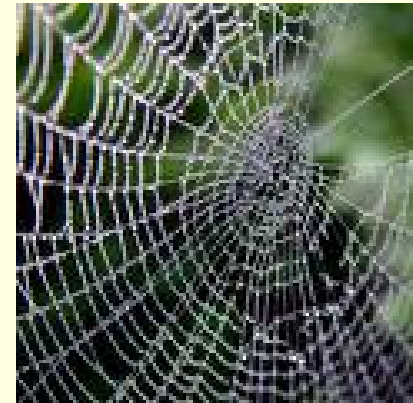   - Youtube, Wikipedia, Blogosphere
  - Social Search & Commerce
    - Rating, Preference, Reviews
  - Social Transactions
- **Connected Global Consumers are Tripling**
  - 1 Billion to 3 Billion by 2015 (4B Cell phones today)
  - Creating, Consuming, Transacting the web

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Data Clouds & Analytics

- ■ **Accessible, Available, Comprehensive**
  - ▪ Google Maps
  - ▪ Media: Google Books Project – 7 mm volumes
  - ▪ Human Genome
  - ▪ Wikipedia
- ■ **Complex Analysis & Interpretive Visualization**
  - ▪ Wolfram Alpha
  - ▪ Modelling
- ■ **Business data strategies**
  - ▪ Leverage external datasets
  - ▪ Build comprehensive internal datasets
  - ▪ Sophisticated analysis
  - ▪ Fundamental Challenge: How to interpret data
- ■ **See "Theres an App for That"**

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There's an App for That

- ## App Stores
  - Simplifies discovery, procurement, and management
  - Leverage clouds for data & storage
  - Simplified, focused packaging of capability

- ## New App Architecture
  - Massive Data Clouds (i.e. Health Record Utility)
  - Customized community based workflows
    - Traditional scope of application
  - Role & Context based Apps provide user interface

- ## The Mashup
  - Leveraging Capability in innovative ways

Count Down To Impact

- **The Internet Transformed Many Businesses**
  - Finance
  - Media
  - Retail
  - Information
  - But not all <not aging services><people business>
- **Mobile Web will transform many more**
  - Energy
  - Education
  - Hospitality
  - Healthcare
- **Envisioning**
  - Emerging Experiences

Emerging Experiences Empowering Workers: 12 Apps

- MyBrand
- MyEmployment
- MySkills
- MyCustomers
- MyTeams
- MySchedule

- MyChecklists
- MyTools
- MyReference
- MyFuture
- PokeMe
- PokeYou

Hypothetical MyWorkLife Apps

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Emerging Experiences Empowering Residents

- ## Cultivating the Muse
  - Extending the wii phenomenon
    - virtual presence & engagement
  - Creative uses of facetime
  - Travel, Entertainment, Arts

- ## Telling Stories <Facebook>
  - Intergenerational collaboration
  - Re-establishing life connections
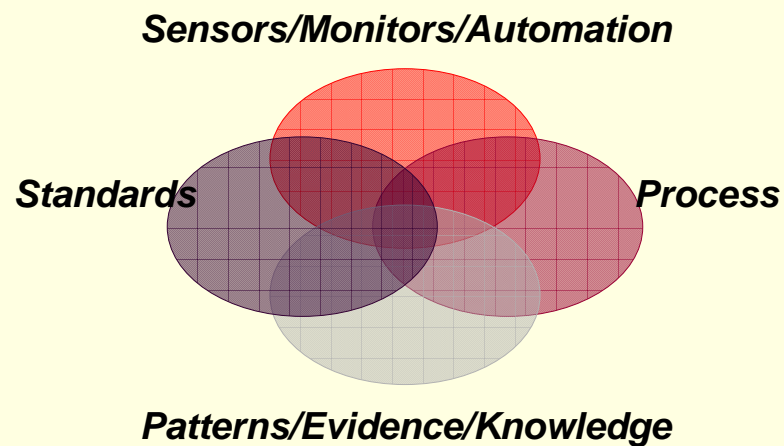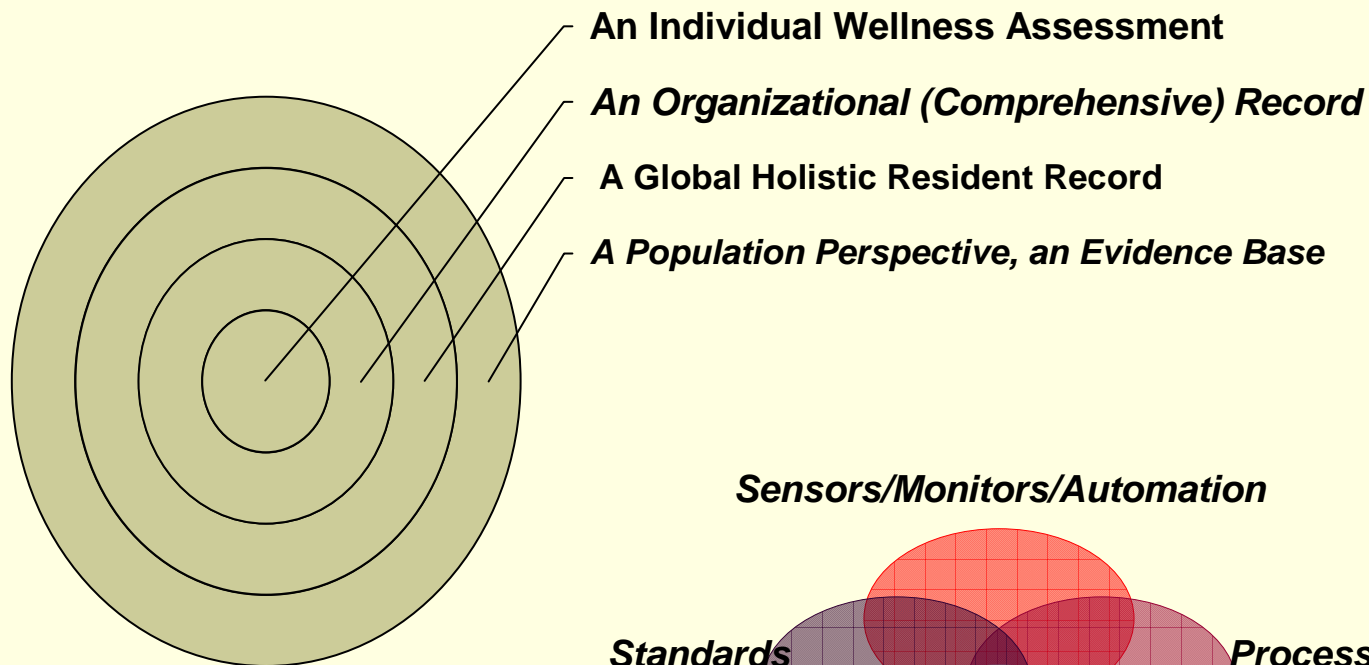 - Maintaining relationships & affiliations

- ## Tablets as the ultimate remote control
  - Media, Environment, Energy, Security
  - Safety, Communications
  - "I'm Home" "Good Night"

- ## Aging Smart, Living Well
  - RWJ: ProjectHealthDesign
    - Observations of Daily Living (ODL)
  - My Wellness Dashboard <Prius example>
  - Tele-wellness "consulting & monitoring"

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Wellness Assessment
Data Perspective

An Individual Wellness Assessment

An Organizational (Comprehensive) Record

A Global Holistic Resident Record

A Population Perspective, an Evidence Base

Sensors/Monitors/Automation

Standards

Process

Patterns/Evidence/Knowledge

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Implications

- Infrastructure
  - Ensure your care/hospitality environments are connected
  - Begin exploring how to make your environments smarter
  - Leverage nextgen devices to support for staff and resident experience
- Rich Data
  - Store your data in a cloud where it is secure, available and connected
  - Feed your data from sensors
    - Observations of Daily Living
  - Implement standards to ensure that your data can be both incorporate and feed other data sets
  - Use evidence based data analytics to interpret your data
    - Shape action <checklists>
  - Provide residents self-service actionable access to your data
    - Self report & self inform
- Process
  - Integrate into hospitality and care processes
  - Avoid Silos

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Questions, Contact & References

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Some of my current thinking has been influenced by the following.

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