From CHAOS TO SYNERGY via a WHOLE of SOCIETY Approach

Innovative
Internet Uses
& the Open Internet:
<u>Security &</u>
<u>Emergency</u>
<u>Communications</u>

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SUMMARY FOR REGULATORS

- **Create Synergy via Innovation, Leadership, & Collaboration (SILC)**
- **Actively promote an Open Internet "Whole of Society" (WOS) approach…move beyond, to inclusive emergency communications**
- **Support Democratized Innovation via specific programs in key innovation areas: Wireless BB, Social Media, Unmanned Tech**
- **Exercise & test measurable WOS-based criteria for Wireless Infrastructure Capacity, Reliability, and Quality in Emergencies**
- **Move from "Thought Leadership" to "Collaborative Action Leadership". Vigorously seek visionary public/private programs.**
- **Apply lessons from past successes and current programs, worldwide (CPUC ROMP/NRF/CAP, CETF, LINC, MCIP, UNWGET, UNETC, APEC/WOS, CMUSV, LLNL, NPS, CalOES, DHS, etc.)**
- **Make WOS-based Emergency Communications a top priority. Based on California's experiences, the CPUC could lead an action team.**

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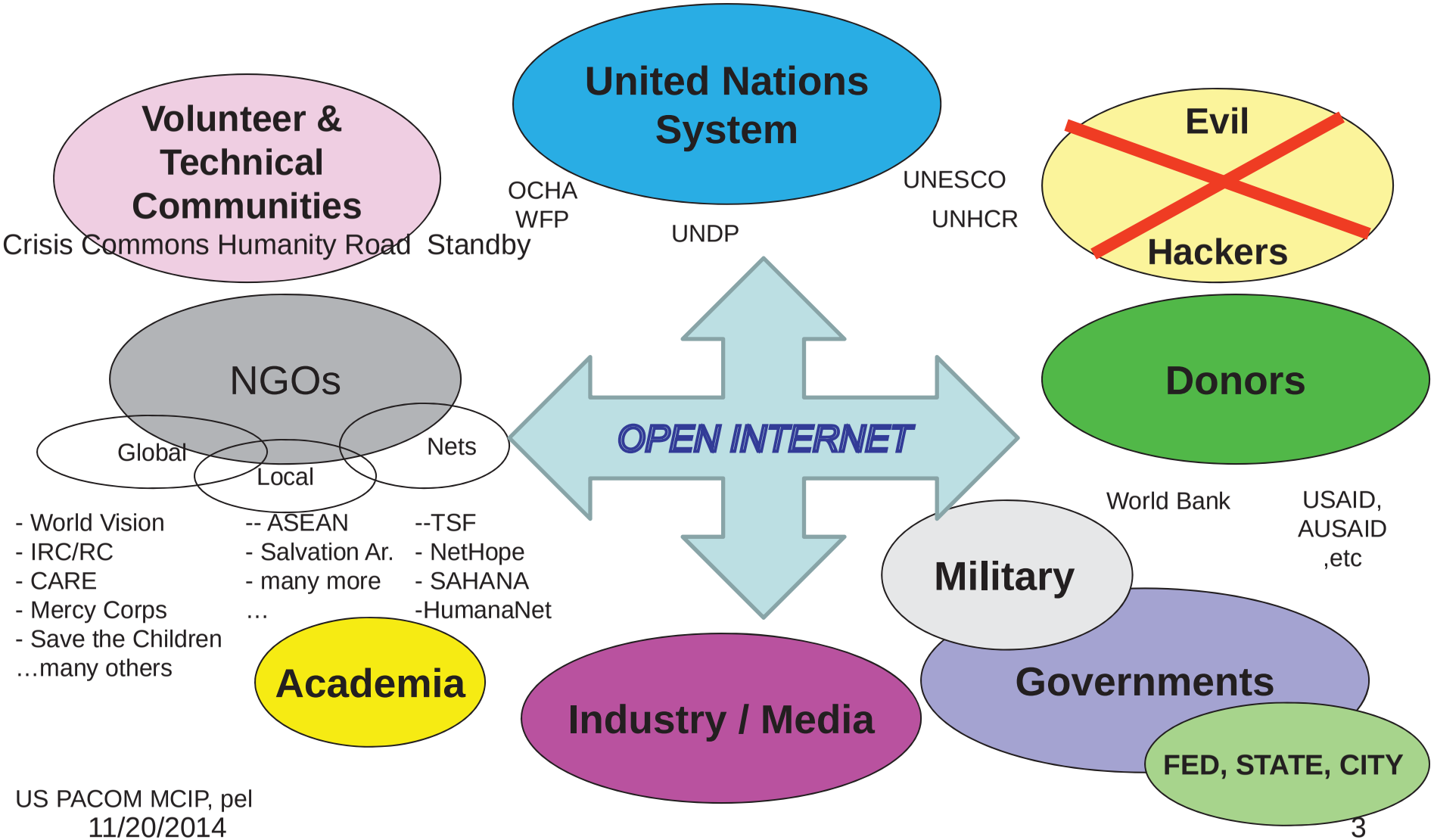
DISASTER CHAOS
The Communications "Ground Truth"



FROM CHAOS TO SYNERGY

SYNERGY : 1 + 1 = 3

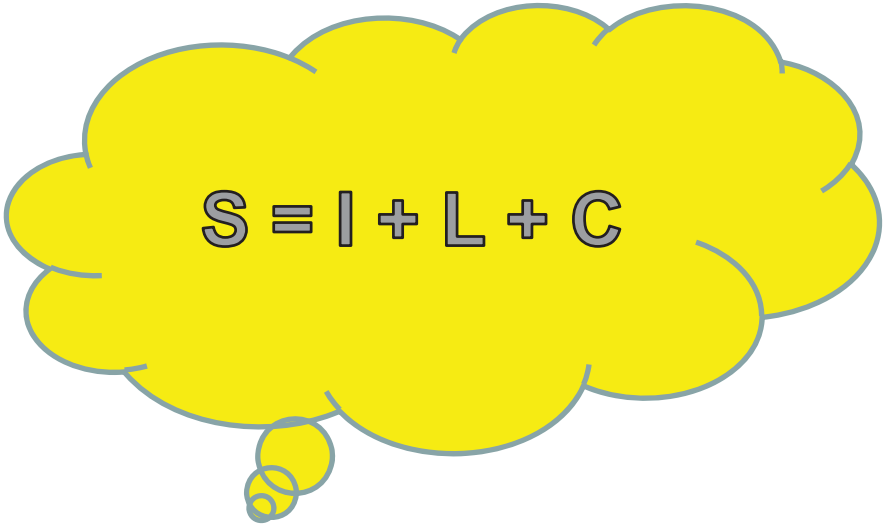
Results are greater than the sum;
more effective, efficient, sustainable

COMBINE:

> INNOVATION

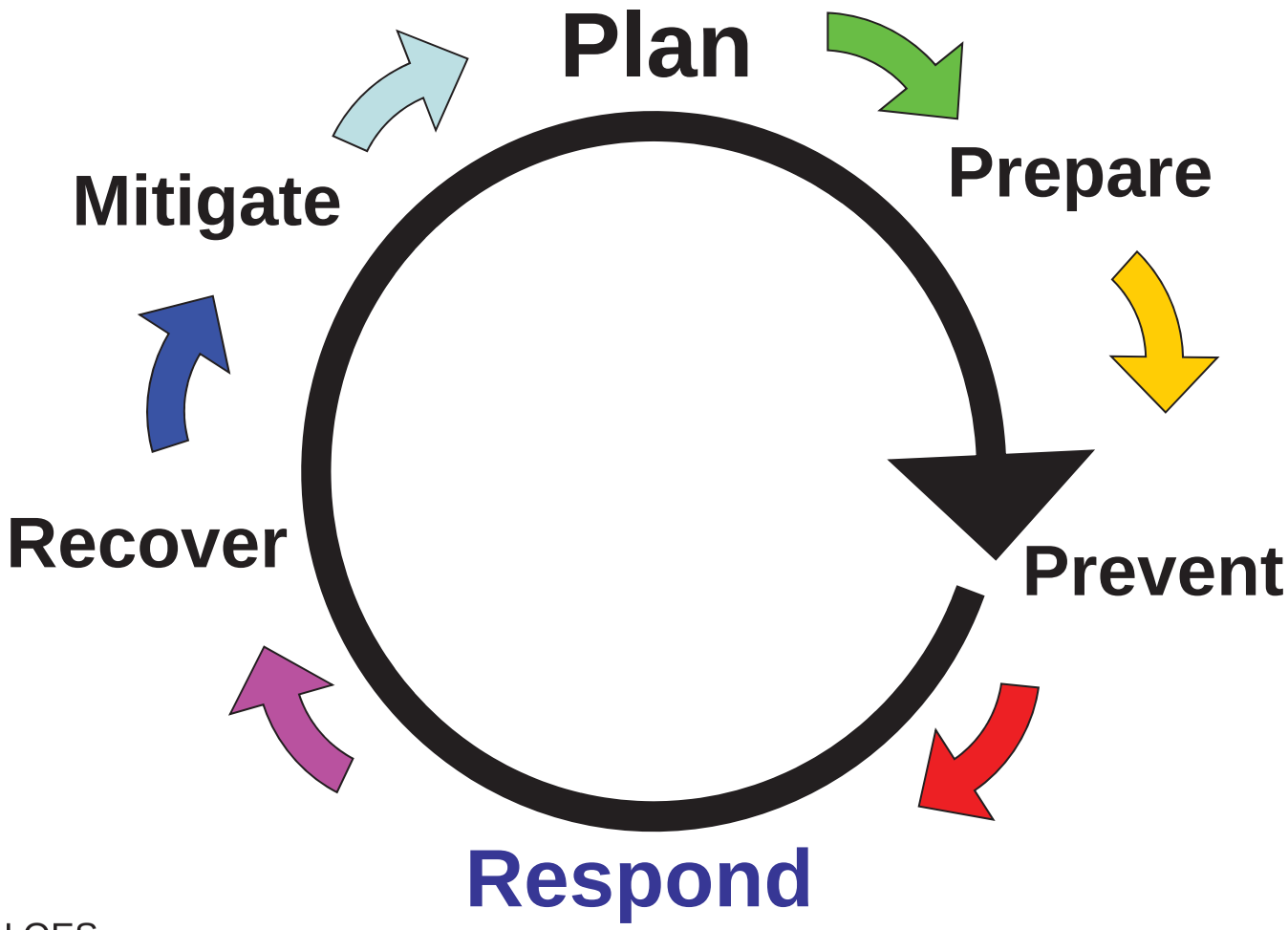
> LEADERSHIP

> COLLABORATION, *via OPEN INTERNET*



MORE THAN RESPONSE

Emergency Management Cycle: interactive comms-heavy process via Voice & <u>Open Internet</u>

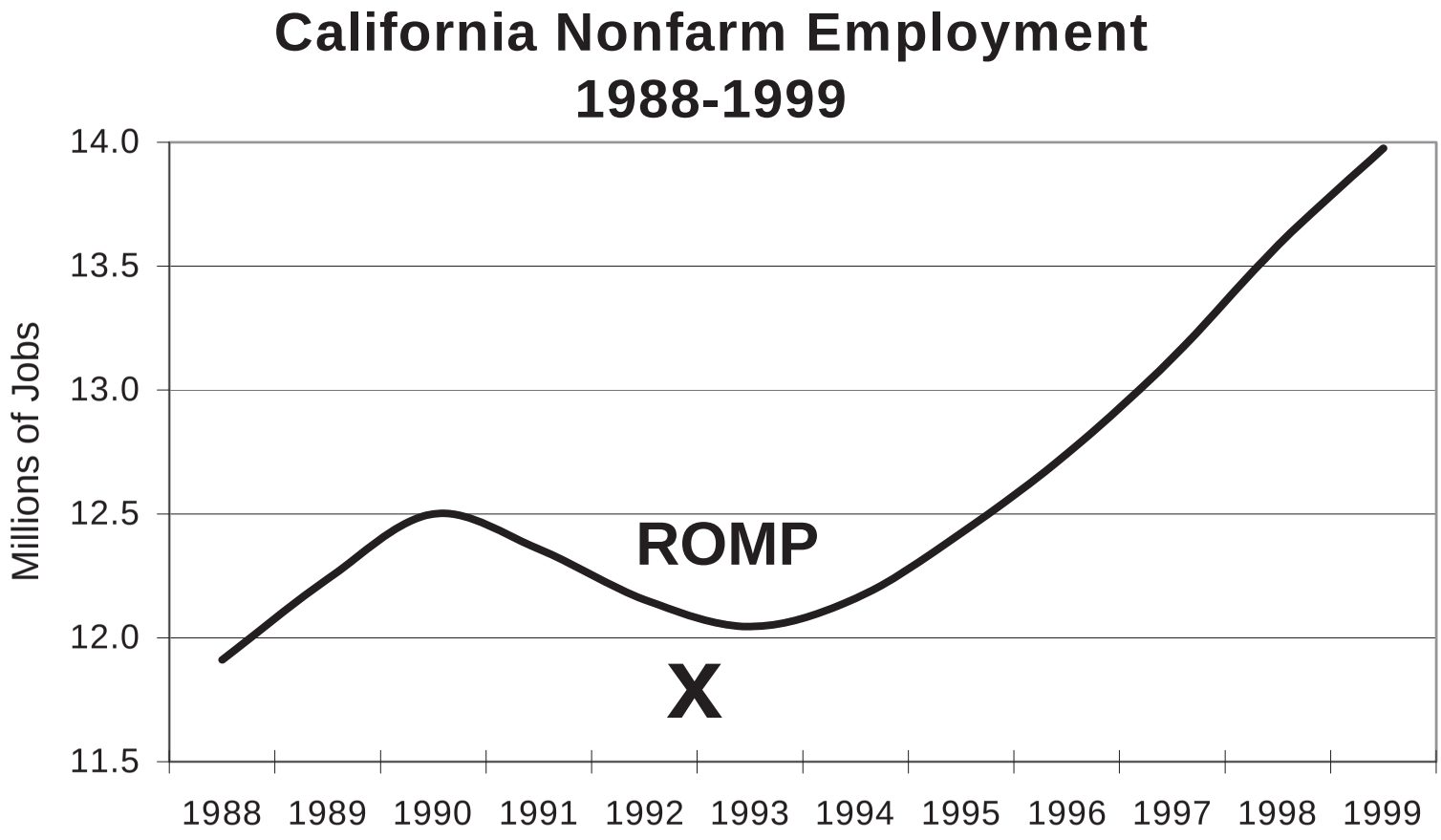


LEADERSHIP EXAMPLE : CPUC +

Digital Conversion -"ROMP"- $400M , 2years

Rural Office Mod Program

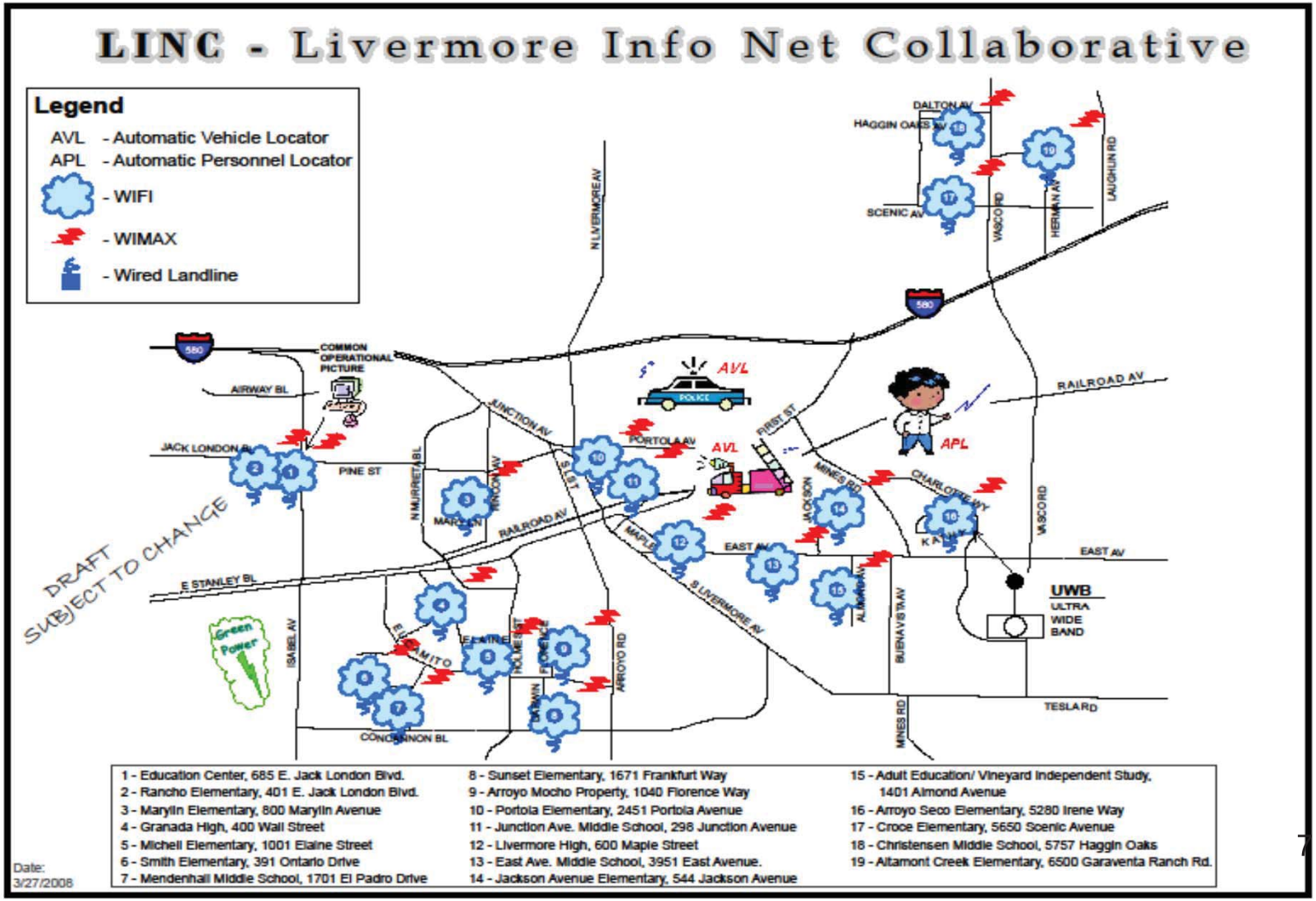
(CPUC + PACBELL + California Consumer Advisory Panel)



SYNERGISTIC EFFECT : INTERNET COMMS = JOBS

LEADERSHIP EXAMPLE : LINC

POLICE, FIRE, SCHOOLS, LLNL, CMUSV, +



INNOVATION:THE NEW ECONOMY
Mobile Internet-Based

The New Economy, 4 aspects:

- **Fast, Global, Networked, Knowledge Worker-Based**

  (California Economic Strategy Panel, "Connecting to Compete")

Communications impacts <u>all</u> 4 aspects, with :

– **Wireless Internet** = Home, Local, Area & Sat nets

– **User Innovation** = Lead Users: "*Democratizing Innovation"* (Dr. Eric von Hippel, MIT)

– **Unprecedented uses, synergies** : social, safety, security, health, education, sustained commerce

– ***BEST TIME, EVER, FOR EMERGENCY COMMS;*** *FOR ALL, VIA* ***<u>OPEN WIRELESS INTERNET</u>***

INNOVATION: WIRELESS

Mobile BroadBand : The Future is Here

"The future of Broadband is Wireless; The future of Wireless is Broadband"*...pel*

"Broadband Wireless will soon close what information gap remains"...*Forbes*

"Most exciting new tech platform since the Internet – no innovation limits"*...Forbes*

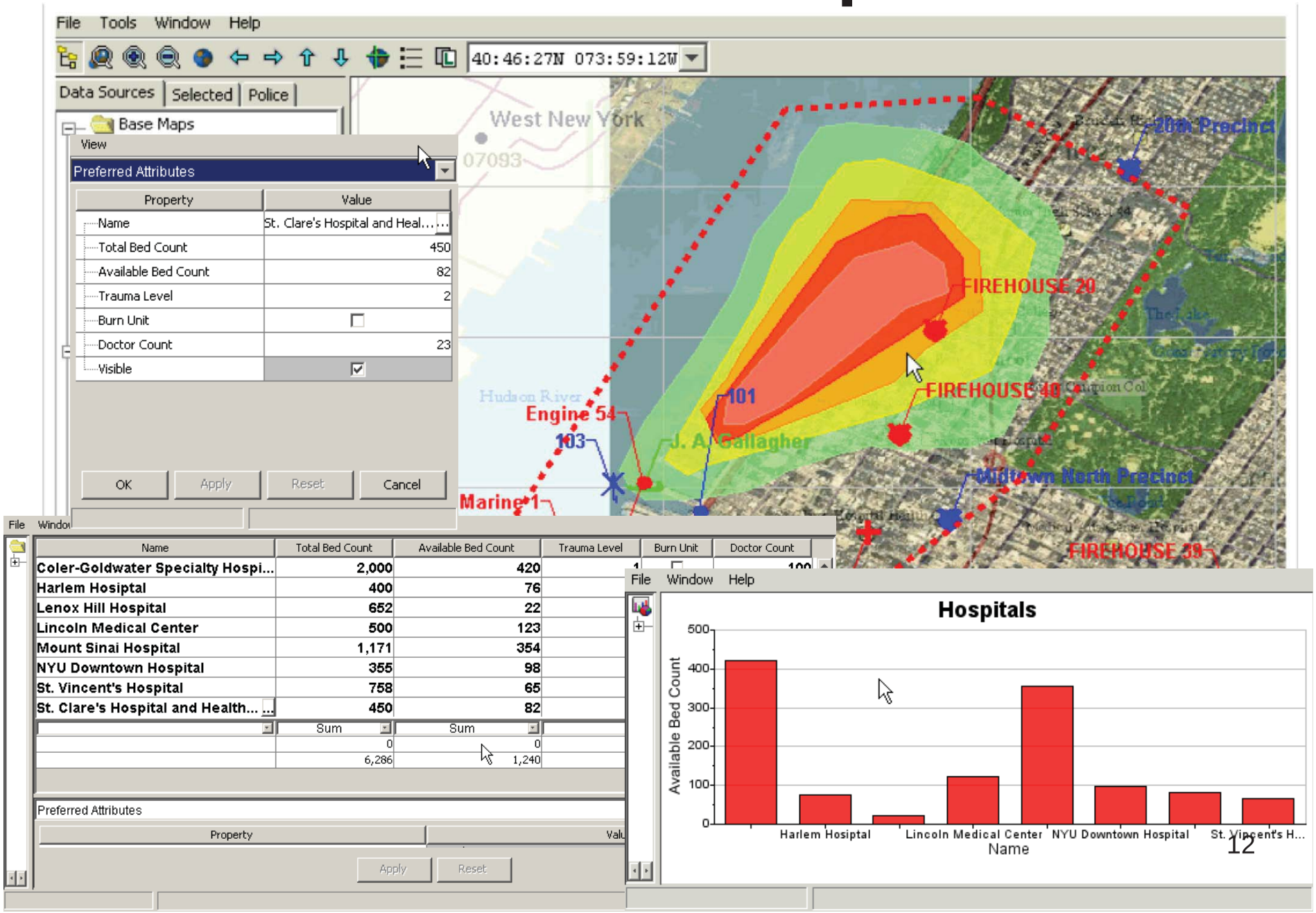
"Likely offer a larger wave of investment opportunity than the PC"*...John Doerr, VC*

CMUSV INNOVATION for PEOPLE: INCIDENT AIDE SYSTEM (IAS)

INNOVATION : SOCIAL MEDIA and UDOP/COP via OPEN INTERNET

- **Enlightened Social Media use/analysis leads to "Social Intelligence" (SI) & "Situational Understanding" (SA-SU)**
- **Common (User-Defined) Operational Picture (UDOP or COP) creates shared space, = <u>Best Decisions</u>**
- **Shared appropriately via <u>Open Internet</u>**

UDOP: User-Defined Ops Picture



INNOVATION: BEYOND AWARENESS

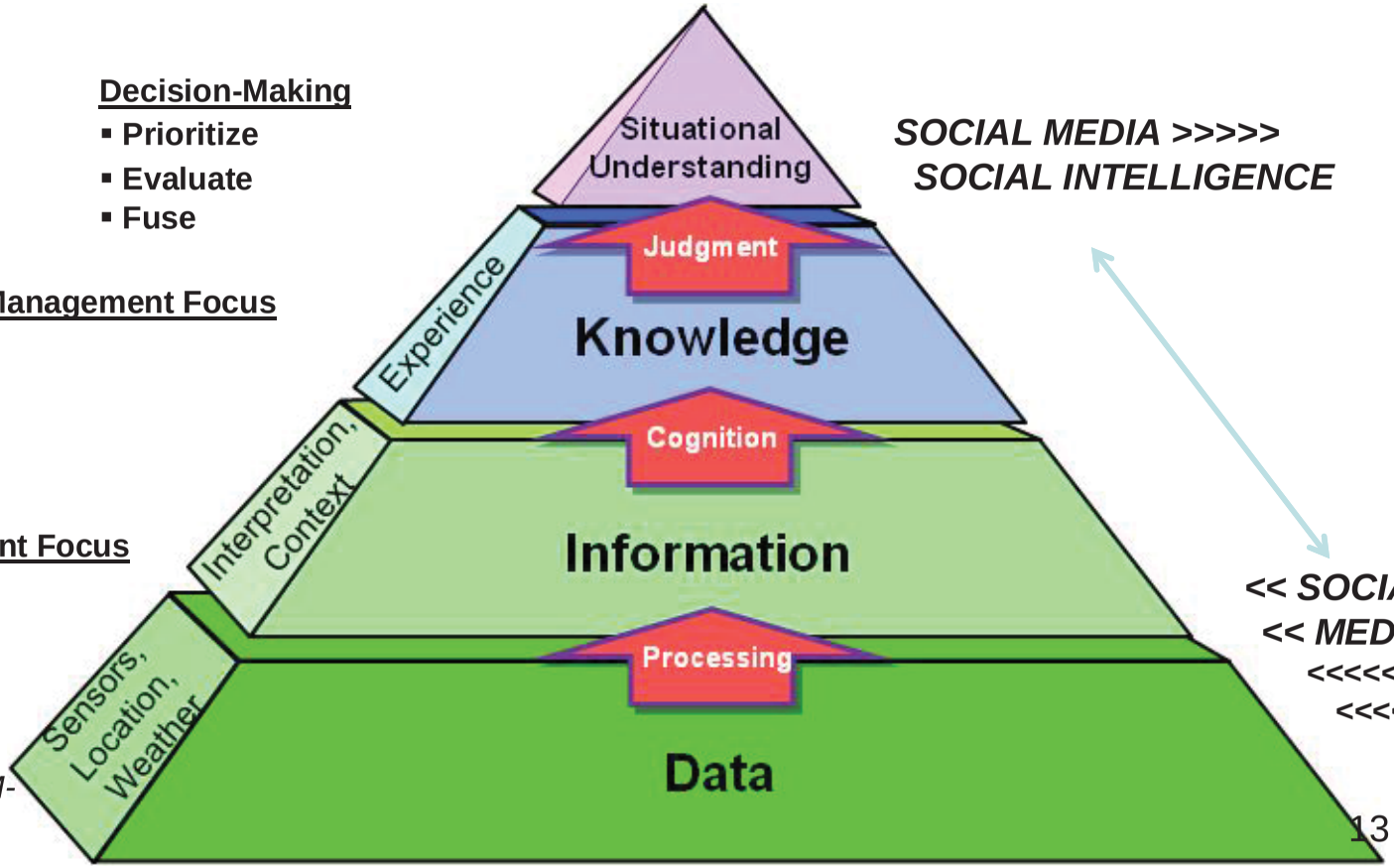
- Strategic: From Awareness to Situational Understanding
- Tactical Process: From Social Media to Social Intelligence

Decision-Making
- **Prioritize**
- **Evaluate**
- **Fuse**

Knowledge Management Focus
- **Create**
- **Organize**
- **Apply**

Information Management Focus
- **Collect**
- **Process**
- **Disseminate**
- **Store**
- **Display**
- **Protect**

-USPACOM-



SOCIAL MEDIA >>>>>
SOCIAL INTELLIGENCE

<< SOCIAL
<< MEDIA
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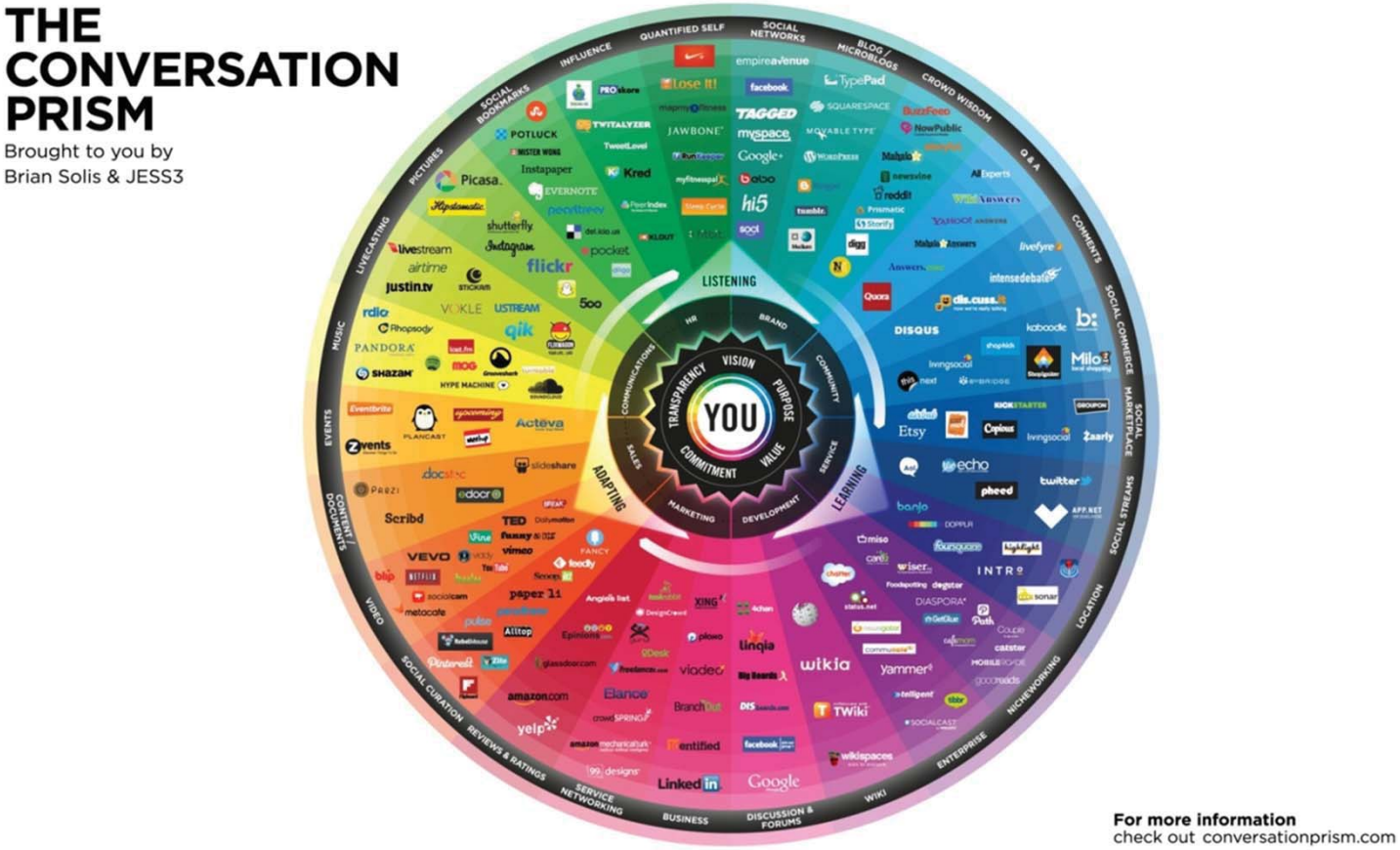
SOCIAL MEDIA: BIG CHANGE

Just 10 years, engaging all,

via Open Internet



INNOVATION: UNMANNED SYSTEMS

MIONet: Drive-by Search by USV Sea Fox, and USV and UAV Wireless Relay

COLLABORATION

"Stars Aligning" IN ASIA/PACIFIC = Globally Unique

MCIP

- Multinational Communications Interoperability Program (MCIP) PACIFIC ENDEAVOR; 23 Countries, UN, NGOs
- NEPAL: US & Nepal Mil, Tribuvan U., CMUSV, CAN, etc.

APEC

- ASIA PACIFIC ECONOMIC COLLABORATION
- "WHOLE OF SOCIETY APPROACH" 11/11/11

MORE

- Build from best practices of MCIP, UNWGET, UNETC, PTC, CPUC, CalOES, others

“WHOLE OF SOCIETY” APPROACH via APEC

- **Asia Pacific Economic Collaboration**

- **11/11/2011: Signed “Statement Of Intent” To “Strengthen Regional Disaster Risk Reduction & Resilience” via a “Whole of Society” Approach**

APEC (con't)

- **"WHOLE OF SOCIETY" Approach to:**
  1. **Save Lives,**
  2. **Ensure Economic Vitality, &**
  3. **Enhance Human Well-Being"**

U.S. President Obama, Sect. Clinton, USAID, USPACOM, US Chamber Of Commerce, NOAA, Foundations, Countries; a "Joint Policy Declaration"

MCIP, UNWGET, & PTC ECDM

- **All focused on HA/DR (Humanitarian Assistance/Disaster Relief) Communications Planning & Management with Military, Gov't, UN, NGOs, Industry, Academia**

- **MCIP: Multinational Communications Interoperability Program; 23 countries, USPACOM Joint Command**

- **UNWGET: UN Working Group on Emergency Telecomms & UNETC: Emergency Telecomms Cluster**

- **PTC ECDM: Pacific Telecommunications Council, Emergency Comms & Disaster Management Workshop**