Human Engineering and Saying YES!

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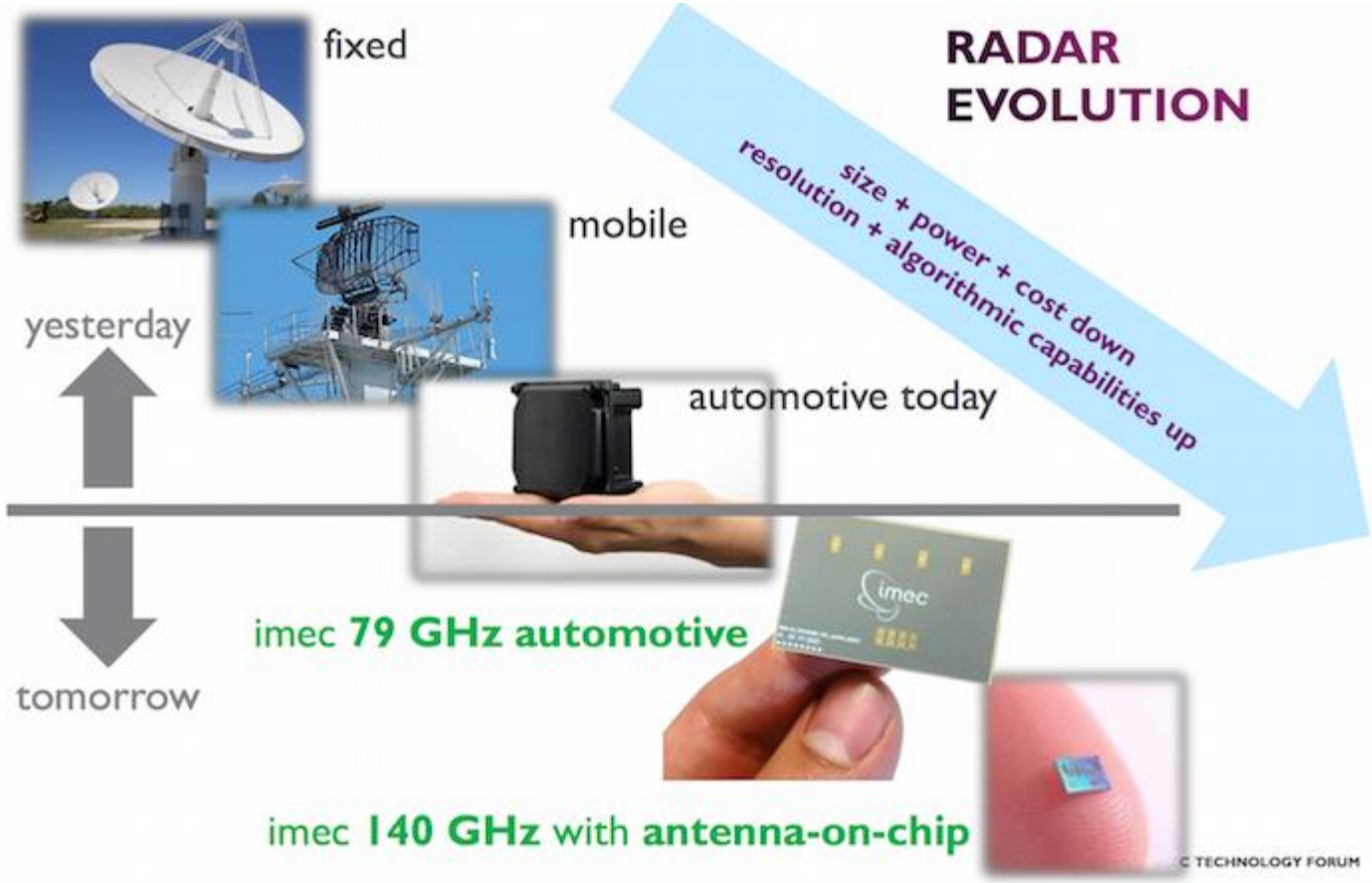
Abstract

Electronic Warfare is evolving. To fully optimize the transition, there needs to be increased engagement with younger generations. This means not only training them on STEM, but also teaching them the passion of the career field. To achieve that, we need to stop being so risk adverse and just say yes. This presentation will include some depressing examples of organizational failures to engage younger generations and some exciting examples of successful innovative cultures. While the future has a lot of automation, artificial intelligence, and advanced hardware, it also has a lot to do with people, their innovation, and working together.

Electronic Warfare is evolving...



http://semimd.com/blog/tag/infineon/

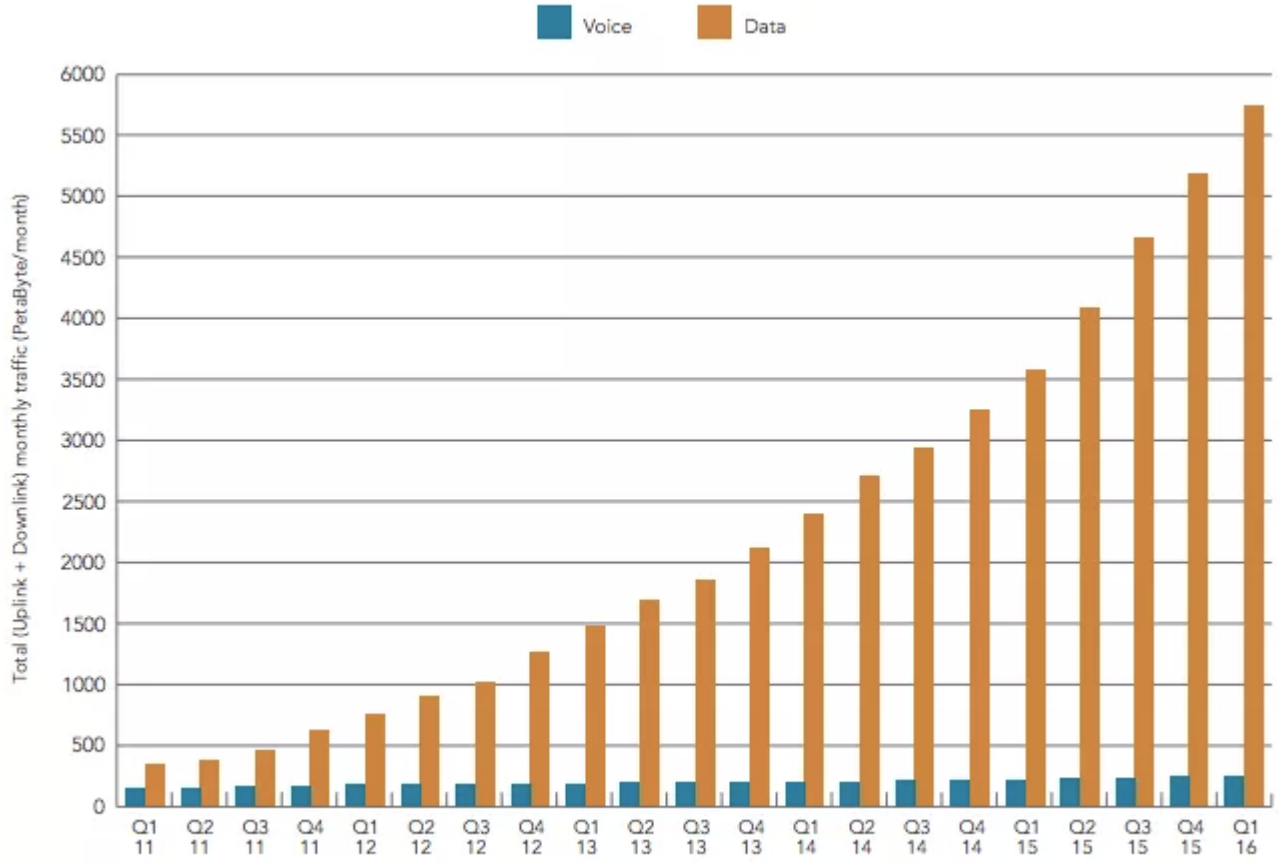
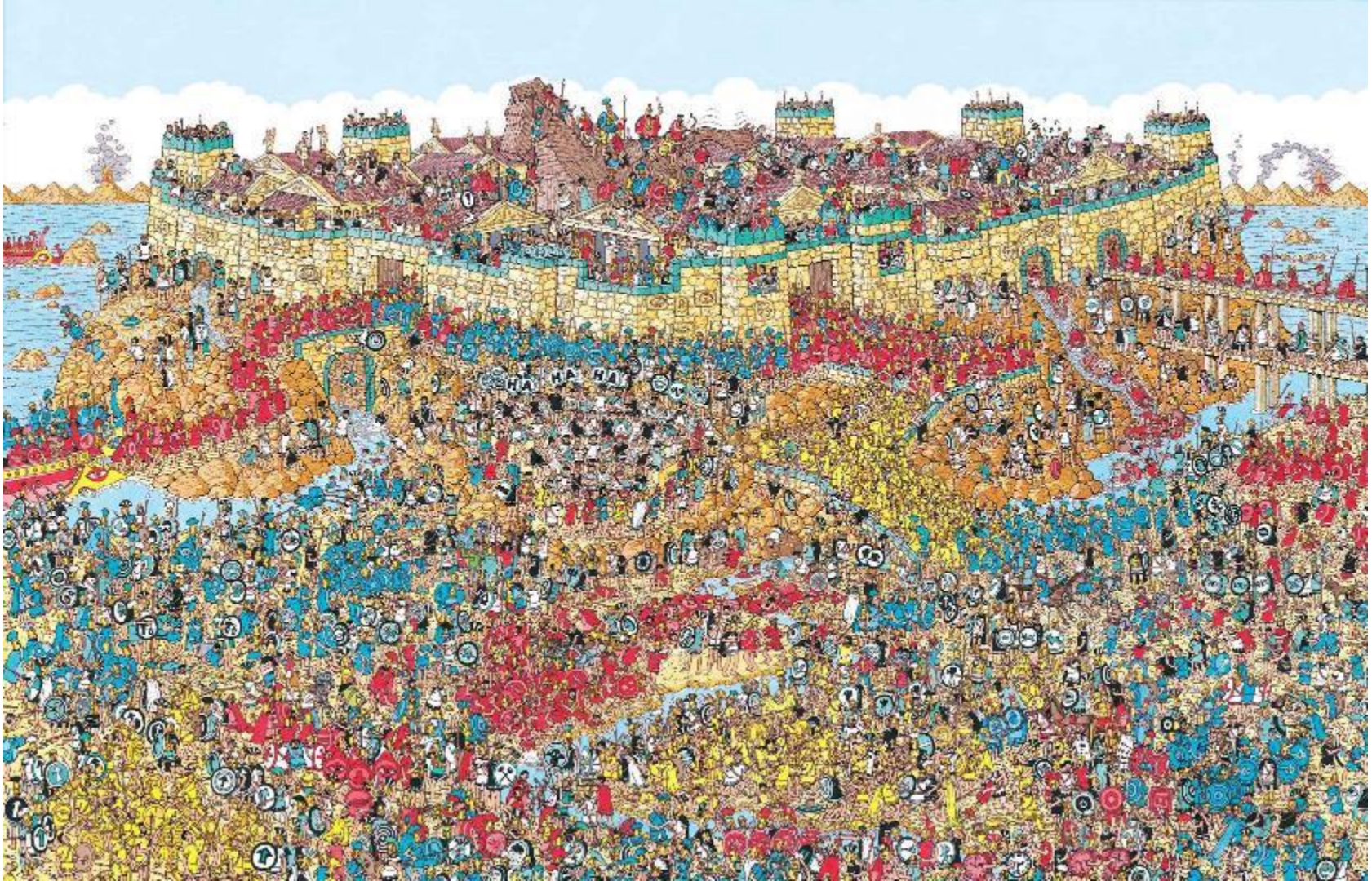
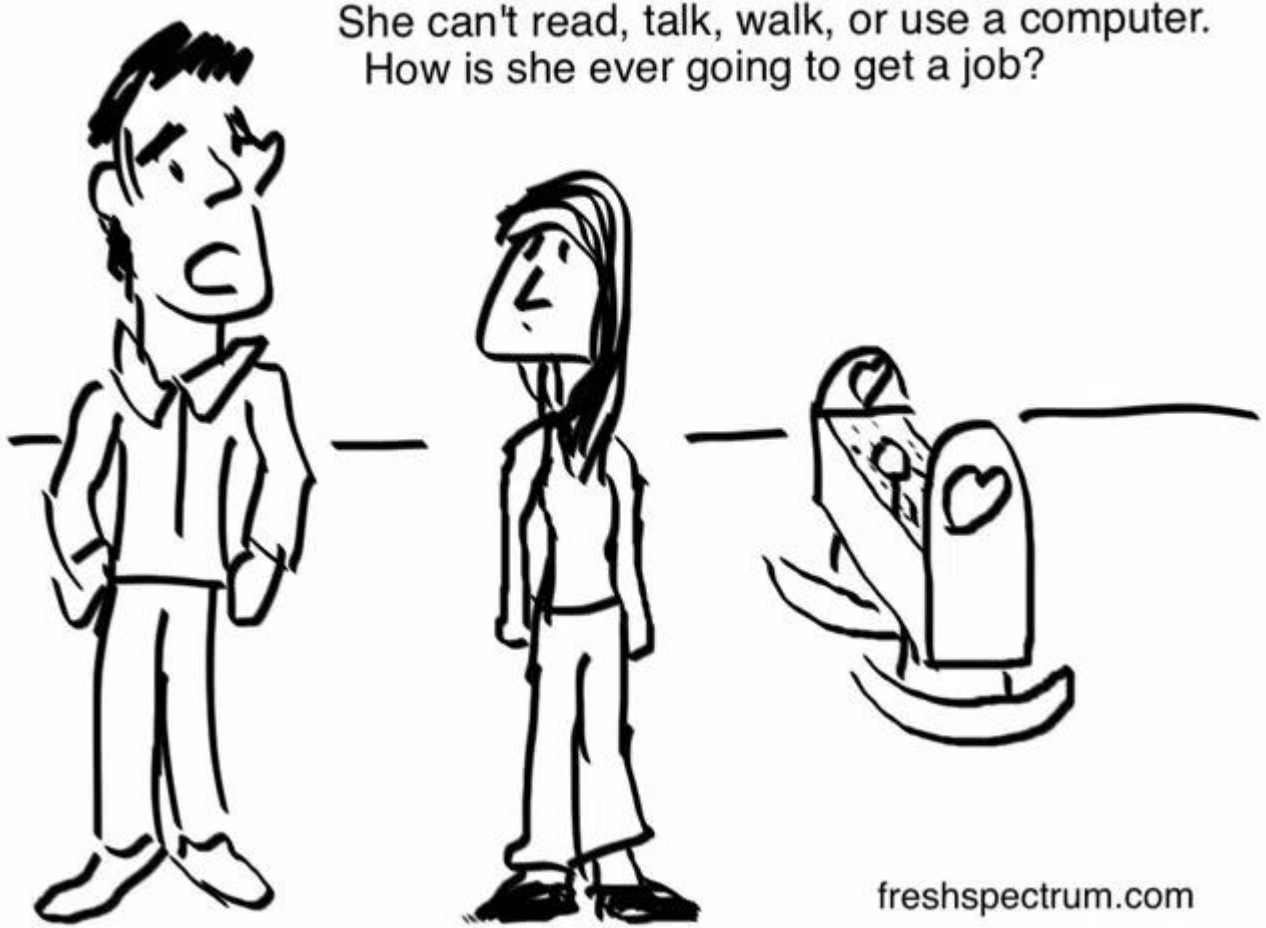


Figure 41: Total Monthly Mobile Voice and Data Traffic as Measured by Ericsson

https://www.theverge.com/2016/6/29/12056760/uk-fastest-mobile-internet-us-lags-behind-akamai-report


HA HA HA


She can't read, talk, walk, or use a computer.
How is she ever going to get a job?
freshspectrum.com

What do Millennials want?

A group of researchers from George Washington University and the Department of Defense analyzed more than 20 published and unpublished studies examining generational differences and concluded that **meaningful differences among generations probably do not exist in the workplace.**

1. Is this a winning organization I can be proud of?
2. Can I maximize my performance on the job?
3. Are people treated well economically and interpersonally?
4. Is the work itself fulfilling and enjoyable?

https://hbr.org/2016/04/what-do-millennials-really-want-at-work

Failures!!!

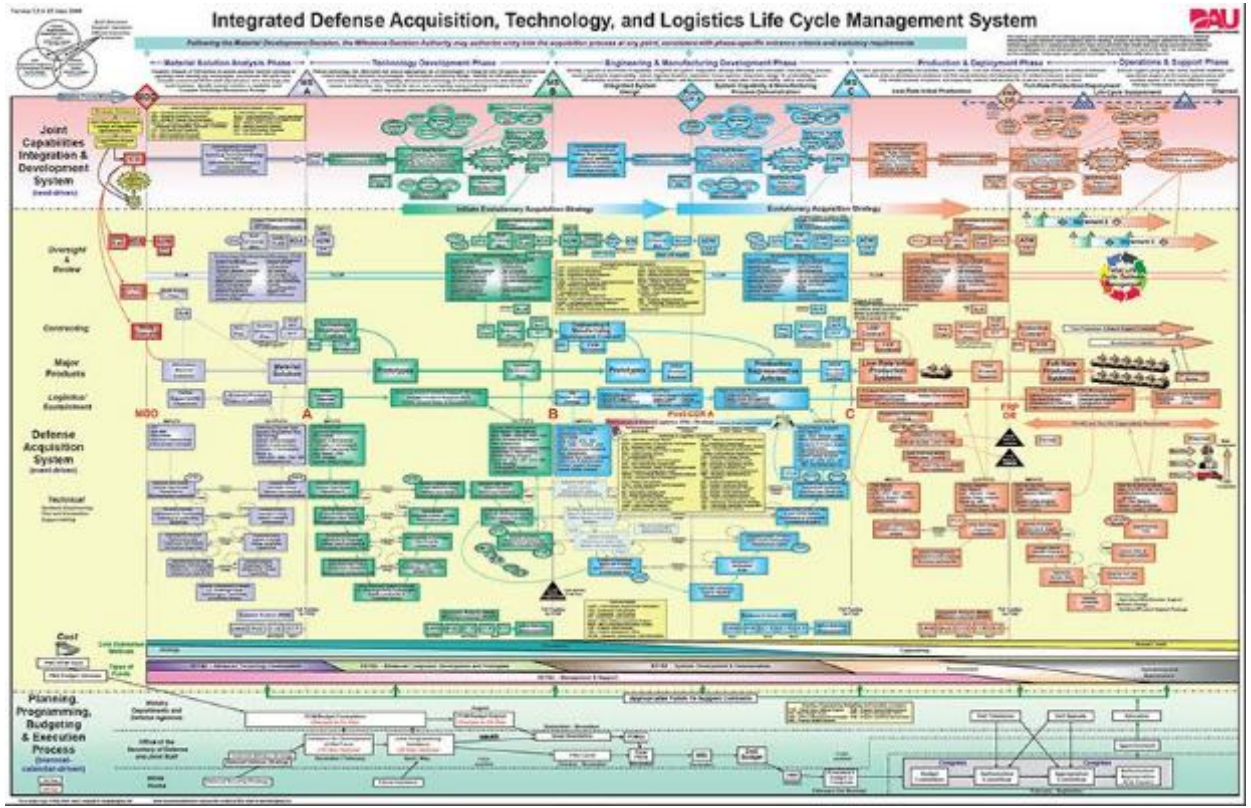
Exclusion...

https://www.eweurope.com/visiting/admission-policy

“No person under the age of 18 years, including children of exhibitors, will be admitted during the tenancy period.”

“Unfortunately we have to operate the same No Under 18s policy that Infosecurity Europe does given that it is held in Olympia.”

Process...


Integrated Defense Acquisition, Technology, and Logistics Life Cycle Management System
Joint Capabilities Integration & Development System
Defense Acquisition System
Planning, Programming, Budgeting & Execution Process
Cost
MDD
A
B
C
FRP DR

Fiscal Over-accountability...

Budgets: Training cuts, conference cuts, prototype cuts, tools cuts.

Approvals: Immediate supervisor, 3 matrixed supervisors, senior supervisor, director, senior director, vice president, then a senior vice president can give the ok.

Isolation rules...

No Social Media (Facebook, LinkedIn)

No Personal Communications (email, cell phones, computers)

No Streaming Media (YouTube, streaming music, professional development, online meetings, web or cloud tools)

No Convenience (fitness devices, telework, automation)

Might as well not allow modern conveniences or clean drinking water.

https://commons.wikimedia.org/wiki/File:Faraday_Cage.JPG#/media/File:Faraday_Cage.JPG

Overclassification...

To work here, your clearance level must be this high…

~1.5% of the US Population (or 5 million) has a security clearance.

~1.5 million Top Secret clearances, of 200 million working-age adults

~0.75% of the population provides the innovation for the biggest secret programs.

https://www.washingtonpost.com/news/the-switch/wp/2014/03/24/5-1-million-americans-have-security-clearances-thats-more-than-the-entire-population-of-norway/?utm_term=.a2c539fa54bc

Overly-sad-classification effects...

Overclassification and excessive secrecy have **negative effects** on national security and government accountability.

Excessive classification prevents Congress from fully investigating and holding government agencies accountable.

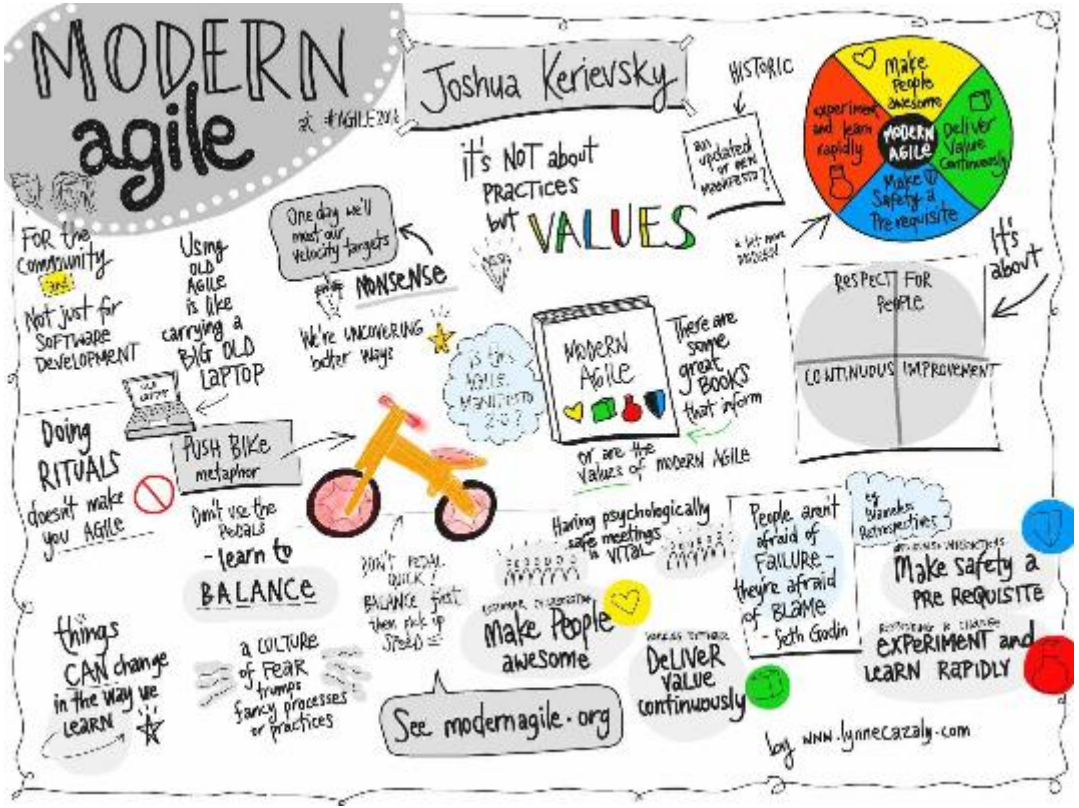
The federal government spent more than $100 billion during the last 10 years on security classification activities, and yet, it is **estimated 50 to 90 percent of classified material is not properly labeled.**

Federal agencies often mark documents classified and withhold information for decades simply because they contain embarrassing material.

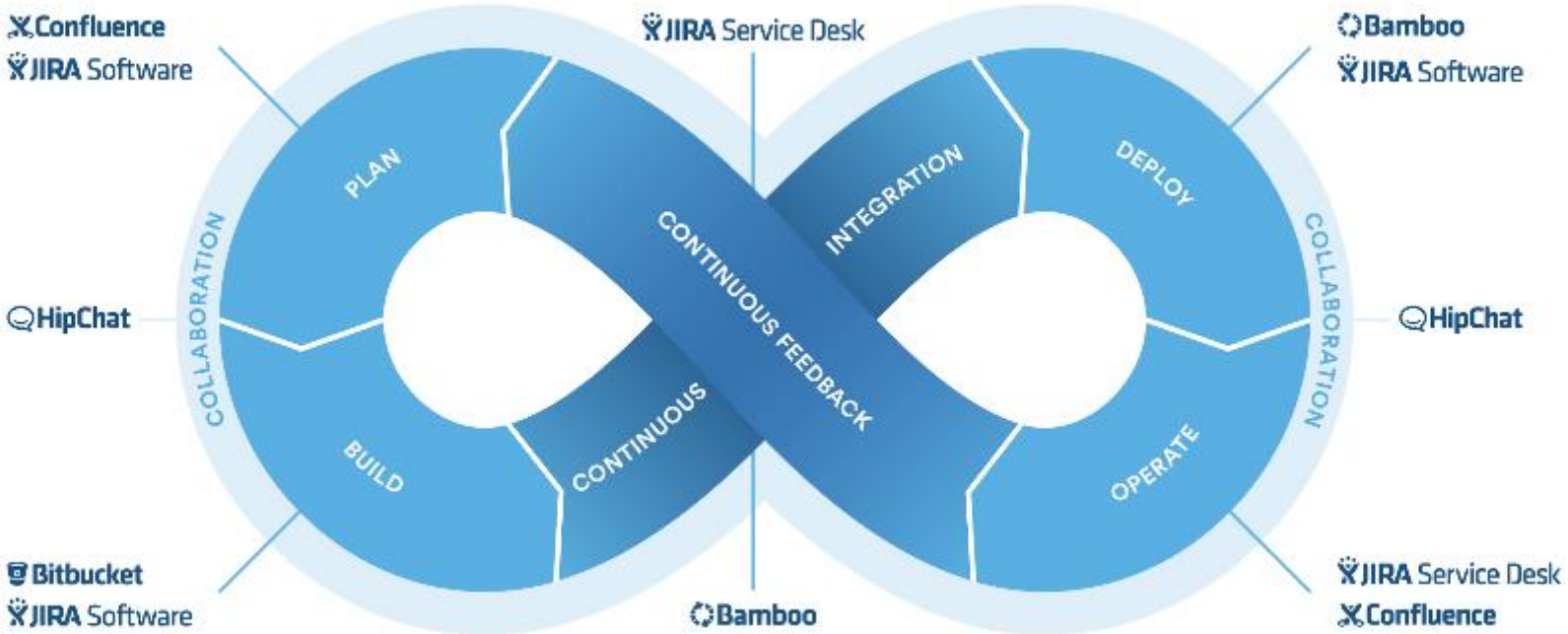
https://oversight.house.gov/hearing/examining-costs-overclassification-

Successes!!!

Agile Process



DevOps


Confluence
JIRA Software
JIRA Service Desk
Bamboo
JIRA Software
PLAN
INTEGRATION
DEPLOY
COLLABORATION
CONTINUOUS FEEDBACK
COLLABORATION
HipChat
HipChat
BUILD
CONTINUOUS
OPERATE
Bitbucket
JIRA Software
Bamboo
JIRA Service Desk
Confluence

Fiscal Freedom...

ARM Holdings

- **Paid sabbatical of one month every four years.**
- Patent and white paper awards.
- 6% 401K matching.
- Flexible hours, telecommute options.
- **30% born after 1981**

Fiscal Freedom...

Salesforce

- **7 Paid Days Off to Volunteer**
- **Wellness Reimbursement Program**
- 6% 401K matching.
- 46% born after 1981

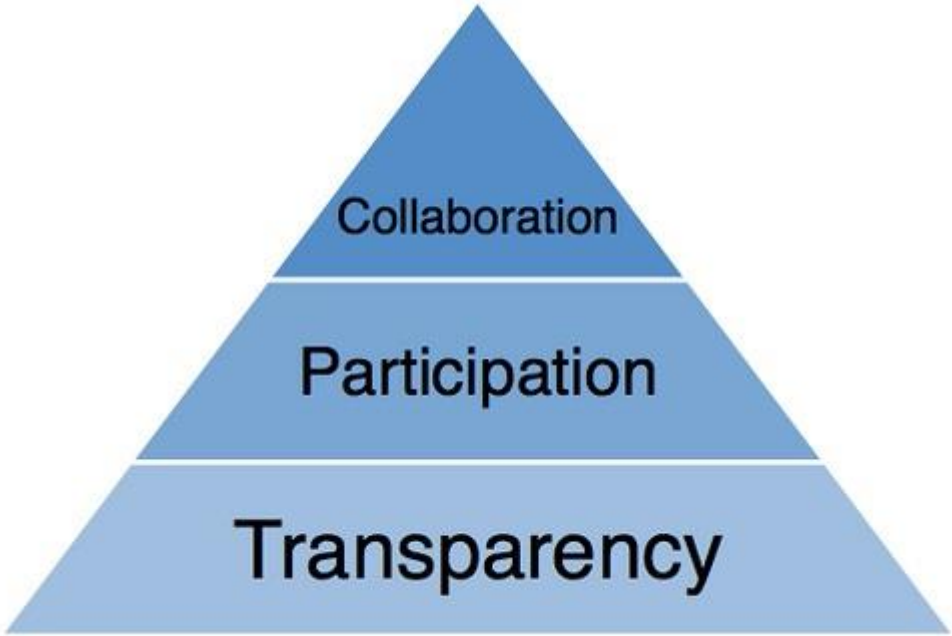
Transparency...

Open-source - sourceforge

Community Development - github

Bug Bounties - hackerone

Crowd Source - kickstarter



Crowdsourcing...

1714 – **The Longitude Prize**: When the British government was trying to find a way to measure a ship's longitudinal position, they offered the public a monetary prize to whomever came up with the best solution

2001 – **Wikipedia**: "Free-access, free content Internet encyclopedia"

2009 – **Waze**, a community-oriented GPS app, allows for users to submit road info and route data based on location, such as reports of car accidents or traffic, and integrates that data into its routing algorithms for all users of the app

Crowdvoting, Crowdsolving, Crowdsearching, Crowdfunding

Pikes Peak Roost

10 hands on challenge lanes as a proof of concept.

Electronic Warfare - Attack, Support, Protect

Cyber Warfare - Attack, Support, Protect

Models & Simulation

Science, Technology, Engineering and Mathematics (STEM)

Contact me!

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