

The Internet of Things

And what it mean for librarians

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Presented to: Internet Librarian

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FACTTANK 

NEWS IN THE NUMBERS

Oxford English Dictionary

Internet of things:

Development of the Internet in which everyday objects have network connectivity, allowing them to send and receive data

Colleges Are Tracking When Students Work Out at Rec Centers

Amid a Building Boom, Schools Mine Data to Justify Their Spending and Tailor Their Offerings to Undergrad Demand

WSJ – 10.28.14



Coming Soon to the Library: Humanoid Robots

They Can Speak in 19 Languages and Even Do Tai Chi

WSJ – 9.29.14



What IoT means for libraries

1. 4th digital revolution and it's tied to another revolution moving toward gigabit connectivity
2. People: Reshapes who librarians are and what they do
3. Place: Reconfigures library space and media
4. Platform: Redefines the role libraries play in communities

RISING TO THE CHALLENGE

Re-Envisioning Public Libraries




THE ASPEN INSTITUTE
Communications and Society Program

<http://bit.ly/1w5YIE7>

Our inspirer



2004-2011 Disruptions and Disputes

Greatest hits

- Rise of cyber attacks
- Move to mobile-preferred connectivity
- Degradation of traditional publishing / knowledge businesses
- Growing concern about privacy
- Power of augmented reality
- Mixed social impact
- Less tech impact on education and health care

Our 'news peg'



Survey 6 – 2013-4

PewResearch Internet Project



The Web at 25

On March 12, 1989 (25 years ago), Tim Berners-Lee wrote a [paper](#) proposing an “information management” system that became the conceptual and architectural structure for the Web. He eventually released the code for his system—for free—to the world on Christmas Day in 1990. It became a milestone in easing the way for ordinary people to access documents and interact over a network of computer networks called the internet—a system that had been around for years.

<http://bit.ly/OgpZkS>

[Digital Life in 2025](#)

[The Internet of Things Will](#)

[Thrive by 2025](#)

[Net Threats by 2025](#)

[AI, robotics and the future of jobs](#)

[Killer apps in the gigabit age](#)

[Cyber attacks likely to increase](#)

– November 25–January 13

– 2,551 respondents

- 19% research scientist
- 10% authors, editors, journalists
- 9% entrepreneurs, biz leader
- 8% tech developers
- 8% activists
- 7% futurists, consultants
- 2% legislators, lawyers
- 2% pioneers

"A Day of Glass" - Corning

<https://www.youtube.com/watch?v=jZkHpNnXLB0>

"Sight" – Students Bezalel Academy of Arts

<http://vimeo.com/46304267>

Digital Life in 2025

*This is an **open-ended question** allowing you to make your own prediction about the role of the Internet in people's lives in 2025 and the impact it will have on social, economic and political processes. Good and/or bad, what do you expect to be the **most significant overall impacts** of our uses of the Internet on humanity between now and 2025?*

Digital Life in 2025



The Internet will become 'like electricity' — less visible, yet more deeply embedded in people's lives for good and ill

The Internet of Things Will Thrive by 2025

*The evolution of embedded devices and the Internet/Cloud of Things —As billions of devices, artifacts, and accessories are networked, will **the Internet of Things have widespread and beneficial effects** on the everyday lives of the public by 2025?*

Future of Internet of Things

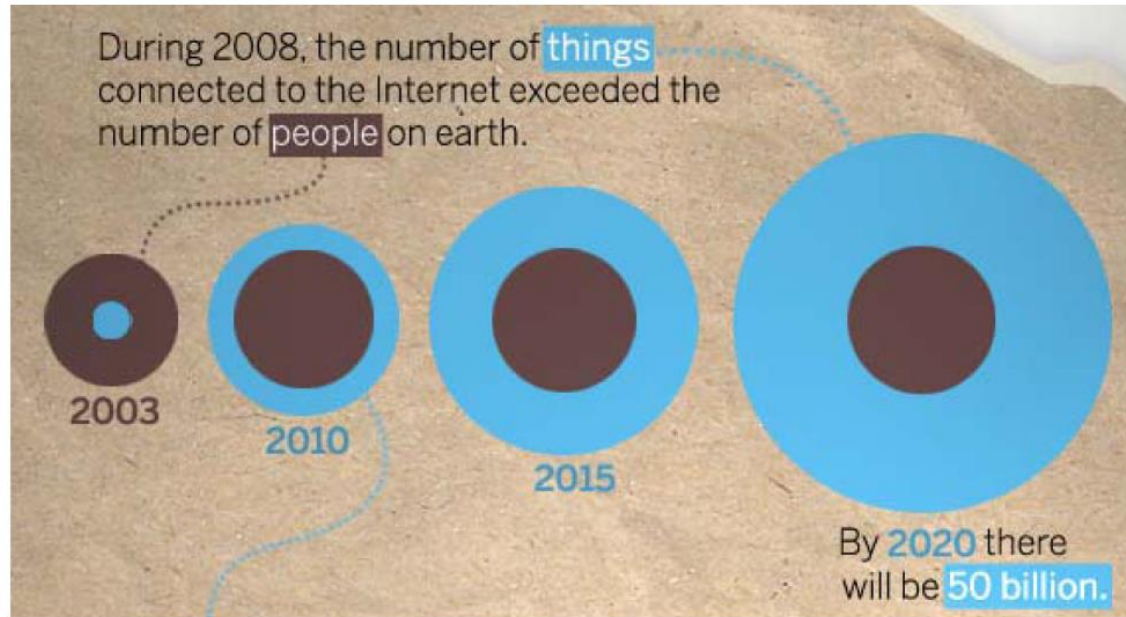
**Yes – widespread and
beneficial**

No

83%

17%

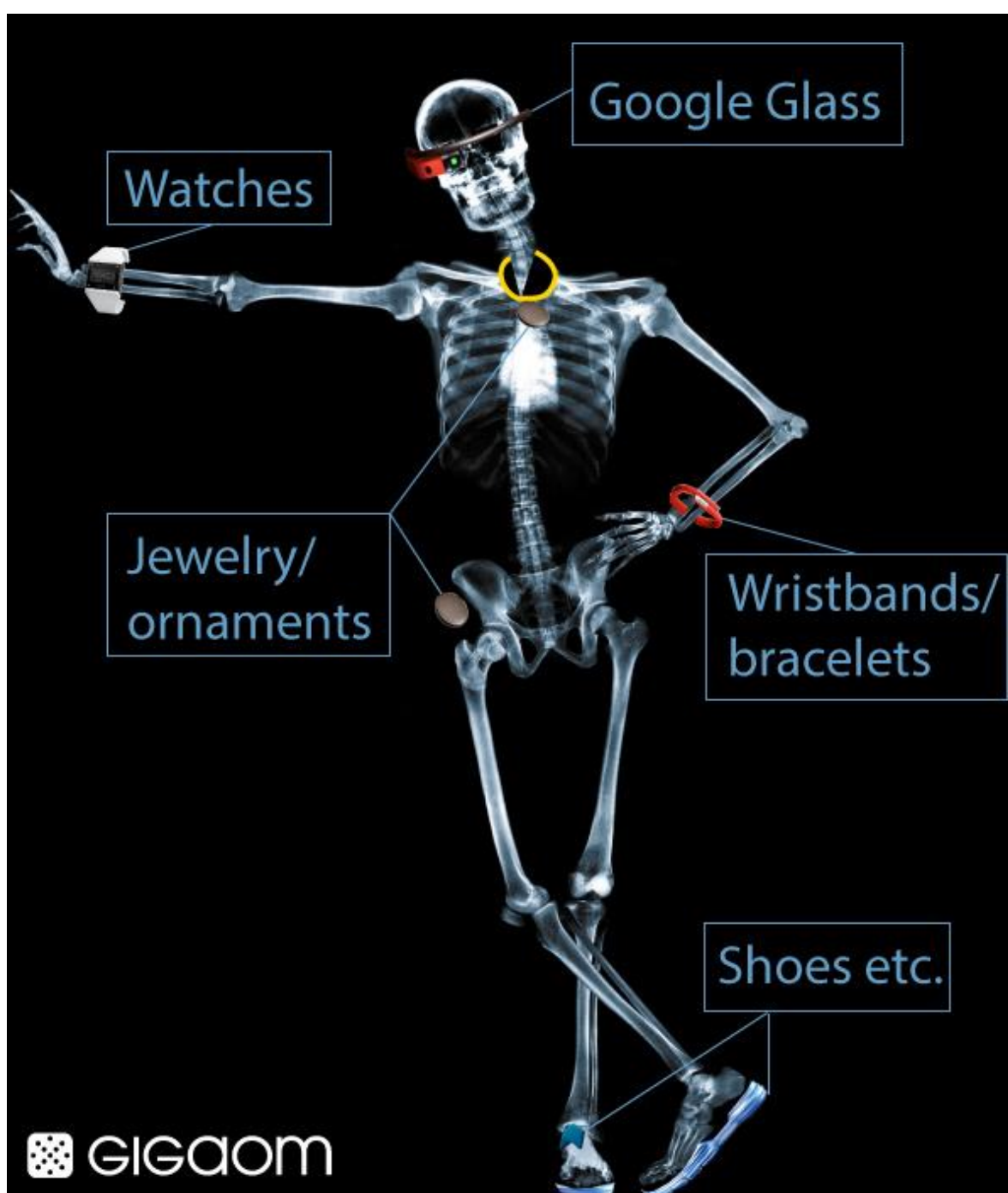
The Internet of Things Will Thrive by 2025



It's the next revolution. **Upsides:** enhanced health, convenience, productivity, safety, and vastly more useful information. **Downsides:** privacy challenges, over-hyped expectations, tech complexity, lagging human adaptation to new realities.

The rollout

BODY



Check on baby – wearable monitor



Remember to take your meds –
small dispenser caps



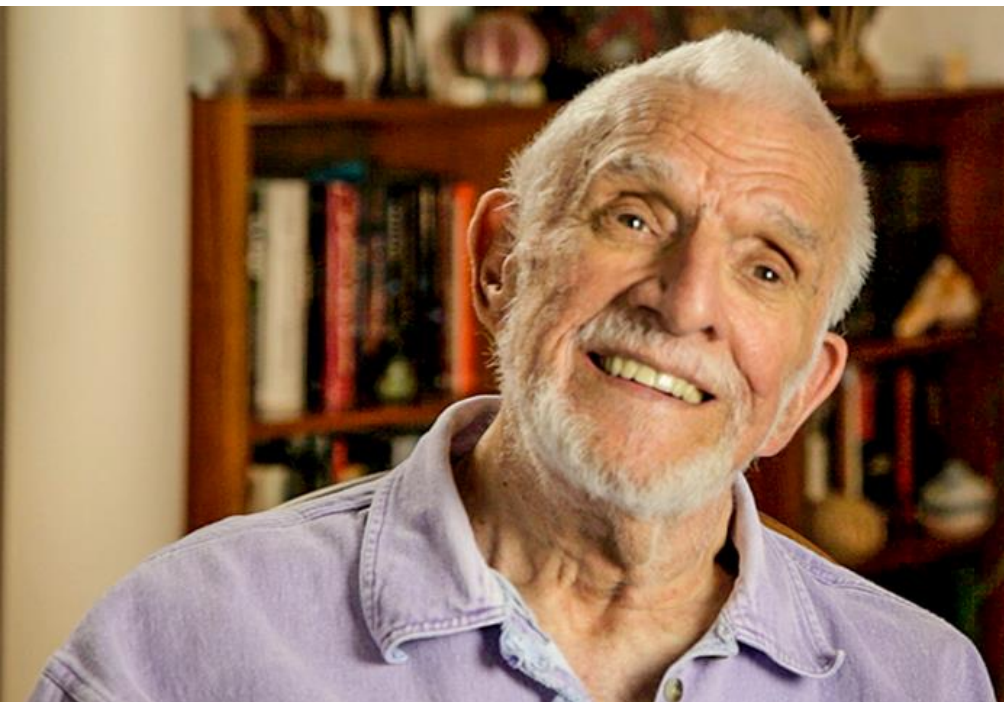
Track your activity



Get most of your meds – pill sensor



Monitor family member



HOMES



Heat your home efficiently – smart thermostat



Make sure oven is off – smart outlets



Track down lost keys - tags



Avoid disasters – monitor remotely



Keep your plants alive



COMMUNITIES



Streets clean



Parking



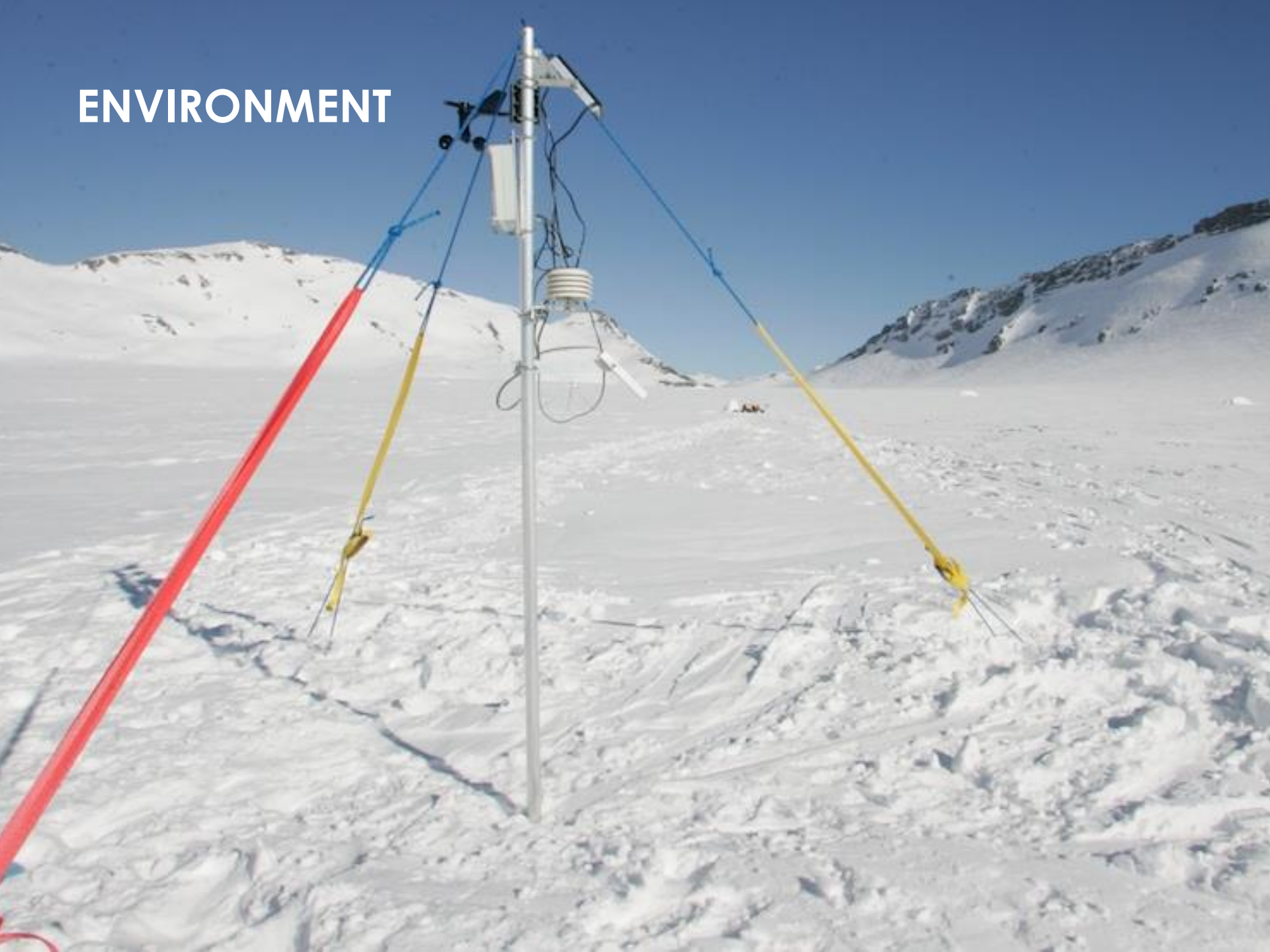
Pollution warnings



Share your findings – ‘aircasting’



ENVIRONMENT



Monitor pollution



Track water



Help protect wildlife



Get advanced warning – mudslide detection



Image: CC Washington Department of Natural Resources

Know the variables



Lil Bee

@lilbee

myhomealerts: Life is good! We're busy working.
[Moderate #bumblebee #activity detected (Pulse
Count 133)] dlyr.it/1NTChf #auto

Reply Retweet Favorite



Swlight On



Beam Level (54)



Stop the bleeding



Hopeful theses

- 1) Information sharing over the Internet will be effortlessly interwoven into daily life.
- 2) Artificial intelligence, augmented reality, wearable devices, and big data will make people more aware of their world and their own behavior – especially aid in health care.
- 3) The spread of the Internet will enhance global connectivity that fosters more planetary relationships and less ignorance.
- 4) An Internet-enabled revolution in education will spread more opportunities, with less money spent on real estate and teachers.

Downbeat theses

- 1) The realities of this data-drenched world raise substantial concerns about privacy and people's abilities to control their own lives. The level of profiling and targeting will grow and amplify social, economic, and political struggles.
- 2) Dangerous divides between haves and have-nots may expand, resulting in resentment and possible violence.
- 3) Abuses and abusers will 'evolve and scale.' Human nature isn't changing; there's laziness, bullying, stalking, stupidity, pornography, dirty tricks, crime, and those who practice them have new capacity to make life miserable for others.

Downbeat theses (con't)

- 4) Pressured by these changes, governments and corporations will try to assert power as they invoke security and cultural norms.
- 5) Humans and their organizations may not respond quickly enough to challenges presented by complex networks.
- 6) There will be complicated, unintended consequences: 'We will live in a world where many things won't work and nobody will know how to fix them.'

Libraries and the IoT

People: Serve and Learn



- Tech experts
- Master teachers in age of lifelong learning
- Visionaries for the knowledge economy and the jobs it produces
- Experts in sense-making and context
- Curators of the most relevant and useful material
- Monitors of algorithms
- Modelers of lifelong learning and value upgrading

Place: Reconfigured and Repurposed



- Physical space is different and sensed / metered
- Artifacts are connected and data-rich artifacts
- Nodes for “system of systems” with databases and media
- Test beds – maker masters
- Community information and media stewards – server farms

Platform: Community Resource



- Trusted institution and privacy watchdog
- Advocates for free and open
- Advocates for closing digital divides
- Data and collections repositories
- Entrepreneur enablers
- Civic specialists and gap fillers – especially in learning realms
- Credentialing???

Be not
afraid

