

Tapping Your Inner Futurist

The Futures of Government IT Experiences



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#GovITSym



PDF: garrygolden.com/December6

Start

End



In the News



**Drivers of Change:
Data & Blockchain**



Next Steps

Fundamentals of Foresight

Investigate

- Horizon Scanning
STEEP Category Signals from:
Society
Technology
Environment
Economy
Politics
- Emerging Issues Analysis
(Will we do xyz?)
- Indicator Analysis
(Leading vs Lagging)

Imagine

- Forecasts
(Trend Extrapolation)
- Scenarios
(Alternative Assumptions)

Inspire

- Visioning & Backcasting
- Planning, Goal Setting & Roadmapping
- Transformation Management



In the News

Nvidia and Singapore's Department of Public Safety are piloting a 'Micro Drone' Fleet that citizens can request as an aerial escort until their destination.



True

False

Creepy Line or Compelling Outcomes

Google

Is this dynamic inevitable for ...

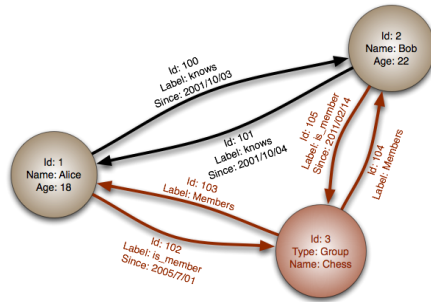
Government IT Services

How do we...

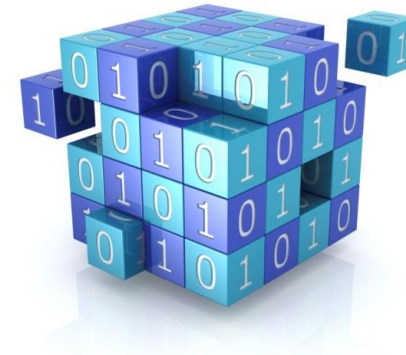
- tell our story of bringing value to communities*
- tell our story of value to internal agency team*
- integrate data + interventions near the creepy line?*
- broker innovative partnerships?*

Slow Pace of *Fast Change*

Big Ideas to Explore for Future Government IT Experiences



**Data + AI Driven Innovation
(Bridge of Graph Analytics)**



**Blockchain & Smart Contracts
for Trusted Transactions**

**Social Norms for the
Anonymous-Access Web
1993**




“On the Internet, nobody knows you’re a dog.”

“On Facebook, 273 people know I’m a dog.
The rest can only see my limited profile.”

Social Norms & the Social Web

2008





Everyone knows I'm
working on some
personal growth issues

**How do government services and our
communities evolve around
experiences that help drive outcomes
& personal behavior change?**

Who will deliver the nudges and prescriptive analytics?

Race to Build Intelligent Assistants



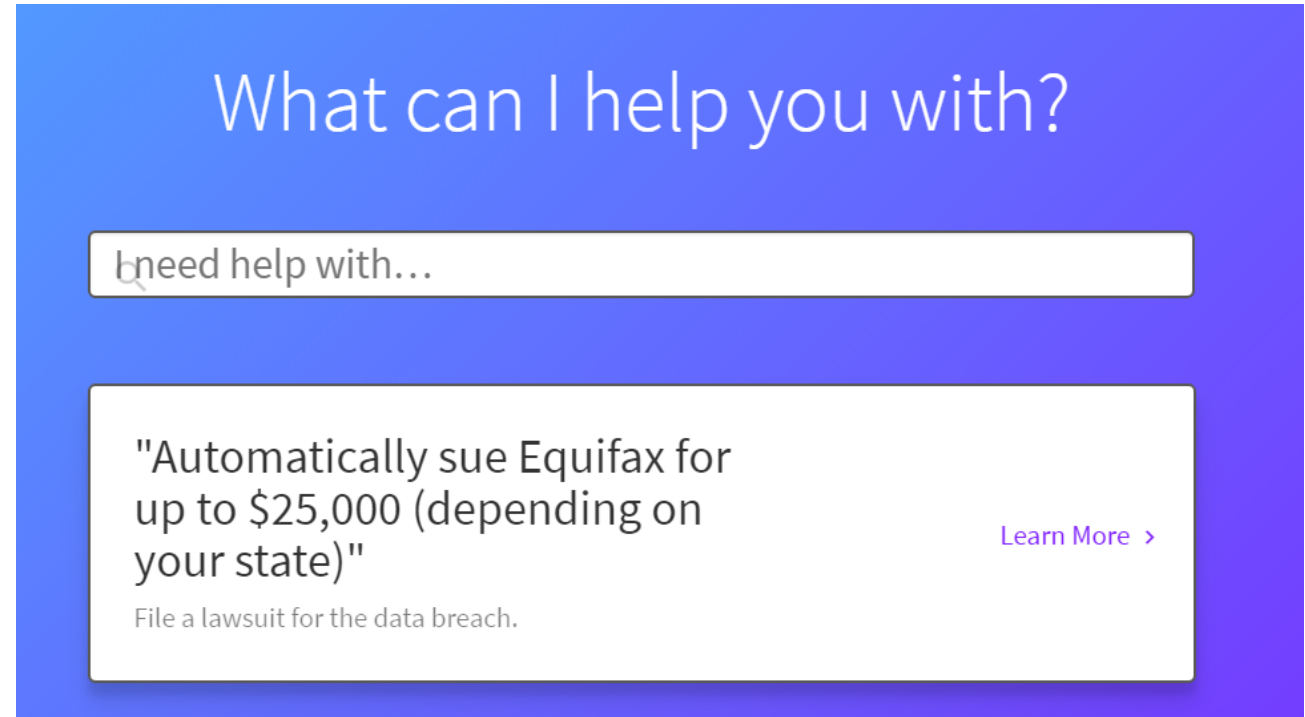
“...it is clear that the most powerful technology companies are investing immense resources to make virtual intelligent assistants ubiquitous before the end of the decade”

- Daniel Nadler, CEO of Kensho

DoNotPay

Phase One: 2018 – 2021

Rolling Eyes **at those *Silly Chatbots***



DoNotPay has already proven successful throughout the U.S. and U.K., having already helped to overturn around 400,000 tickets.

Australian Taxation Office Website Finding Satisfaction With Voice-Based AI

Posted on December 6, 2016

atobeta

ato.gov.au

Phase One: 2018 – 2021

Rolling Eyes
at those *Silly Chatbots*



“Nuance says it has had over 950,000 conversations since it was deployed in March, and that initial results indicate it has achieved “first contact resolution rates of 80 per cent”, according to a statement from the company.”

Phase One: 2018 – 2021

Rolling Eyes at those *Silly Chatbots*

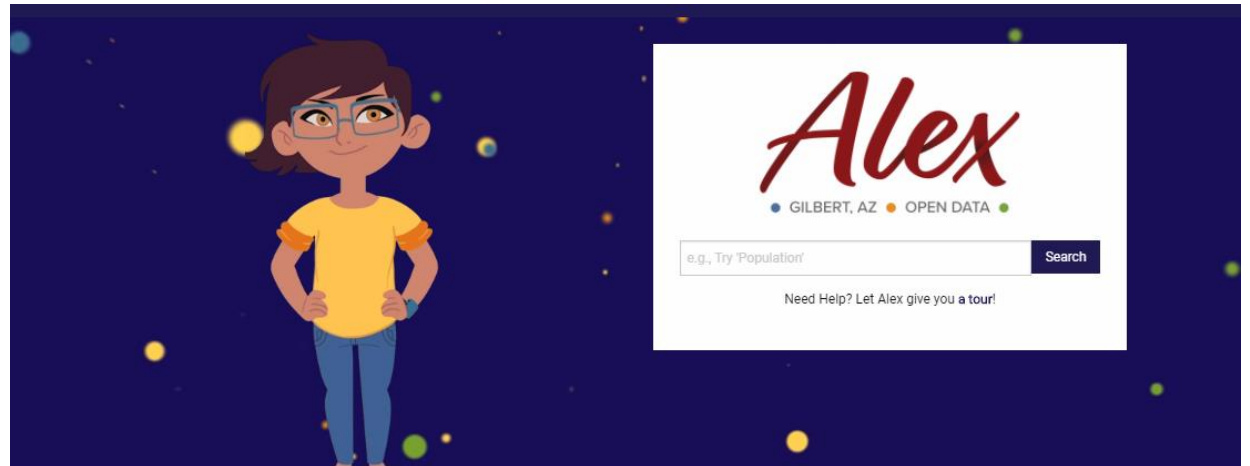


Gilbert, Arizona  @GilbertYourTown · Dec 4

Today, #GilbertAZ is excited to announce the launch of Gilbert's #OpenData Portal! 🎉

Meet Alex. 🍌 She's here to help you connect the dots and tell Gilbert's story using #data!

Learn more  alex.gilbertaz.gov



Community
Safety



Growth and
Development



Recreation and
Culture



Finance and
Operations



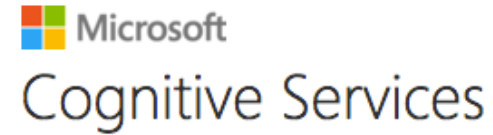
Transportation
and Facilities

Assumption to Explore

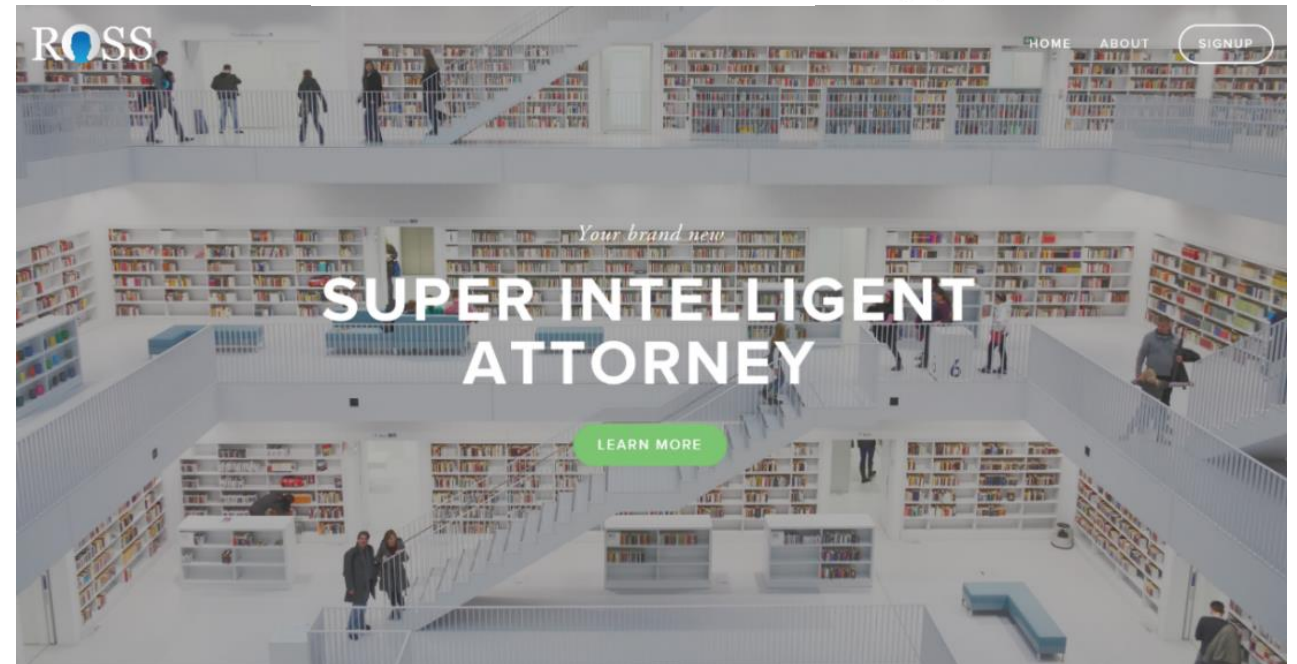
**By 2020 – bots will deliver small nudges
that government project outcomes**

Embracing a New Learning Curve of Creepy + Compelling Futures:

- Explore Risks and Liabilities
(e.g. avoiding algorithmic bias)
- Understand service design for conversation-based government services
- Road mapping for automation of simple questions
- Hiring Experience Designers with Inclusive Mission



Phase Two: 2020 - 2027
AI in the Cloud
Transforms Idea of
Knowledge Work



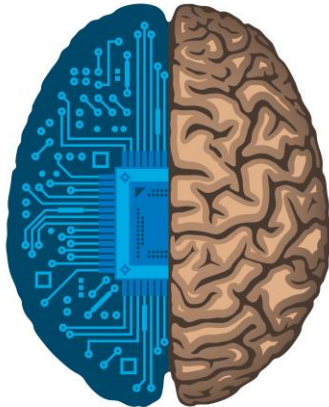
Embracing a New Learning Curve of Creepy + Compelling Futures:

- ❑ Top-down mandate for augmenting work experiences with performance support
- ❑ Understand cultural issues (e.g. pride in work; role of managers)
- ❑ Creating data sets to train AI software

Assumptions to Explore

By 2022, half of government workers will use Intelligent Assistants

By 2022, 40% of citizen to government engagements will be AI-mediated.



If this becomes true...

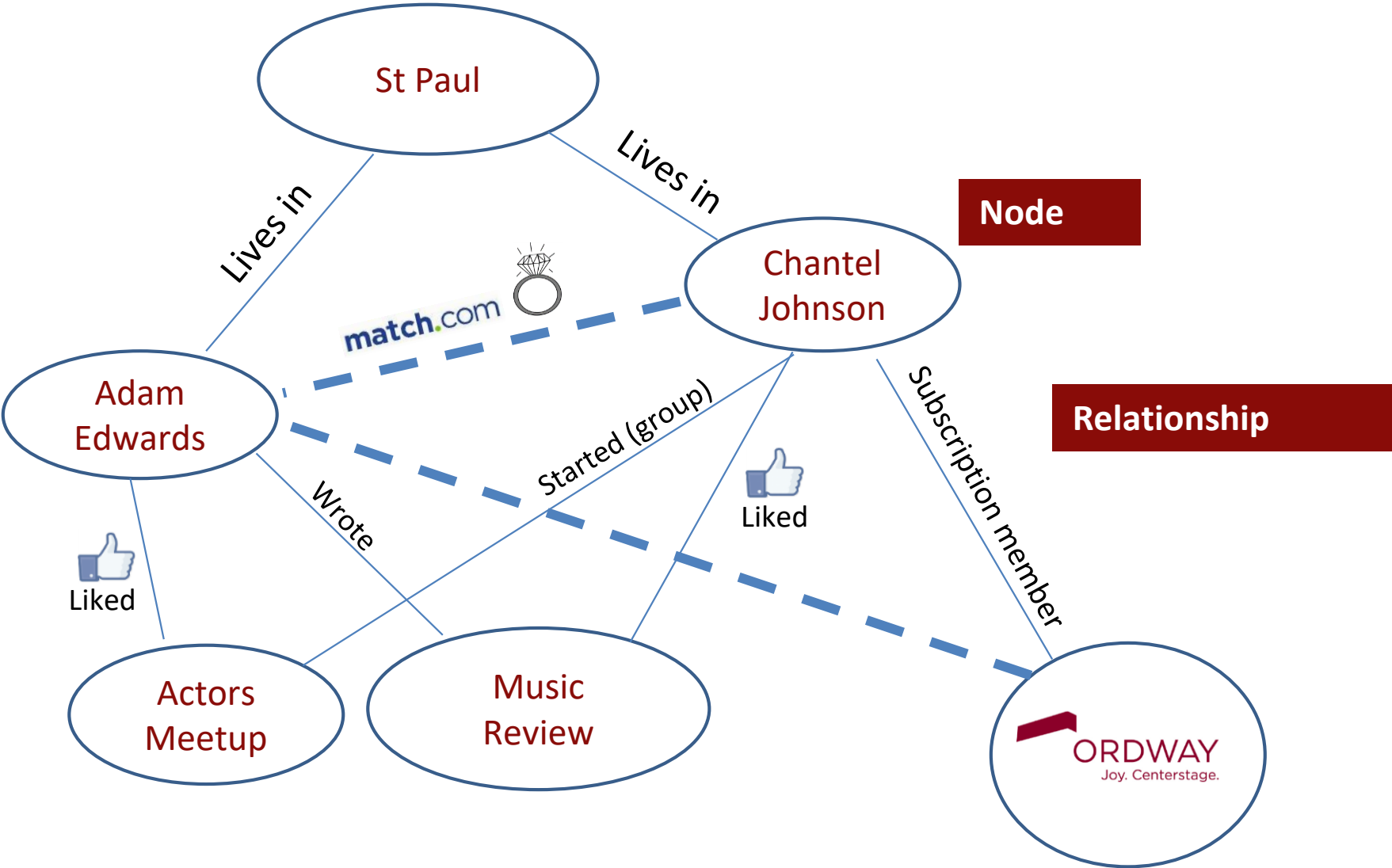
What is our Bridge Strategy?

Humanizing AI

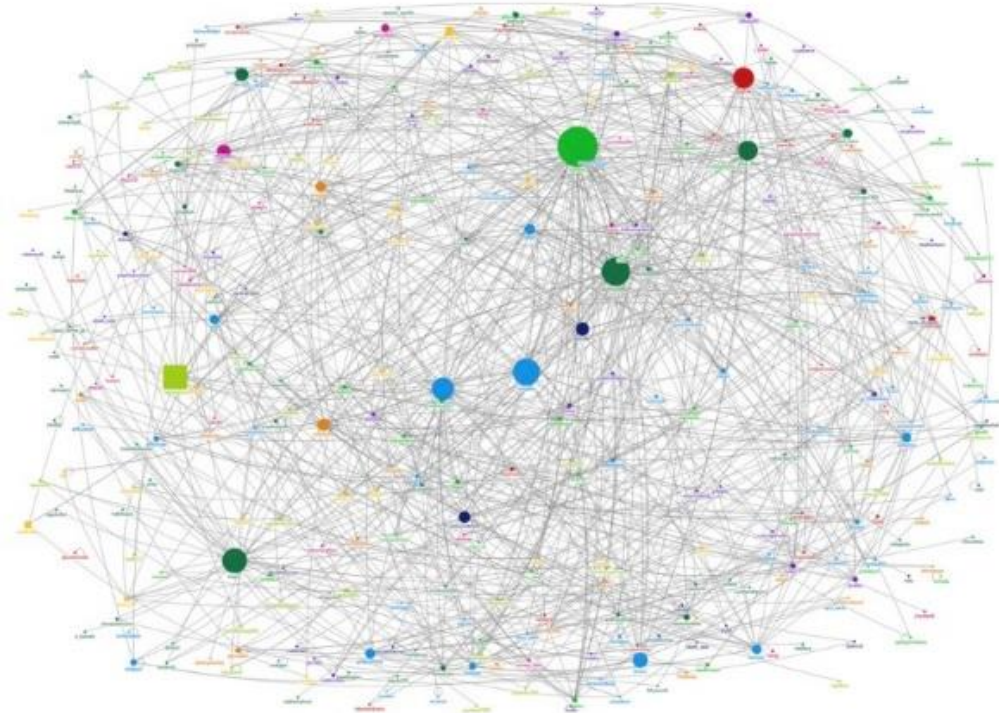
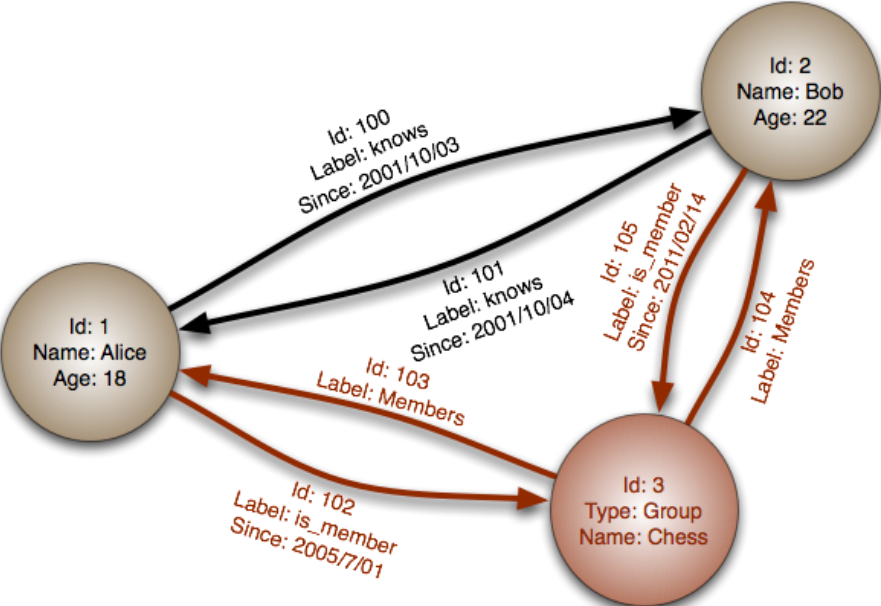
(Cultures Eats Automation Strategy)

***Creating “Knowledge Graphs”
& “Experience Graphs”***

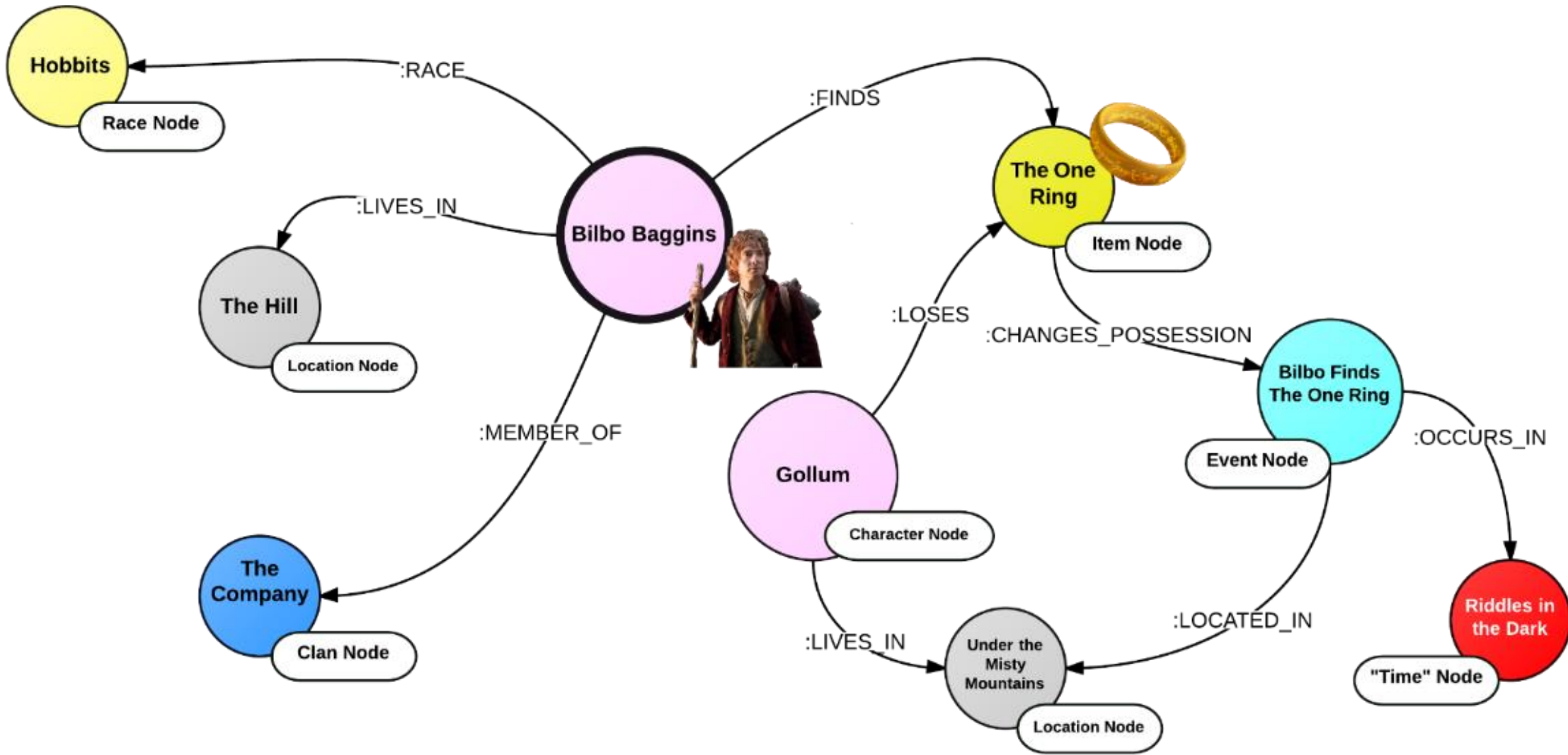
Graph Thinking (Database) = Understanding Relationships + Connections



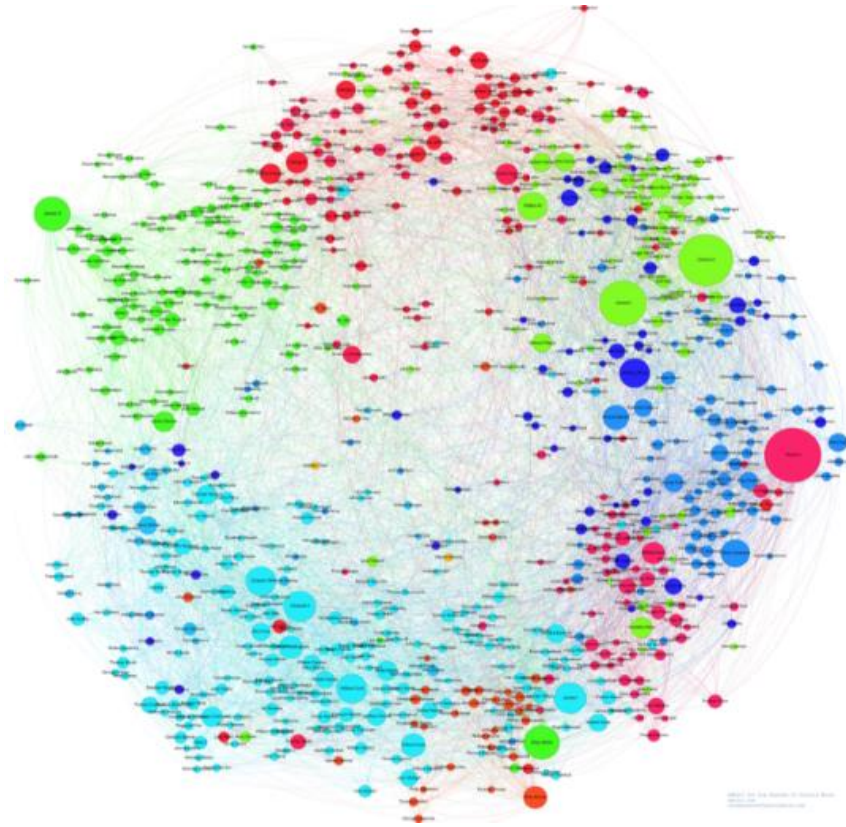
Graph Analytics = Mirror the *Real World* to Reveal Influencer Profiles, Decision Pathways and Recommendations



Graph data strategy to avoid 'getting lost in system'?



Industries & Innovators are Connecting Dots



Link Graph

Google

Interest Graph



Social Graph

facebook.

Economic Graph

LinkedIn

Health Graph

???

Learning Graph

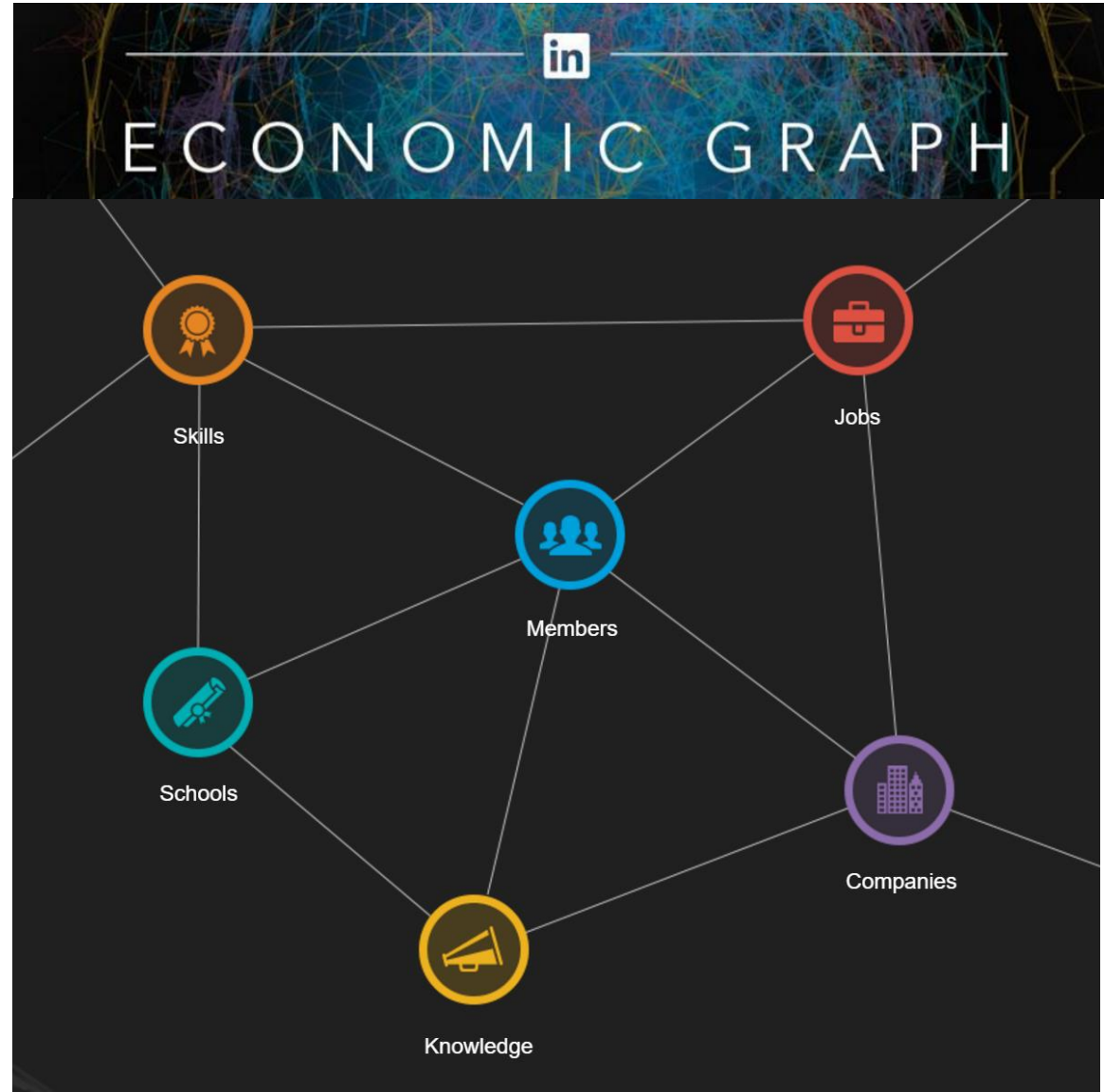
EXPERIENCE API

Transportation Graph

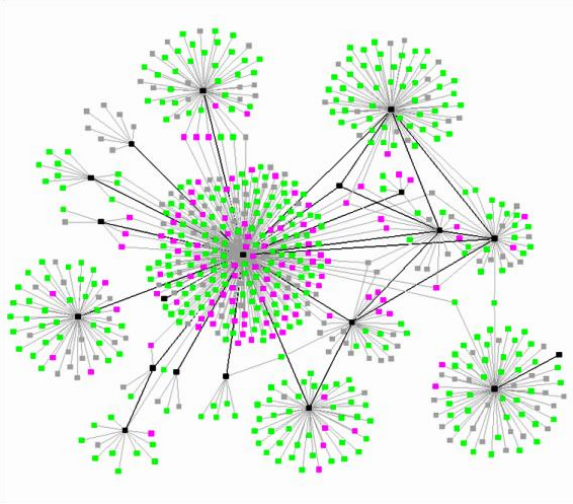
???

Who might know more about our community dynamics than we do?

What information are they missing that we might provide?



Government IT Innovations



Knowledge Graphs

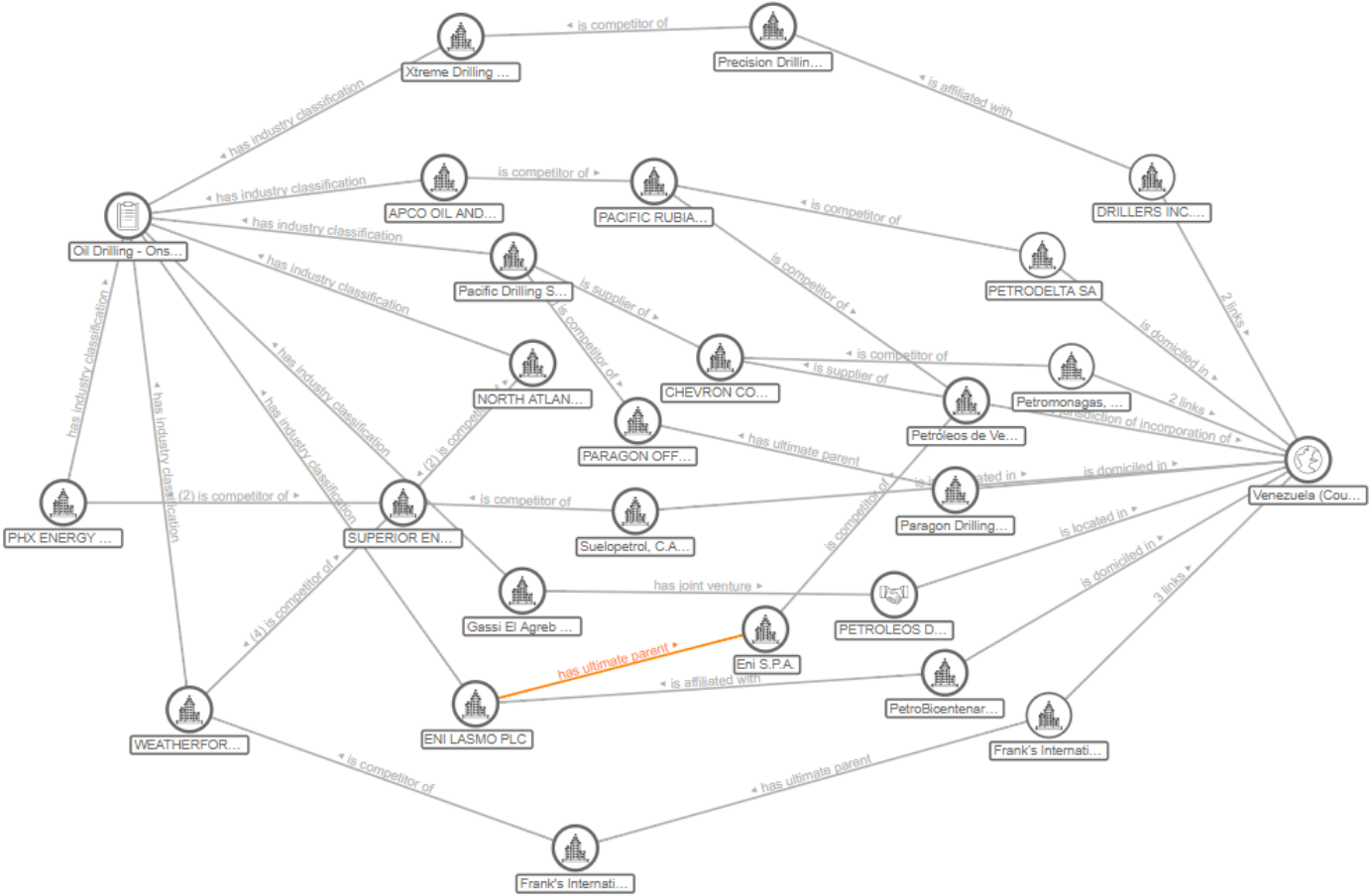


Experience Graphs

Emergence of Enterprise Knowledge Graphs



A linked data feed of Thomson Reuters financial content sets with a pre-identified set of relationships, helping you to uncover previously undetected connections within and across data sets.



Learning More – Graph Databases & Analytics



Government IT Innovations



Knowledge Graphs



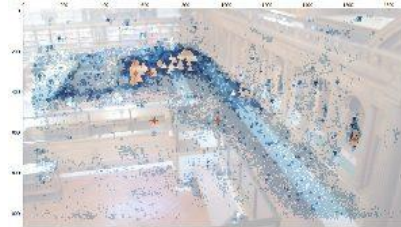
Experience Graphs



**Social
Data**



**Health
Data**



**MEASURE
the
FUTURE**

**Device
+ Place Data**

**EXPERIENCE
API**

“I did this...”

**Learning & Life
Experience Data**

Training to Performance Outcomes: Experience Data Appears Inside Workplace



Course



“I did this...”

Statements



Real World

Seamless Integrated into

- Software products
- Connected Tools
- Manager & Team Tools

Scenario: Talent Embraces Experience Capture Analytics



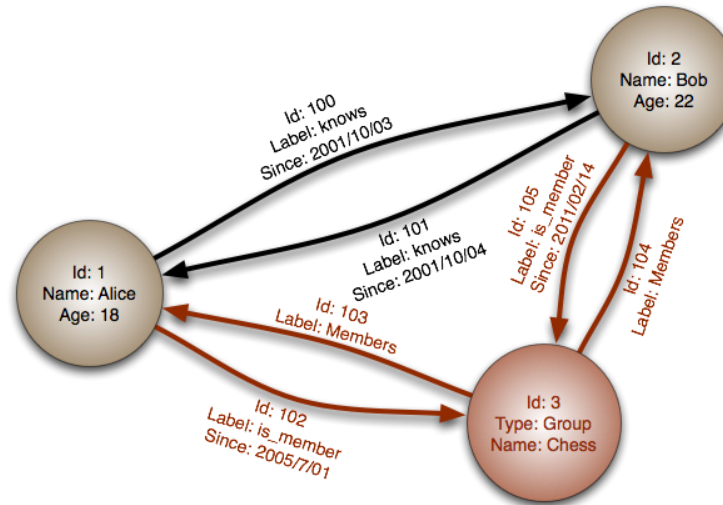
“I did this...”
Statements

- Lucy **read** an article on virtual reality for aging populations
- Lucy **opened** an Evernote folder on aging solutions
- Lucy **watched** a Youtube video on Social VR Experiences for Aging Boomers
- Lucy **interviewed** the Director of MIT's Age Lab
- Lucy **attended** an MIT workshop on VR simulations
- Lucy **wore** an 'aging suit' at MIT Age Lab
- Lucy **mentored** with the Head of Innovation at AARP
- Lucy **designed** a new VR social space using Facebook Oculus dev kit
- Lucy **won** an Webbie award for Social VR platform
- Lucy **taught** a Coursera MOOC on Universal Design and VR experiences
- Lucy **was hired** as head of Social VR for Aging Populations at Facebook

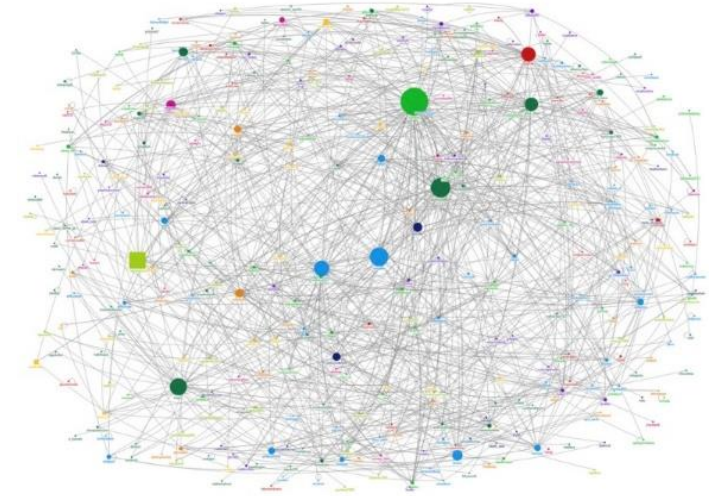
Scenario: Government IT Builds Out the Next Valuable Digital Asset



**Social
Graph**

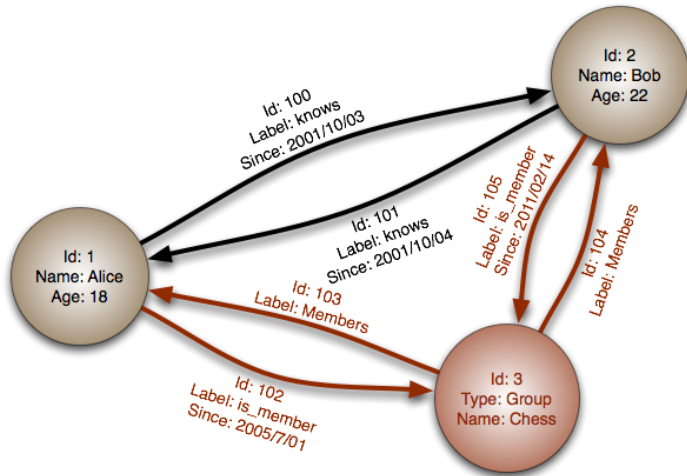


**Experience
Graph**



**Population
Graphs**

Government IT - Graphs



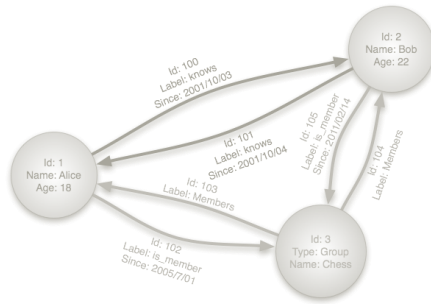
Graph Thinking + Analytics could help to transform:

- Recommendation
- Real-time Responses
(e.g. Event happens; Which stakeholders effected?)
- Social Services
- Infrastructure

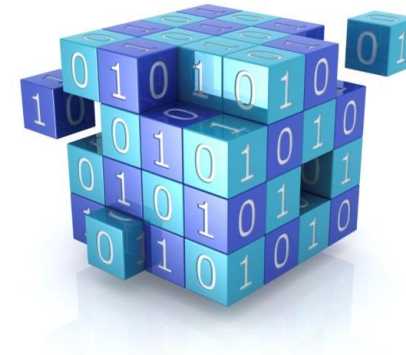
By 2025, what new types of questions might we be able to ask about our communities using graph thinking?

Slow Pace of *Fast Change*

Big Ideas to Explore for Future Government IT Experiences



Data + AI Driven Innovation
(Bridge of Graph Analytics)



Blockchain & Smart Contracts
(Integration & Decentralized Govt Applications)



**World Economic Forum Survey Projects
Blockchain 'Tipping Point' by 2023**

By 2025, 10% of of Global GDP will be orchestrated by blockchain applications.

Dubai gov't hailed for pioneering move to blockchain

World Economic Forum highlights Dubai among creative ways cities worldwide are drawing on big data to improve life



100%: Dubai Will Put Entire Land Registry on a Blockchain

Samburaj Das on 09/10/2017

It Was Hard to Explain the Internet in 1994



1994: "Today Show": "What is the Internet, Anyway?"

Evolution of the Web & Government IT Services



*Internet of Files
(Websites)*

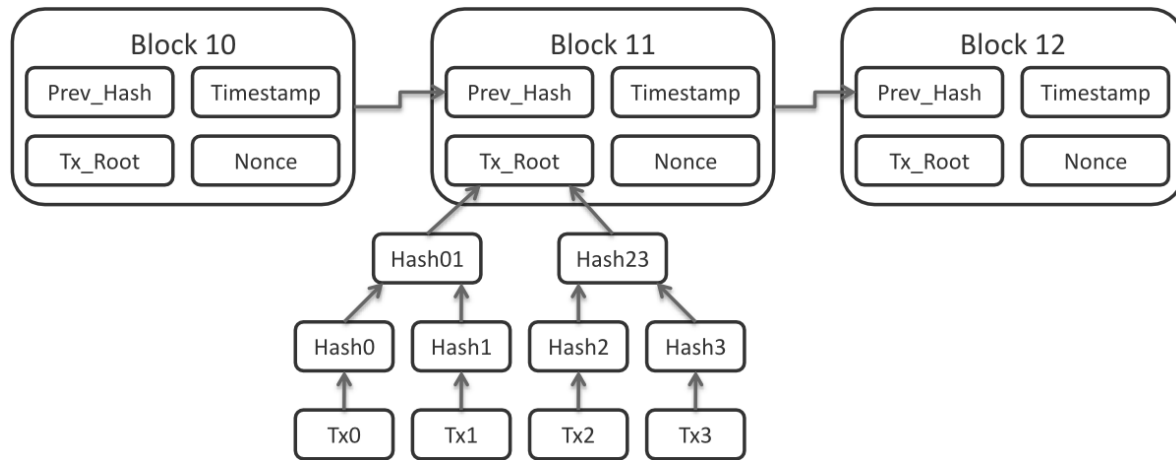


*Internet of
Social Networks*



*Internet of
Trusted Transactions*

In Shared Secure Records We Trust



**Ledger of Keys &
Asset Transactions**

*Network Consensus
on who did what...*

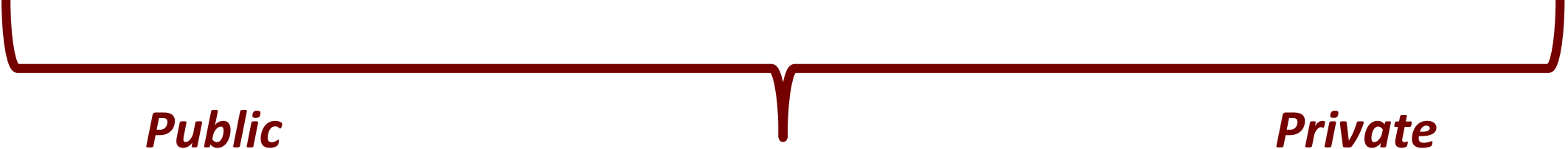
A sample of EtherScript

```
note: ***An Ethereum smart contract to sell website for "5000 by March"  
note: First, store buyer's ethereum address:  
put: 6af267736363738ghgs7726337373737 in storage slot BUYER  
note: Then, store seller's ethereum address:  
put: 6af267736363738ghgs7726337373737 in storage slot SELLER  
note: April 1, 2014 is 13929839948 in "computer time"  
put: 16365437465 in storage slot DEADLINE  
note: If the agreed amount is received on time...  
When: transaction value ≥ 50000 ether  
and block timestamp ≤ storage slot DEADLINE  
then  
note: ... then designate the buyer as the new website admin and pay the seller  
put storage slot BUYER in storage slot WEBSITE_ADMIN  
Spend contract balance to storage slot SELLER
```

**Smart Contracts for
Business Process Automation!**

T = 0

Learning Curve: Development Platforms



Blockchain Use Case: Marketplaces

Decentralized exchanges to disrupt the traditional third-party role. *Low fees may still apply.



iTunes
without iTunes

Smart Contracts disperse payments



OpenBazaar

ebay
without ebay

Distributed Marketplaces



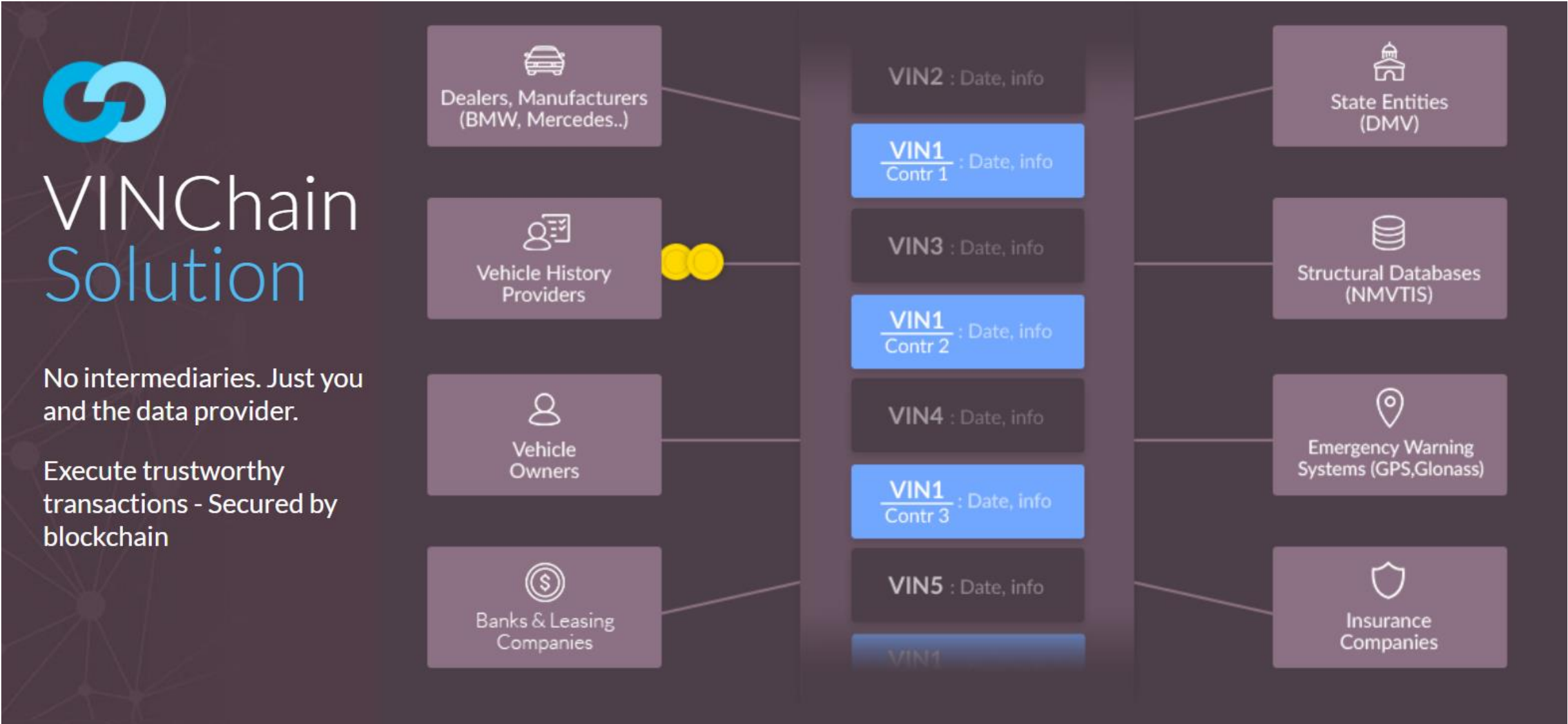
BROOKLYN
MICROGRID

Energy
Trading Network

P2P Energy Trading

Blockchain Use Case: Department of Motor Vehicles

Decentralized exchange for vehicle registration



Population Health Data Exchanges

HealthITAnalytics

Is Blockchain the Answer to Healthcare's Big Data Problems?

Can a blockchain approach to big data solve the healthcare industry's issues with security, interoperability, and care coordination?



Blockchain Use Case: Financial Inclusion / Economic Identity



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BANQU

Leveraging blockchain technology to give the world's poorest access to the global economy.



Blockchain Use Case: Government Services



Governments reduce the cost and complexity via:

- Identity (Passports; Birth certificates; Small Business)
- Asset Registries (including land)
- Voting
- Procurement
- IoT and Building Management
- Regulatory + Compliance Automation
- Community Crypto Currencies (Financial inclusion)
- Cyber Security / Access Control to Documents
- DAOs (Decentralized Autonomous Organizations)*

Embrace and Explore the Jargon and Hype!

Public services to be put on blockchain in UK

28 April 2016 Hits: 568



Skyscape Cloud Services Ltd partners Credits to put the British public sector on blockchain, providing central and local governments, as well as health, defence and other industries with BaaS tools.

Source



Be Prepared: Ideology Drives Innovative Thinking

How Blockchains Bring Full Accountability To Government

from **MayorsChain** 11 months ago | [more](#)

HOW IT WORKS

- 1) The government puts, say, £18 billion into its 2016 budgetary account
- 2) It creates a crypto-asset consisting of 18 billion digital tokens
- 3) It sends budgetary tokens to each dept, district, team, project, etc.
- 4) Departments spend funds by spending tokens
- 5) Every time a token is used, anyone can see it happen on the blockchain
- 6) If any party needs GBP, tokens are redeemable for funds in the account
(Technical note: to redeem GBP, parties will in fact *provably destroy* tokens in order for the total number of tokens to precisely match the amount of GBP in the account. Similarly, if funds are added to the budget, new tokens will be created.)
- 7) If money is paid from the account without trace on the blockchain, everyone knows an illicit act has taken place.



Assumption to Explore (even if it confusing!)

By 2022 the public sector will use the blockchain for decentralized applications (DApps) and *smart contracts* to:

- Reduce operation costs
- Drive Public Private Partnerships
- Transform peer-to-peer and business led transactions
- Confront cybersecurity issues
- Transform voting system
- Branding: Transparency + Accountability

Slides
removed

Step # 1

Create a Healthy Sense of Urgency & Culture Aligned Around Anticipation

*On the Plateau
'Managing the Decline'*

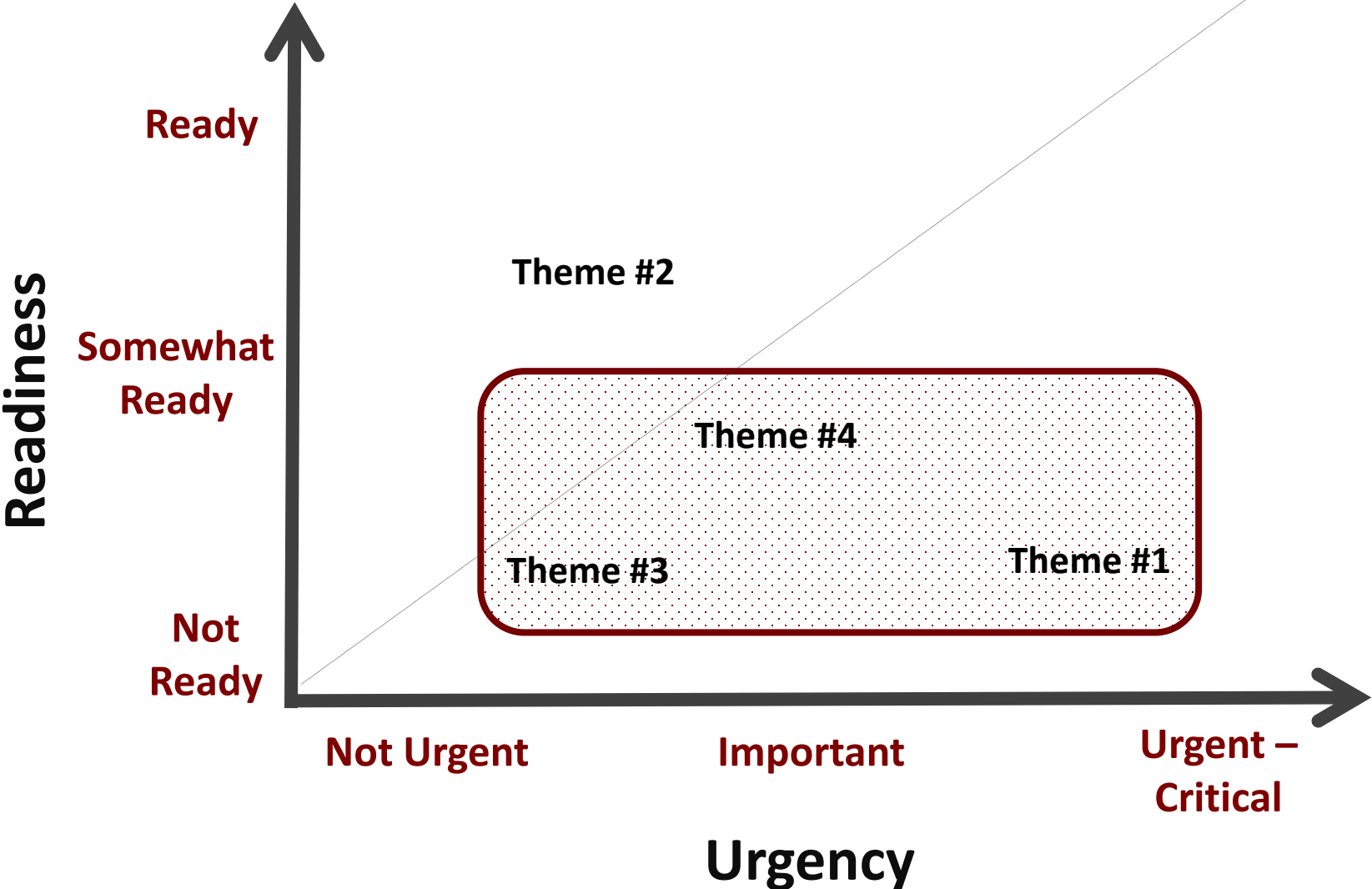
- Incumbent mindset
- Incremental Improvement
- Fear, Uncertainty, Doubt & Denial

*Big Bets,
Small Steps*

- Entrepreneurial mindset
- *Prototyping*
Transformative Change
- *Failing Forward*

Step #2:

Take a Pulse Check on Emerging Trends vs Organizational Appetite

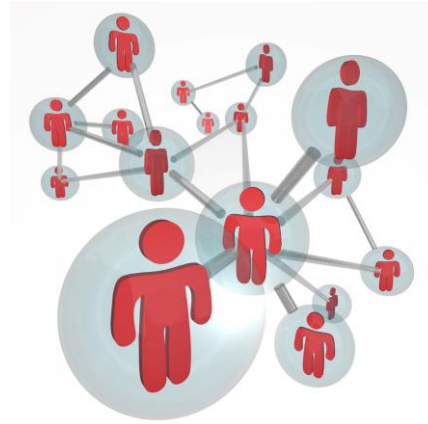


Step #3

Start a Signals Team: Follow Those Who Imagine Different Futures



**Blockchain &
Smart Contracts**



**Graph Analytics
*Connected Data***



@onboardhealth

**Industry Issues on
Talent Development**

Step #4

Use 'Killer Questions' to Brainstorm Ideas

Following the success of HP's Chief Innovation Officer Phil McKinney, generate a weekly 'Killer Question' email message or 'Twitter' conversation that spurs conversation about the future of government IT experiences.

What is a government department that does not exist today but will be our most innovative citizen lever of change in five years?

Which popular consumer brand today could make one of our government departments irrelevant in five years?

Step #5

Host a FailFare!

**Be Able to
Tell Stories
of Your Failures**

FAIL *fa*  *re*

Thank you!

Garry Golden

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PDF & Resources

garrygolden.com/December6

