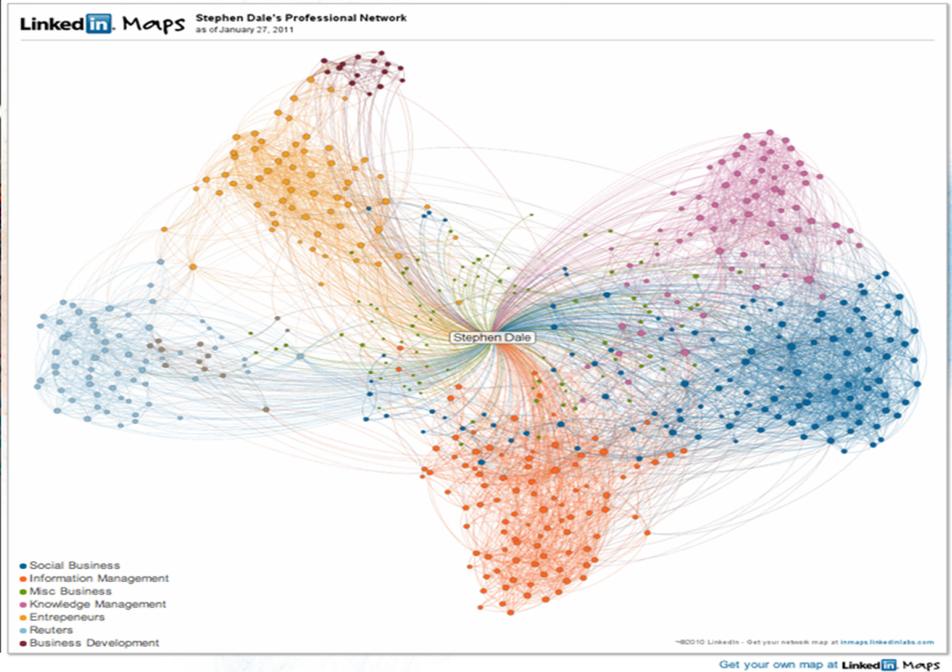
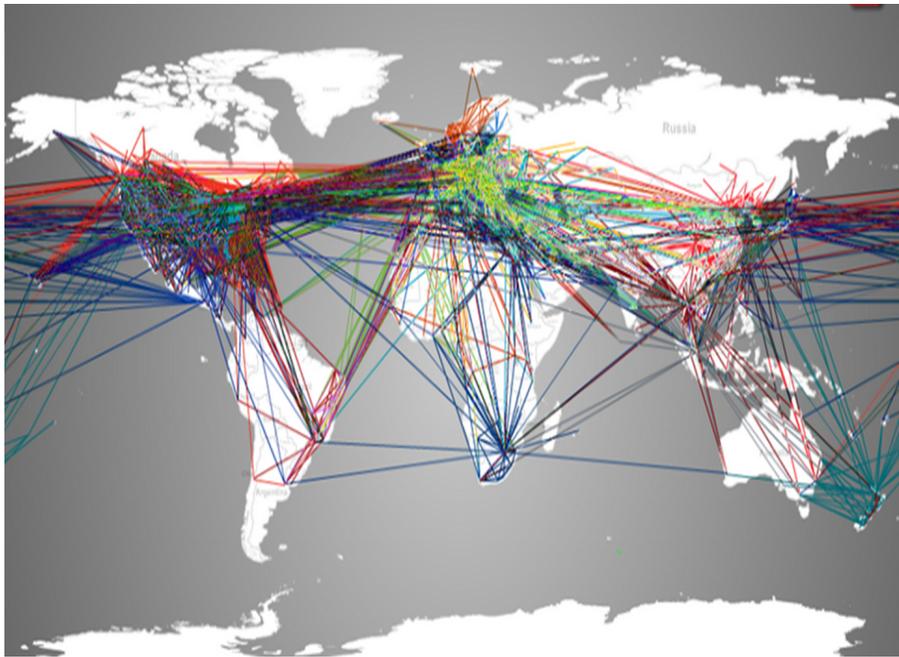


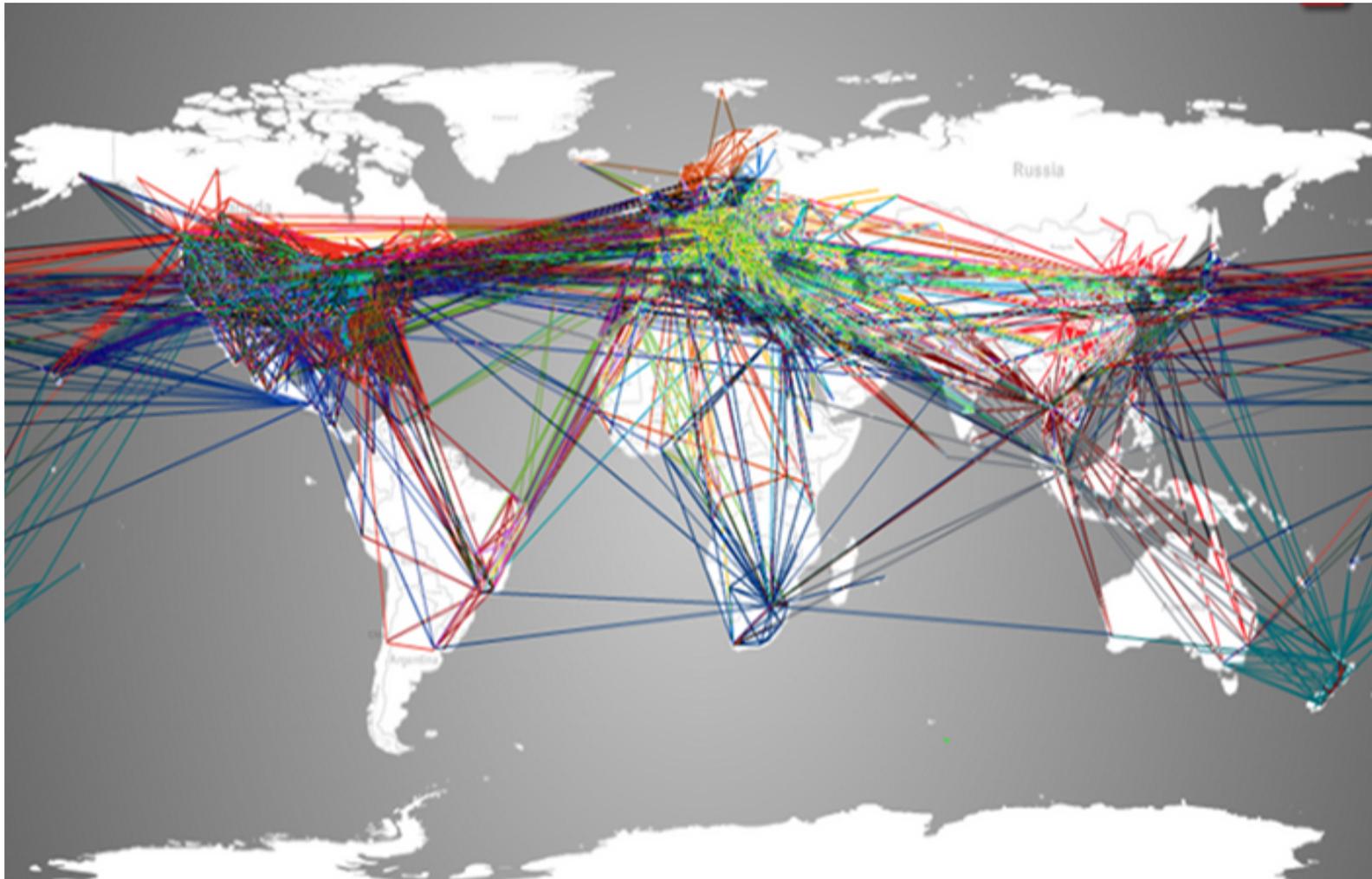
Network Economies & Social Graphs link everything link people



Take both **Extrinsic** (e.g. monetary) and **Intrinsic** (e.g., personal satisfaction) rewards into account

Michelle Jeffalone, MBAMKT 691

Network Economies – link everything



<http://www.digitalsparkmarketing.com/innovation/trends/network-economy/>

Network Economy Definition

The emerging economic order within the information society.

▶ This is in sharp contrast to industrial-era economies, in which ownership of physical or intellectual property stems from its development by a single enterprise.

Value is created and shared by all members of a network rather than by individual companies and that economies of scale stem from the size of the network - not the enterprise. Example: Facebook

▶ Open system (not closed) => more nodes => successful network economy

Infrastructure - Business models for capturing ownership rights for value embedded in products and services created by social networks are being explored

▶ Intellectual property rights - ownership is being replaced by access rights

Global - information can be shared instantly and inexpensively on a global scale, the value of centralized decision making and expensive bureaucracies is greatly diminished.

▶ Electronic infrastructure necessary

3 Things to Know About Network Economies

Networks are driven by small, Cohesive Groups that are weakly linked to other small, cohesive groups

- ▶ Our networks aren't randomly created

Social networks can be Quantified and mathematically analyzed

- ▶ Forbes summarizes, informal relationships Network analysis looks beyond the hierarchy represented in organizational charts.
- ▶ Fairly accurate techniques used by NSA to track terrorist networks

Network structure determines Organizational Performance

- ▶ Mix of order and randomness, too loose or too tight effects performance
- ▶ Sociometer racks the amount of social interaction, not content. More mixing = more gains
- ▶ Businesses => Employees
- ▶ In future it will shrink down to an identity card to help monitor social activity within enterprises
- ▶ Results => Lean value chain achieve sustainable competitive advantage

<http://www.technologyreview.com/view/530241/revolution-in-progress-the-networked-economy/>

By Grea Satell 07/07/2014

Network Economies in the Business Sector

Forbes Magazine stated “To win in today’s connected economy, you need to deepen and widen networks.”

Current Porous Borders

- ▶ Isolated industry => porous borders
- ▶ Current management systems don't yet account for the shift

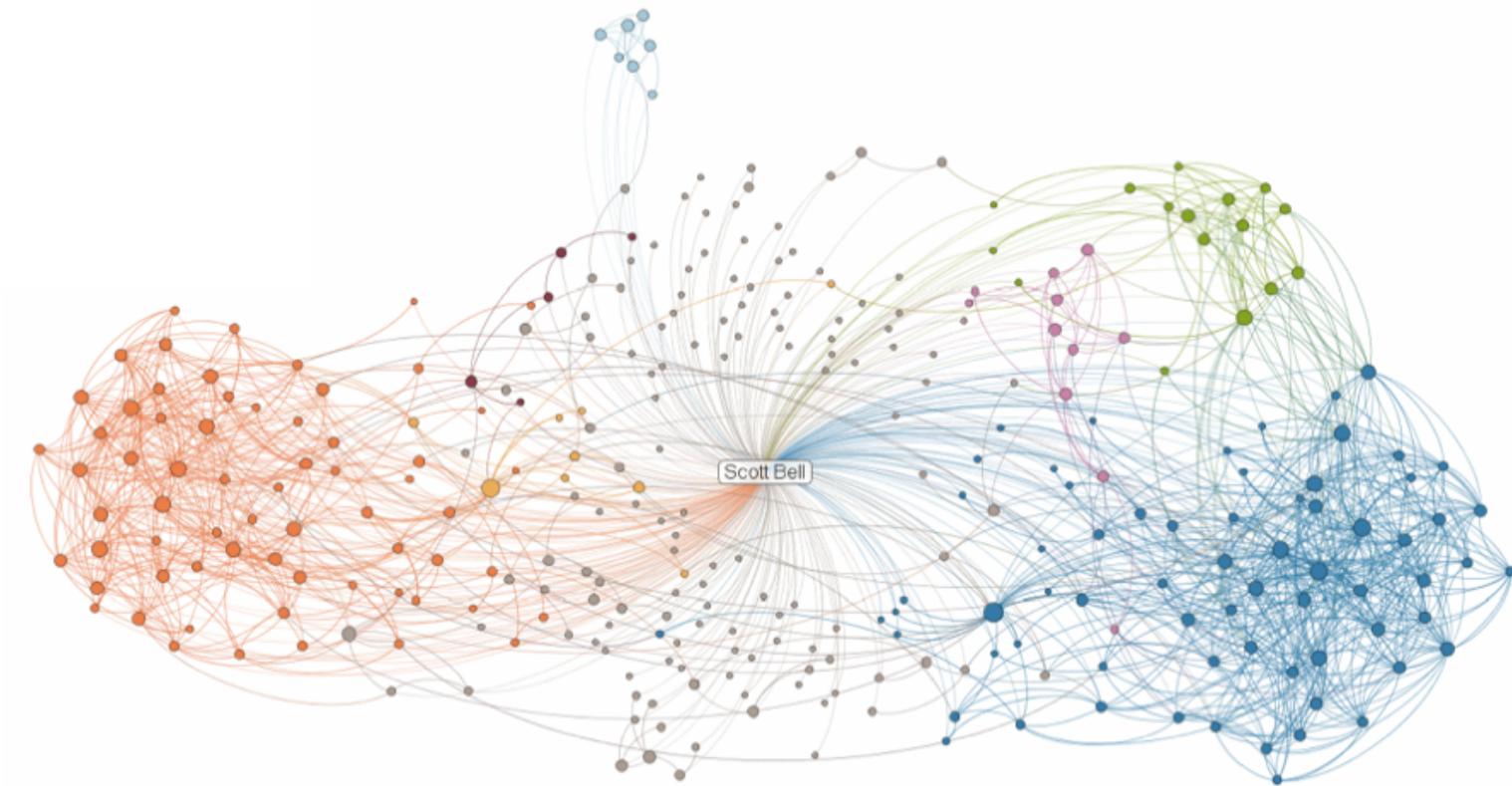
Future Sociometer

- ▶ Tracks the amount of social interaction, not content. More mixing = more gains
- ▶ Will become an identity card for staff to help monitor social activity in an enterprises
- ▶ Reduce costs across value chain and achieve sustainable competitive advantage

Network Economies



Social Graph



<http://iheartwallstreet.com/2011/04/25/social-graph-banking/>

Social Graph – links people

The global mapping of everybody and how they're related. The term refers to both the social network itself and a diagram representing the network.

Actors or Context make up => **Individuals** or **Organizations** => represented as **Nodes** on the graph.

Ties or an **Edge** or **Sharing** => are **Interdependencies**

- multiple and diverse: age, gender, race, genealogy, chain of command, ideas, financial transactions, trade relationships, political affiliations, club memberships, occupation, education and economic status.

“Social media platforms are eating every other traffic source’s lunch”

 Shareaholic Social Media Traffic Referrals

Source	Sep-14	Oct-14	Nov-14	Dec-14	Change from Sep'14-Dec'14	
Facebook	22.36%	25.06%	25.01%	24.63%	10.16%	2.27 pp
Pinterest	5.52%	5.52%	5.22%	5.06%	-8.29%	-0.46 pp
Twitter	0.88%	0.92%	0.89%	0.82%	-6.94%	-0.06 pp
StumbleUpon	0.41%	0.37%	0.47%	0.50%	21.44%	0.09 pp
Reddit	0.18%	0.14%	0.16%	0.15%	-17.16%	-0.03 pp
Google+	0.07%	0.06%	0.05%	0.04%	-43.28%	-0.03 pp
LinkedIn	0.04%	0.04%	0.04%	0.03%	-16.10%	-0.01 pp
YouTube	0.04%	0.05%	0.03%	0.01%	-65.49%	-0.02 pp

In Q4, Social Media Drove 31.24% of Overall Traffic to Sites [REPORT] Danny Wong • Shareaholic Reports, Social Media • Jan 26, 2015
<https://blog.shareaholic.com/social-media-traffic-trends-q4-2015/>



LinkedIn's use of the Social Graph

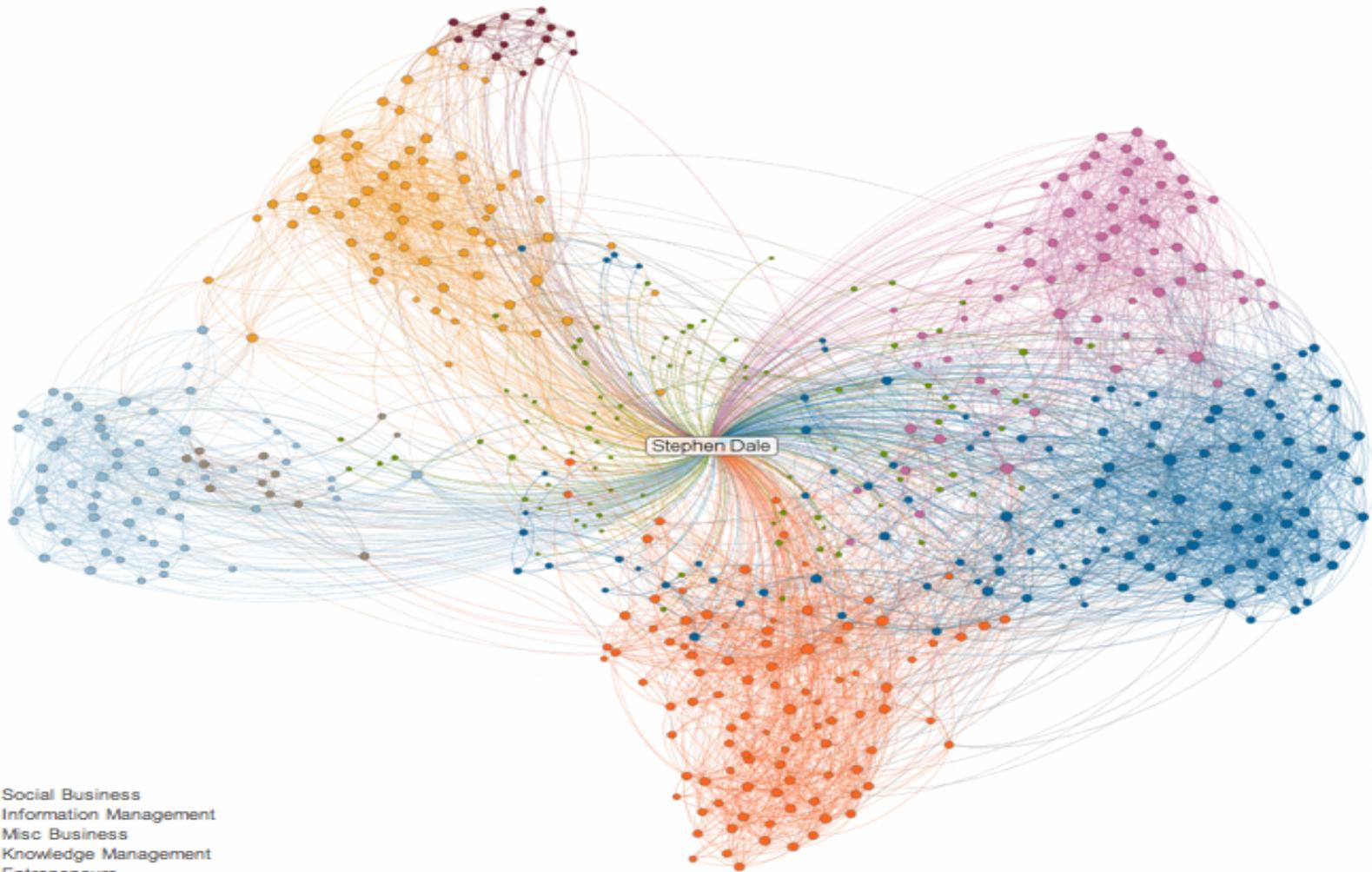
Context not only tells us *who you are*, but by associations and comparisons, *who you are not*.

Distinctions will get you *hired*

If you share content that someone finds useful, they're likely to share it with their community, thereby connecting you with their friends—which **Creates** *even more nodes*

Time and Locations

- ▶ the person is more likely to choose you if you've recently engaged in conversations that keep your social graph fresh and relevant.



- Social Business
- Information Management
- Misc Business
- Knowledge Management
- Entrepreneurs
- Reuters
- Business Development

©2010 LinkedIn - Get your network map at inmaps.linkedin.com

Get your own map at LinkedIn Maps

http://upload.wikimedia.org/wikipedia/commons/d/de/Social_graph.gif

Facebook's use of the Social Graph

Facebook's own search engine, 'Graph Search'

▶ **Social** Purposes

- ▶ Quickly sift through friends' profiles and previous posts
- ▶ Find favorite restaurants of friends

▶ **Marketing** Search

- ▶ Powerful **Analytics** tool that can help businesses craft better targeted ads for specific demographics

▶ **Trending**

- ▶ is typically going to happen at some point in the future.



Discovery

Facebook Graph Search will be able to extract meaning from the social graph. People will likely start using Graph Search, among other things, to discover new job openings, people to date, new restaurants, and life experiences all based on their personal social graph profile.



"Music my friends from high school listen to?"

Searches give Facebook and its advertisers incredibly valuable data in how users are interested in spending cash at the moment they're figuring out what to buy.



"Tropical destinations my friends have liked"

Facebook Graph Search

Unlocking your personal big data to power social discovery, awareness, and action



Social graph connections are based on shared personal connections with social objects.



"Local supermarket deals that my girlfriends redeemed this week?"



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facebook.com/offergraph



pinterest.com/offergraph

Removal of Anonymity

- ▶ Use of network alignment model with social graph - map nodes from the reference graph into the anonymized graph
- ▶ Datasets can be de-anonymized
 - ▶ use external information such as a reference social graph (from the same network or another network with similar users).
- ▶ Sensitivity which may be added to preserve privacy
 - ▶ to larger network size
 - ▶ the number of seeds, and noise

“Community-Enhanced De-anonymization of Online Social Networks”

By: Shirin Nilizadeh Apu Kapadia Yong-Yeol Ahn

School of Informatics and Computing Indiana University Blooming

<http://www.cs.indiana.edu/~kapadia/papers/community-based-deanon.pdf>

Amazon's use of the Social Graph

- ▶ **Semantically** aware web takes advantage of relationships and associations
- ▶ Multiple purchases on Amazon
 - ▶ Understands your **Preferences** and they cross-link them with the preferences of people with similar social graphs to other yours

Industry Use of Internal Social Graphs

Commercial graphs depict relationships between businesses, based on their actual interactions as they are captured digitally

Commercial Graph

B2B & B2supplier

Strength

▶ understanding B2B ecosystem through (SAAS) software as a service

Weaknesses

▶ They do not generate a higher layer of intelligence to aid with new business development or new supplier discovery

▶ They offer no visibility into another enterprise's connections with other businesses, or its reputation based on a track record in dealing with others

<https://hbr.org/2015/02/the-rise-of-social-graphs-for-businesses>

BY [Sangeet Paul Choudary](#) “The rise of social graphs for businesses” February 2, 2015



THANK YOU!



Questions ?