

How to Document and Measure Your Collaborations Using **NODEXL**

Pilot Testing Social Network Analysis at the Regional IPM Centers

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WHY we did it...

- Regional IPM Centers must... Establish and maintain **interactive information networks** that cross traditional institutional, disciplinary, programmatic, and geographic boundaries to **address regional IPM priorities**.
-2014 Crop Protection Pest Management RFA

- Social Network Analysis (SNA) allows us to **understand, categorize, and quantify the relationships** in our information networks.
- SNA helps us identify key **influencers, subgroups, and people who serve as bridges** between subgroups.
- SNA is a great tool for **documenting Regional Centers' progress** toward increasing information flows across nontraditional boundaries.

HOW we did it...

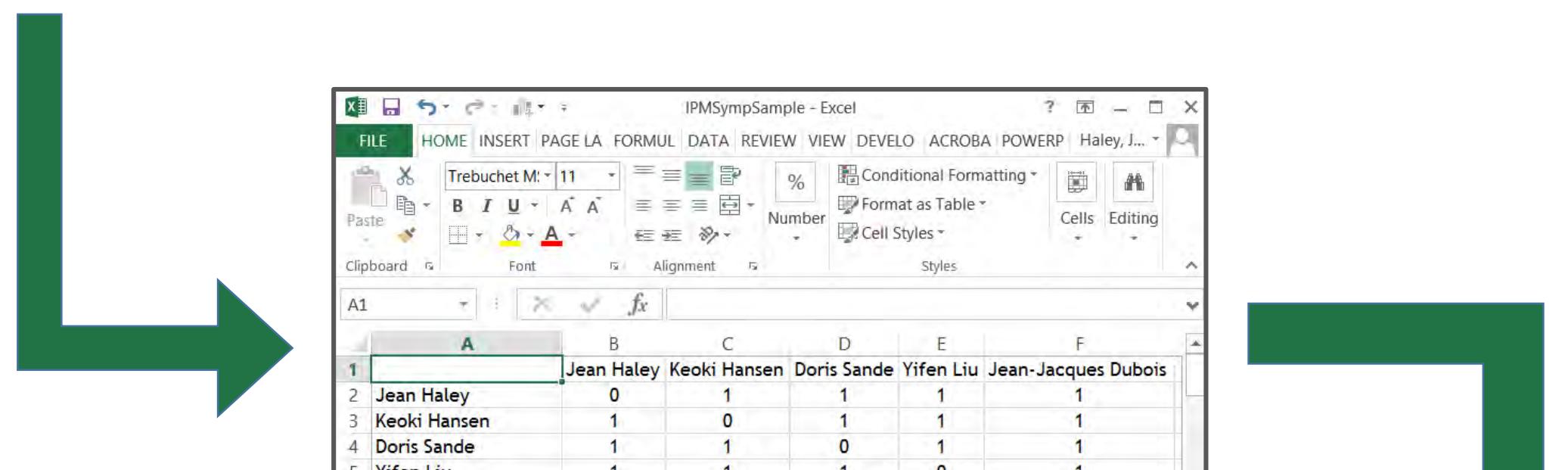
- Regional Centers' Evaluation Specialists **developed a survey** that would work for all regions' Working Groups
- **Got IRB approval** from each respective university
- **Used Qualtrics** to send surveys
- **Used NODEXL** to visualize and analyze networks



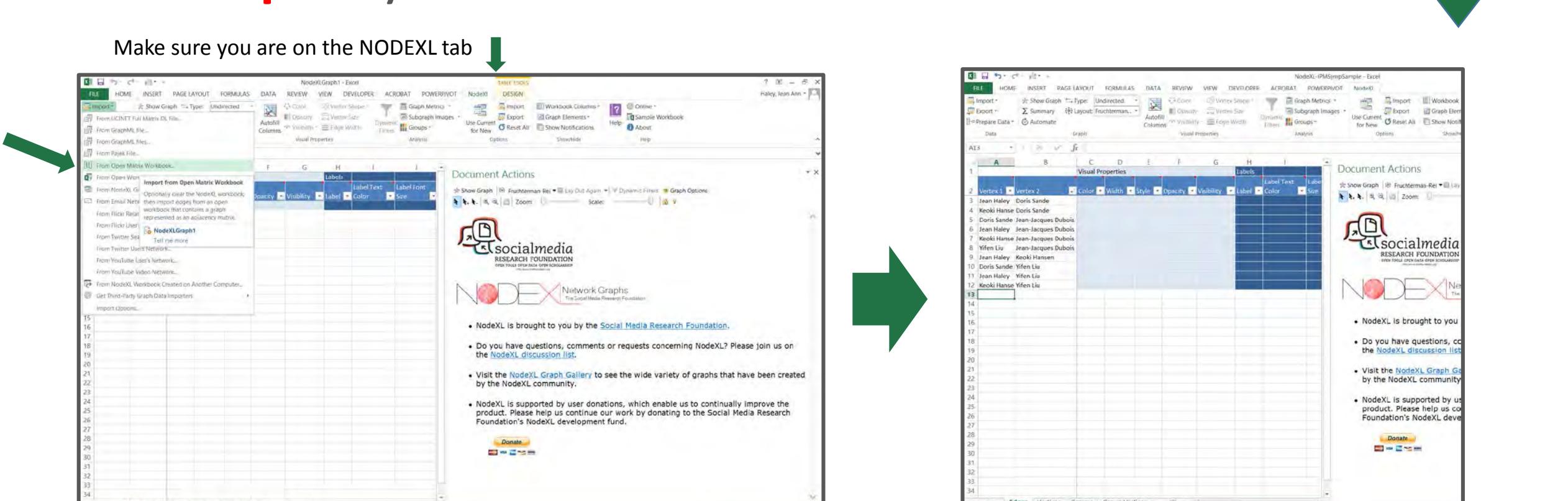
CREATE your own SNA map with NODEXL

1. **Download NODEXL** at: nodexl.codeplex.com

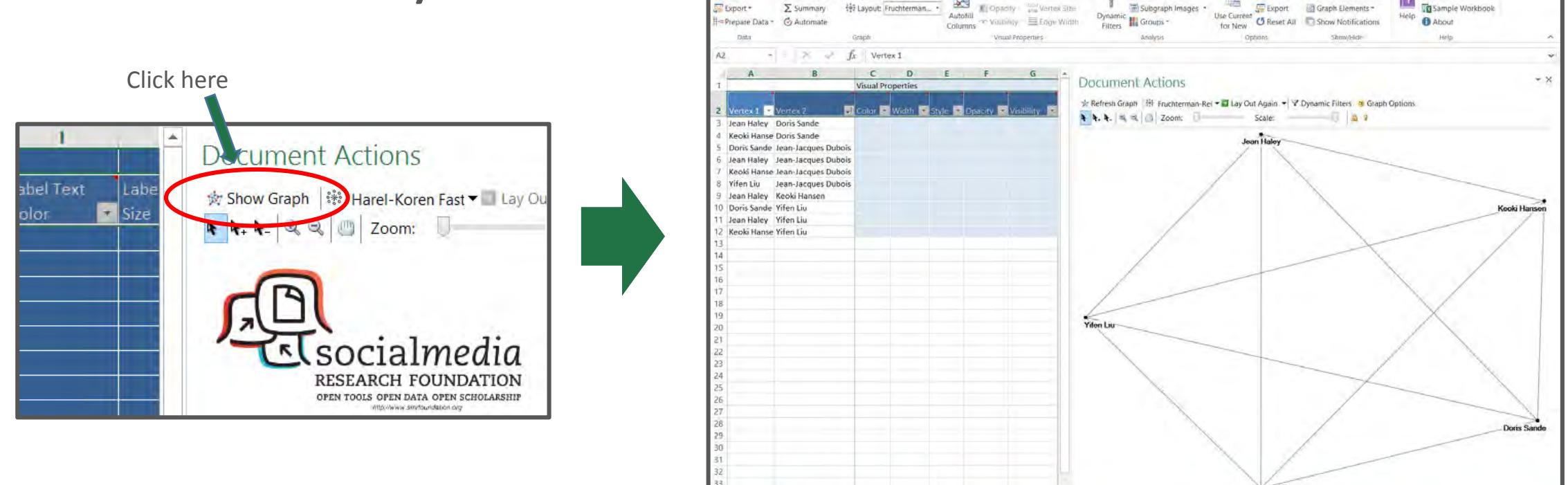
2. from your online **survey into Excel**.



3. **Import** your matrix data from **Excel** into **NODEXL**.



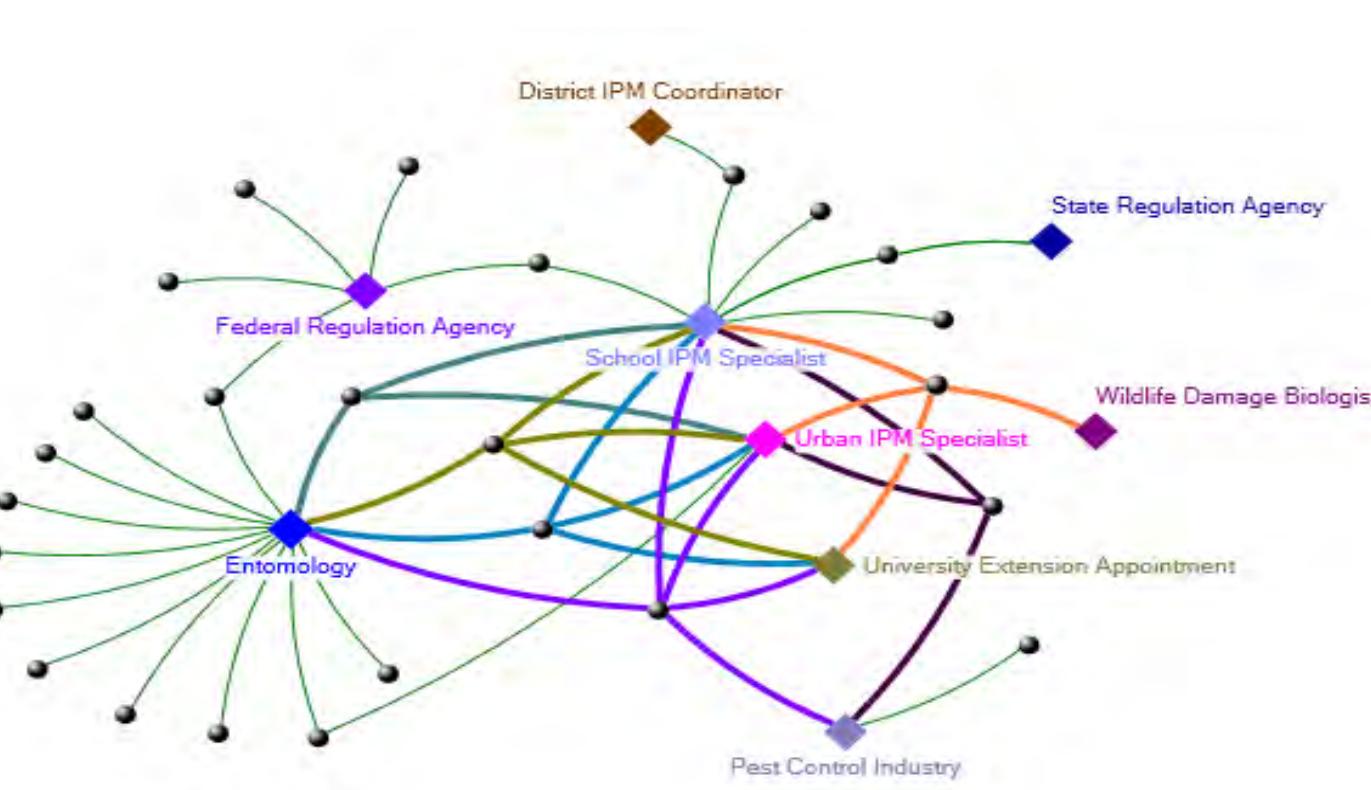
4. **Visualize** your data.



RESULTS from Regional Center SNA pilot tests

The results below show a few examples of how the Regional IPM Centers are using SNA with their Working Groups

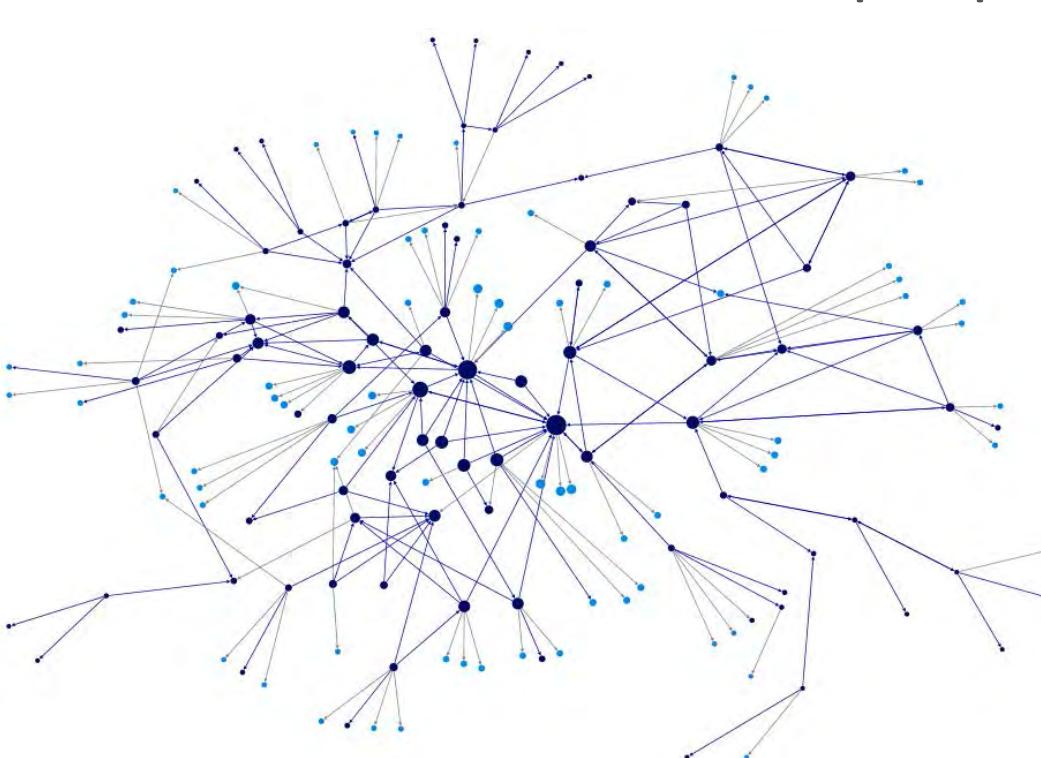
Southern IPM Center – Network Reach & Diversity



North Central IPM Center – Influencers in the network

Eigenvector Centrality

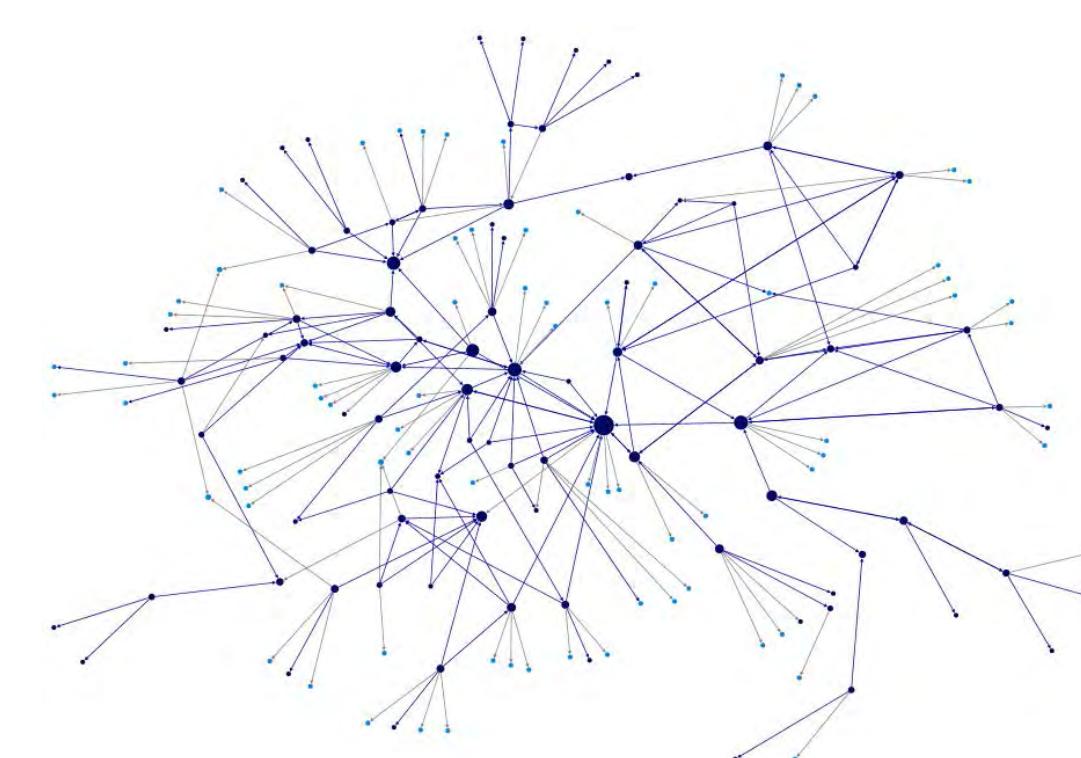
Importance – who's listened to? Who's connected to those people?



Larger nodes are more influential within the graphs based on the two measures of centrality

Betweenness Centrality

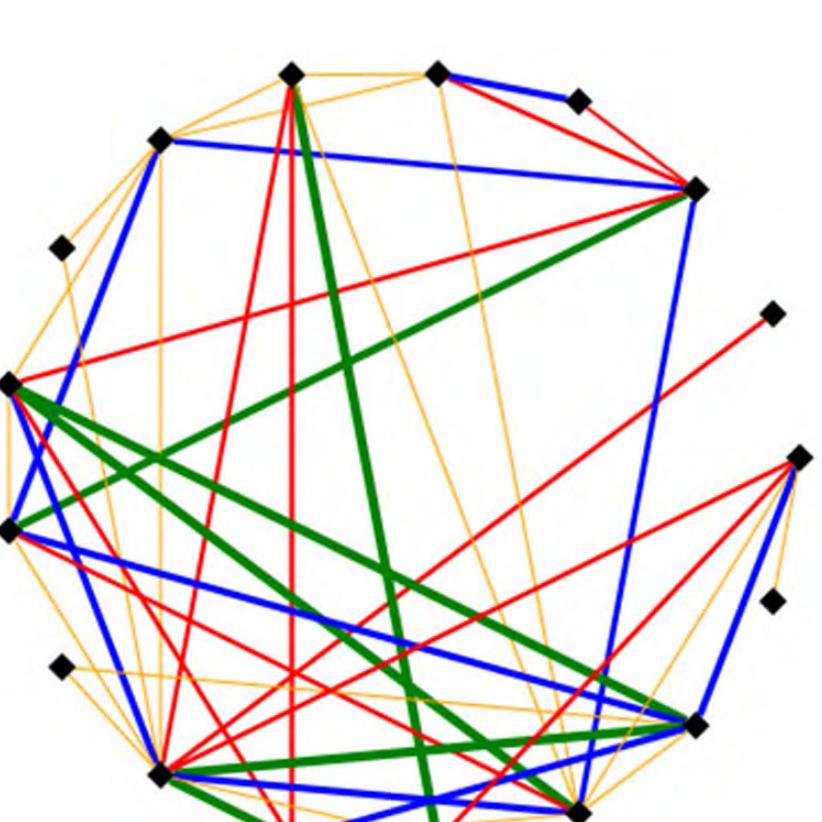
How many shortest paths are you on?



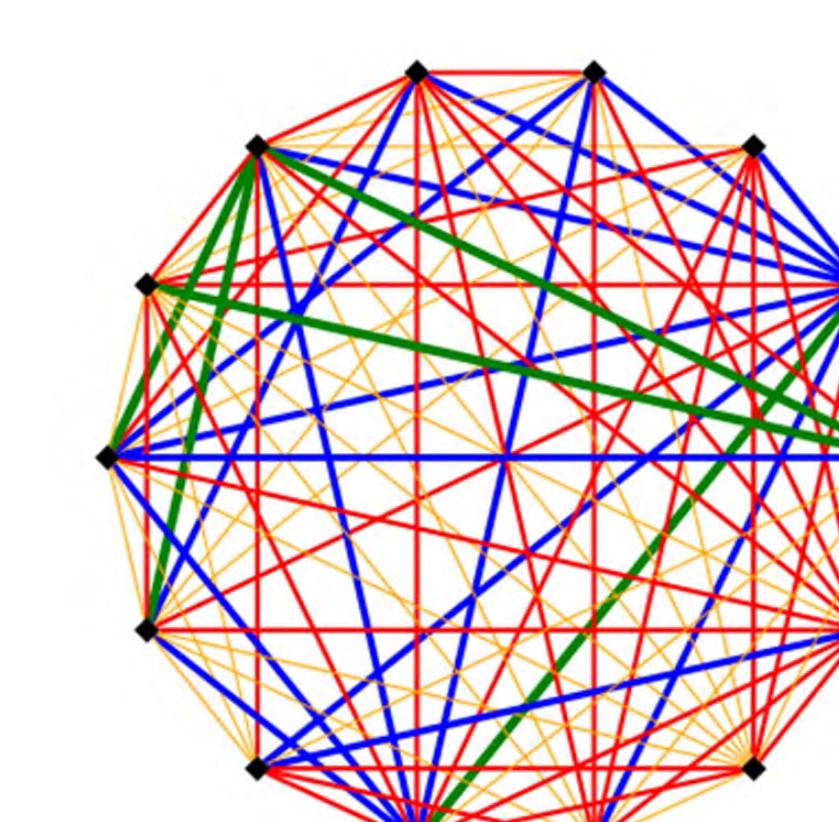
Northeastern IPM Center – Changes over time in network density

Baseline

Strength of Connections before WG formation



Frequency of communication about the WG topic with other WG members
Orange = Rarely
Red = Occasionally
Blue = Often
Green = A Great Deal



Year 1 follow-up

Strength of connections after 1 year of collaboration



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