

TRACK - Technology Feasibility

Powered by



DOWNLOAD

PDFs for Printing

PATHWAY 2

PMF

PIM

CAC

CIA

CLV

Business Connectivity



ติดตามการขยายและกระจายตัวของฐานลูกค้า ตอบให้ได้ว่าแหล่งที่มาของรายได้ รายรับ มาจากลูกค้ากลุ่มใด หรือ ผู้สนับสนุนกลุ่มไหนกันแน่ องค์กรมีขีดความสามารถในการสร้างเครือข่าย (Network Effect Power: Nfx) ได้มากน้อย หรือ “เติบโต” อย่างไร

“...เมื่อต้องจับจุดเชื่อมต่อ “ท่อส่ง” ความสัมพันธ์ อยากสร้างเครือข่าย ขยายความร่วมมือ หรือ อยากได้เพื่อนร่วมอุดมการณ์ที่ควรทำความรู้จัก อยากเจาะพื้นที่กลางใจใกล้ “ไข่มุก” เมื่อต้องการคลุก “วงใน” อยากเริ่มสร้างความสัมพันธ์ได้ไว แต่ยังไม่รู้จะเริ่มทางไหนดี?”



@mjuigtc

www.mjuigtc.com

#iGTCCoLAB

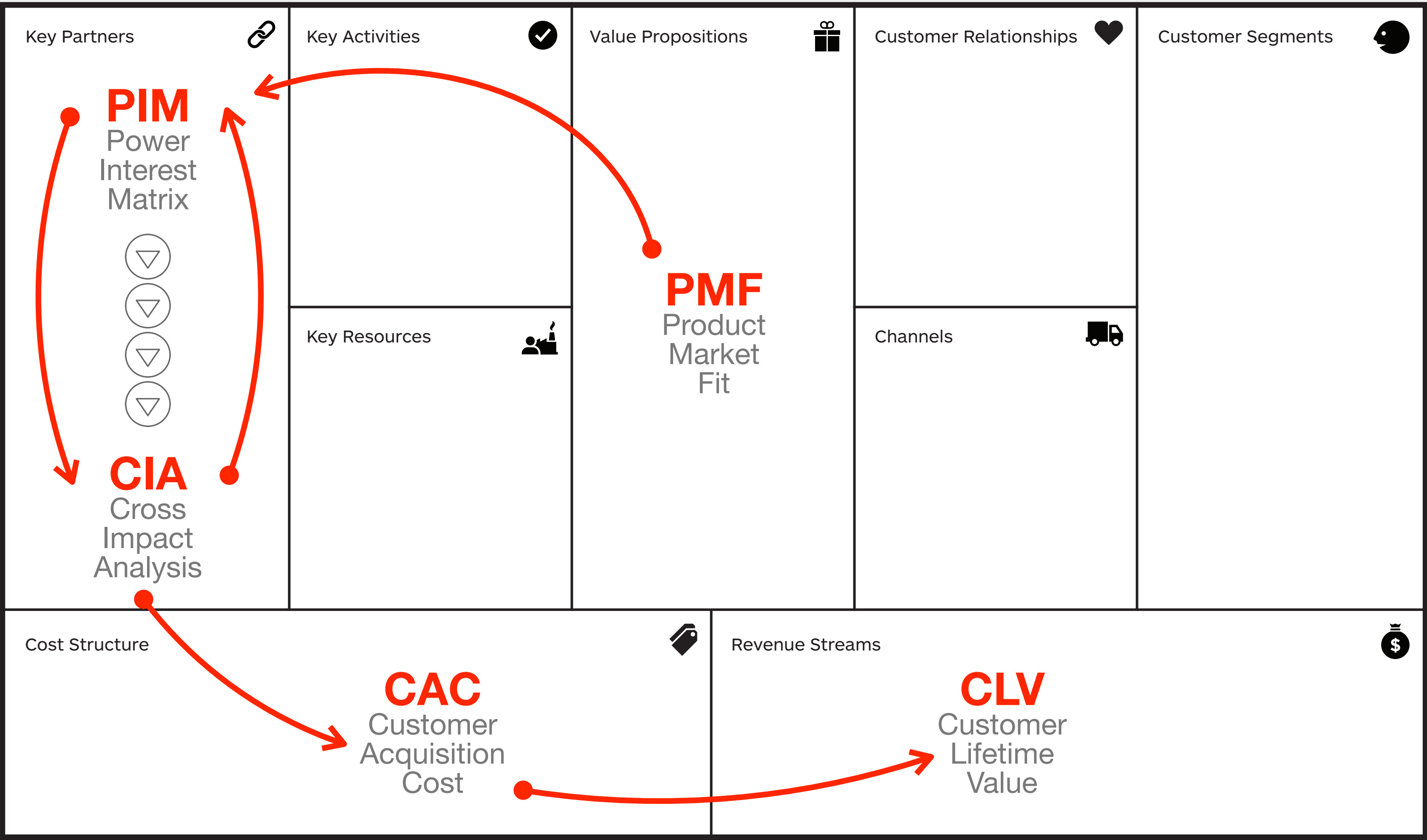
The Business Model Canvas

Designed for:

Designed by:

Date:

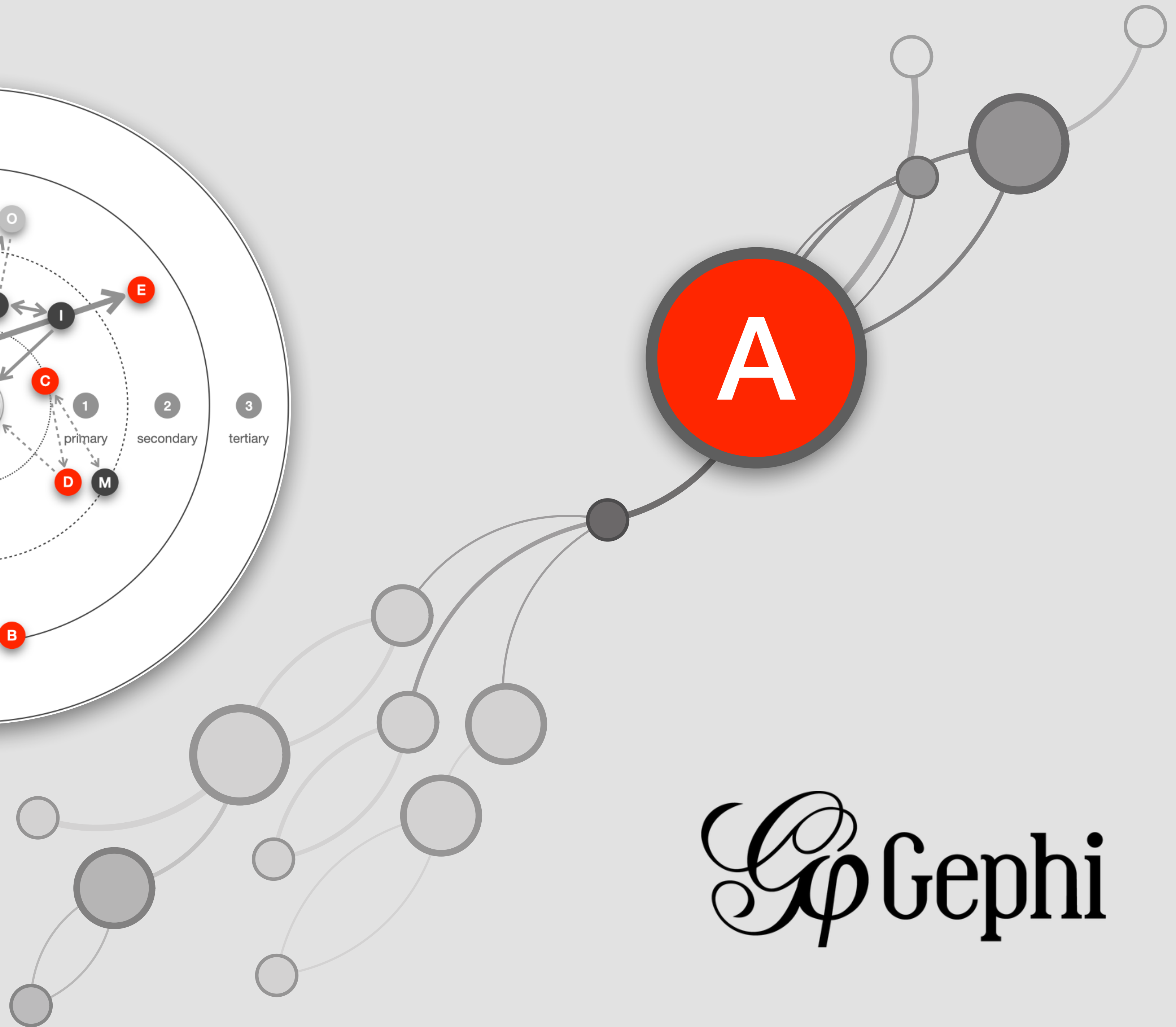
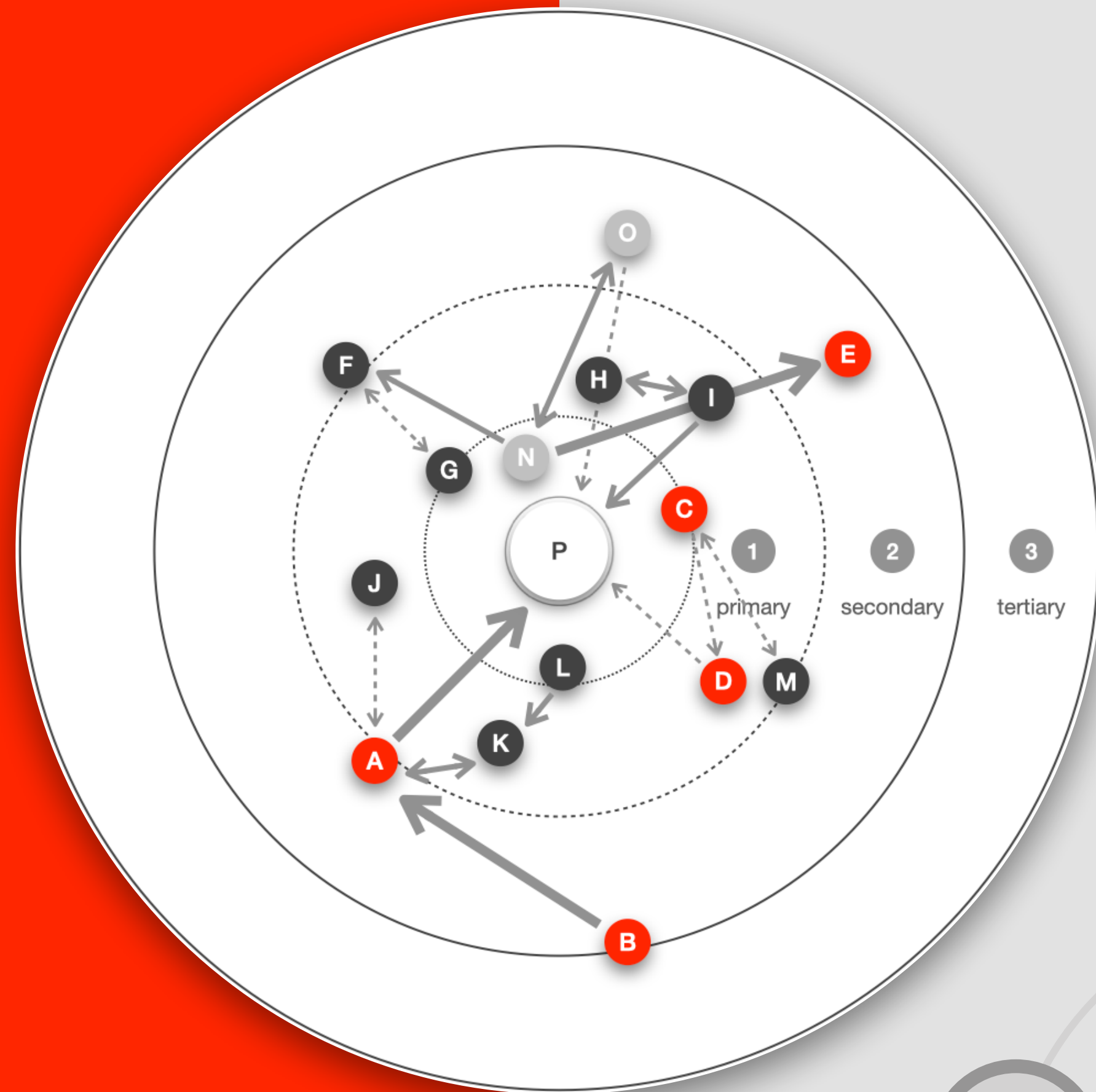
Version:



PATHWAY 2

Business Connectivity

IMPACT PATHWAY DIRECTION



Gp Gephi

The Business Model Canvas

Designed for:

Designed by:

Date:

Version:

Key Partners PIM Power Interest Matrix ▽ ▽ ▽ CIA Cross Impact Analysis	Key Activities CSI Customer Satisfaction Index ↓ IPA Importance Performance Analysis ↑ ESI Employee Satisfaction Index Key	Value Propositions	Customer Relationships	Customer Segments
Cost Structure		Revenue Streams		

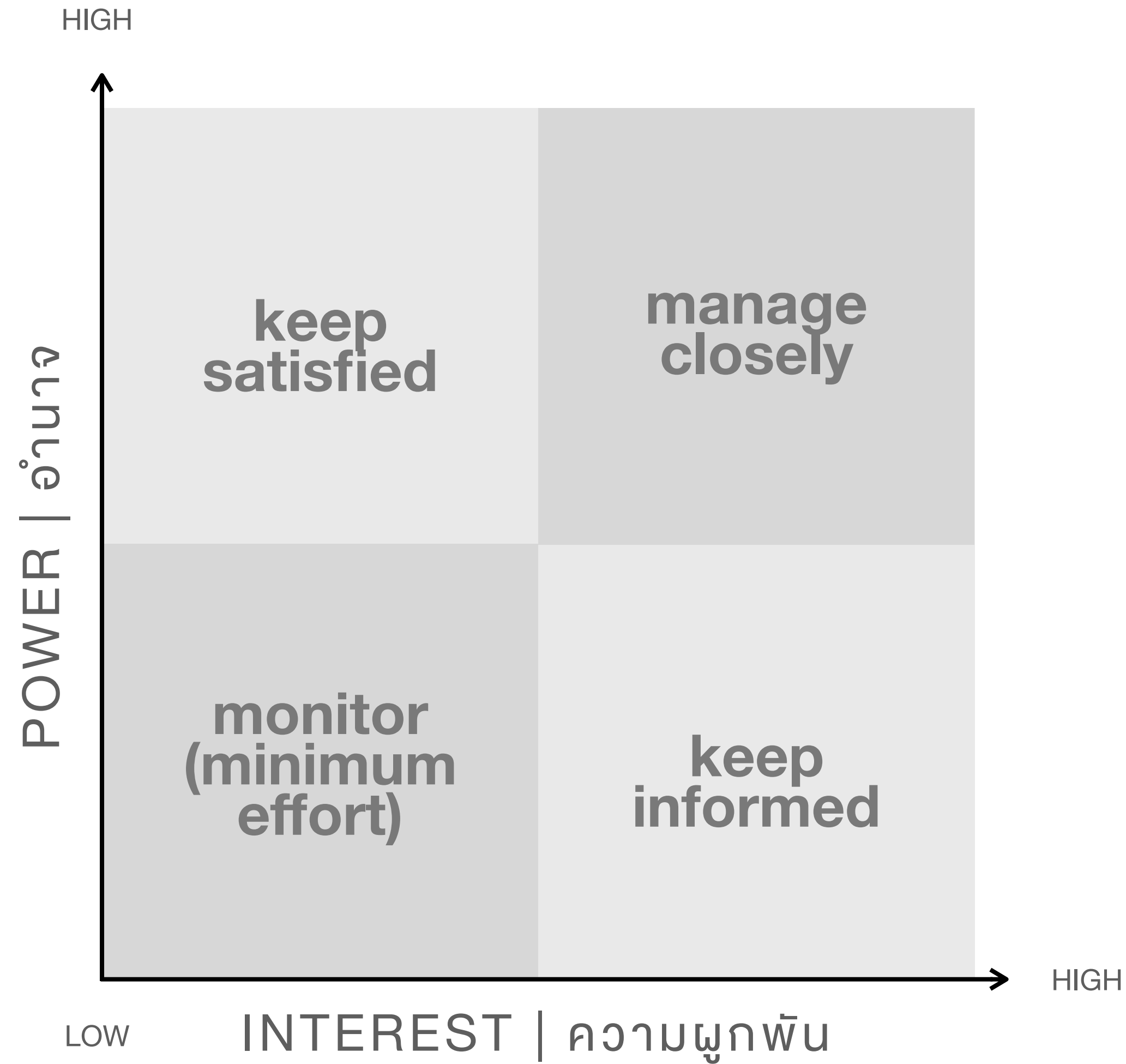


This work is licensed under the Creative Commons Attribution-Share Alike 3.0 Unported License. To view a copy of this license, visit: <http://creativecommons.org/licenses/by-sa/3.0/> or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.

DESIGNED BY: Strategyzer AG
The makers of Business Model Generation and Strategyzer

 **Strategyzer**
strategyzer.com

STAKEHOLDER MATRIX



ATTRIBUTE	INTEREST (X)					POWER (Y)				
	1	2	3	4	5	1	2	3	4	5
	1	2	3	4	5	1	2	3	4	5
	1	2	3	4	5	1	2	3	4	5
	1	2	3	4	5	1	2	3	4	5
	1	2	3	4	5	1	2	3	4	5
	1	2	3	4	5	1	2	3	4	5
	1	2	3	4	5	1	2	3	4	5
	1	2	3	4	5	1	2	3	4	5
	1	2	3	4	5	1	2	3	4	5
	1	2	3	4	5	1	2	3	4	5
	1	2	3	4	5	1	2	3	4	5

SCENARIO

PROJECT

DATE

STAKEHOLDER MAP

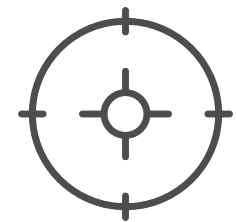


Find ค้นหาผู้ที่เกี่ยวข้อง

คู่แข่ง (competitor)

คู่ค้า (partner)

คู่ใจ (promoter)

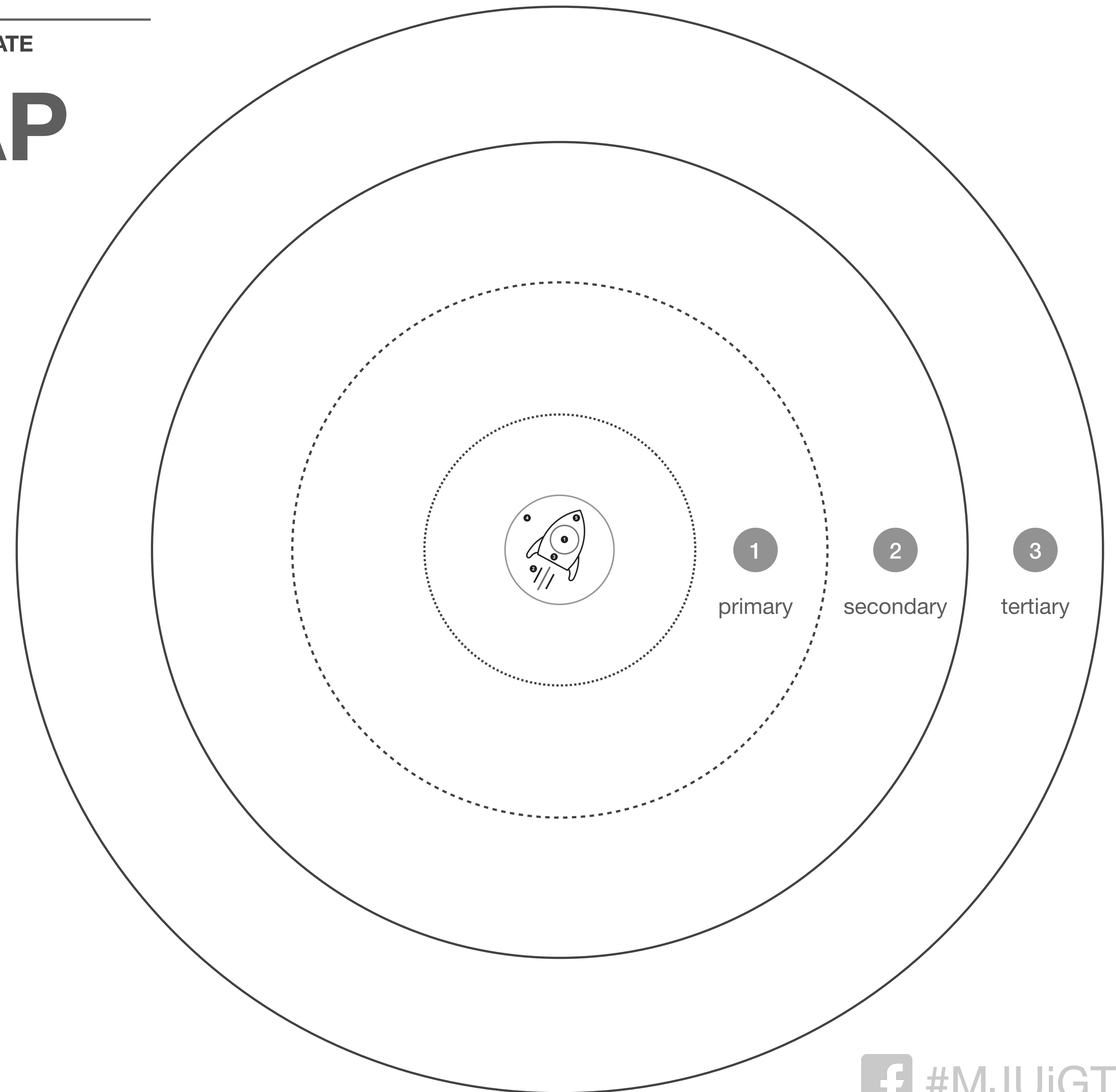
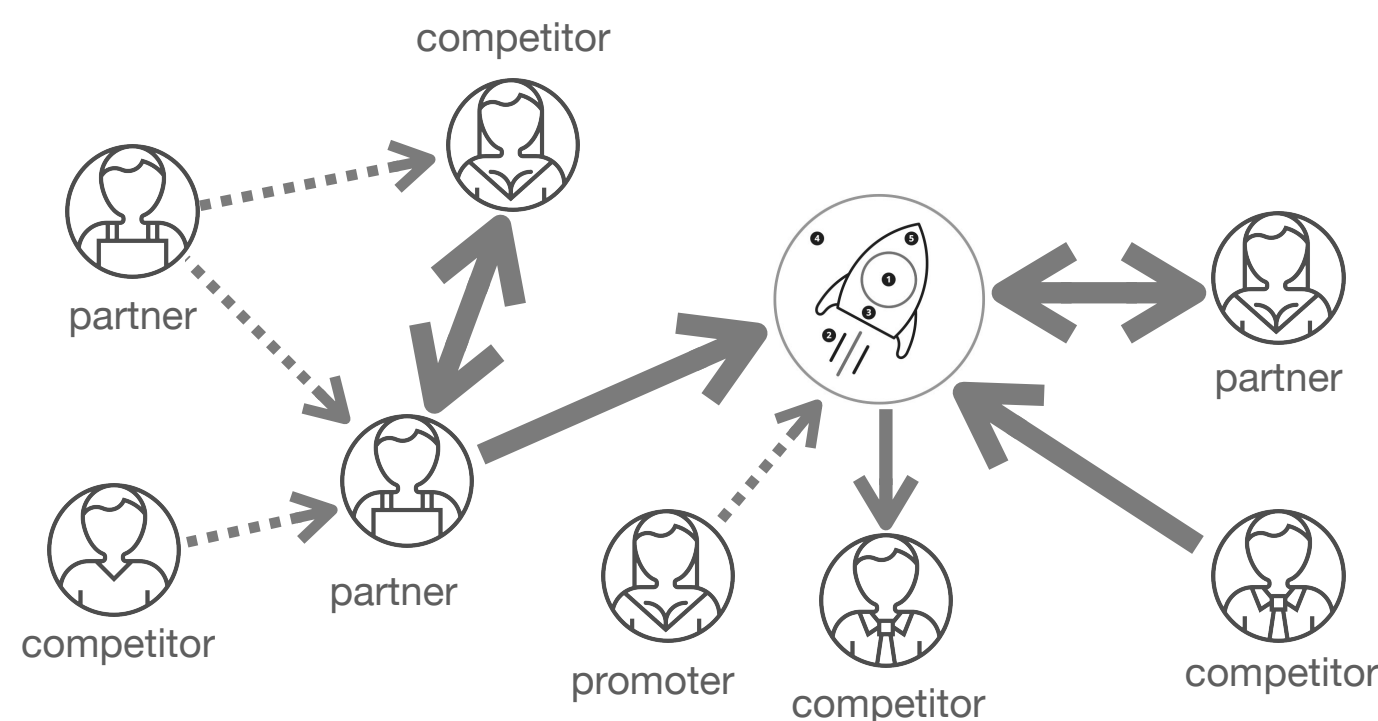


Focus คบคนที่ใช้ ไกล่คนที่ชอบ

อำนาจ (power)

ความสนใจ (interest)

Conceptual
Mapping



Source: Moonshot Canvas by Futur/10

SCENARIO

PROJECT

DATE

STAKEHOLDER MAP

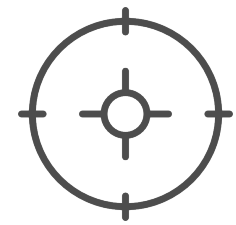


Find ค้นหาผู้ที่เกี่ยวข้อง

● คู่แข่ง (competitor)

● คู่ค้า (partner)

● คู่ใจ (promoter)

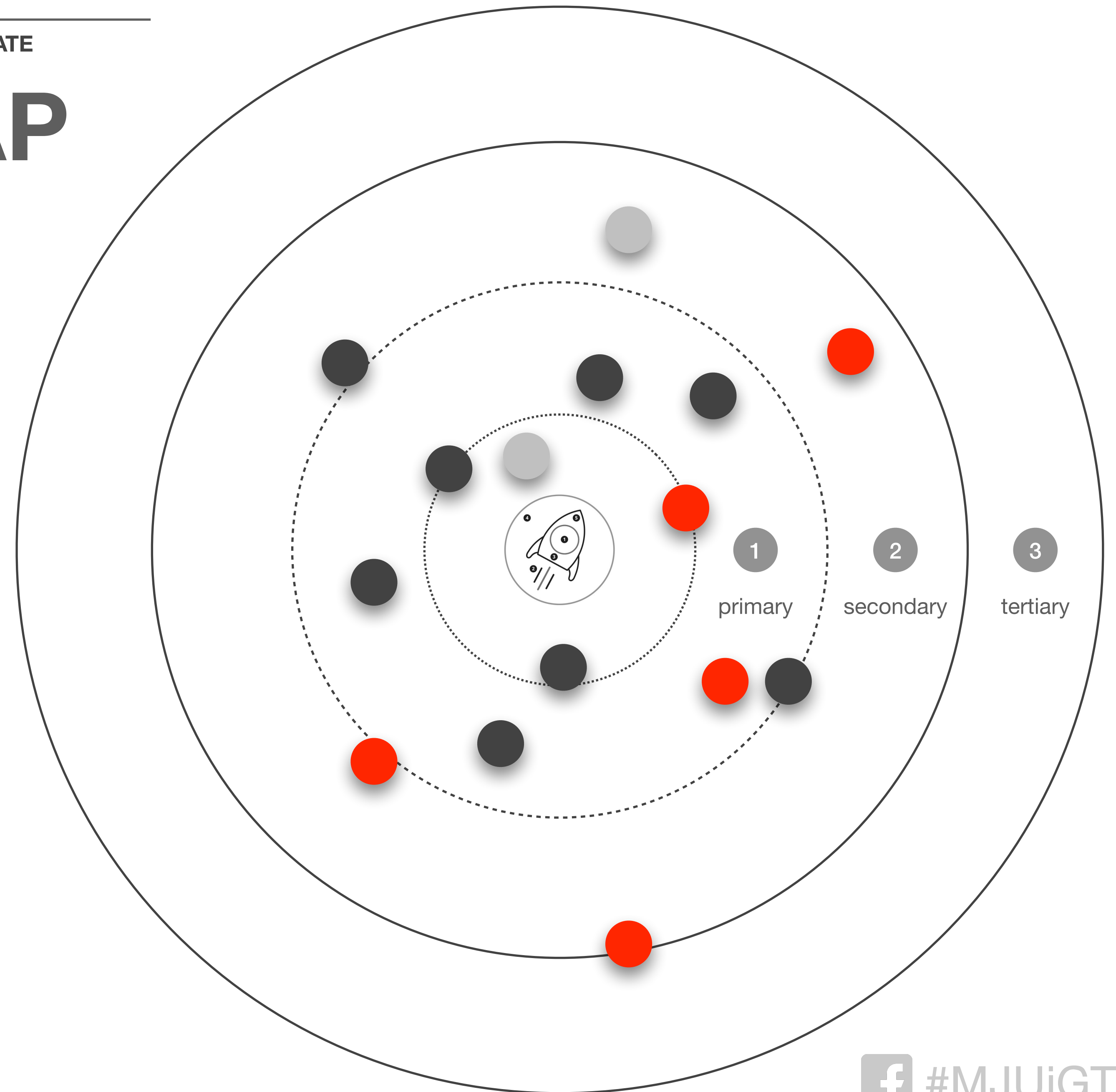
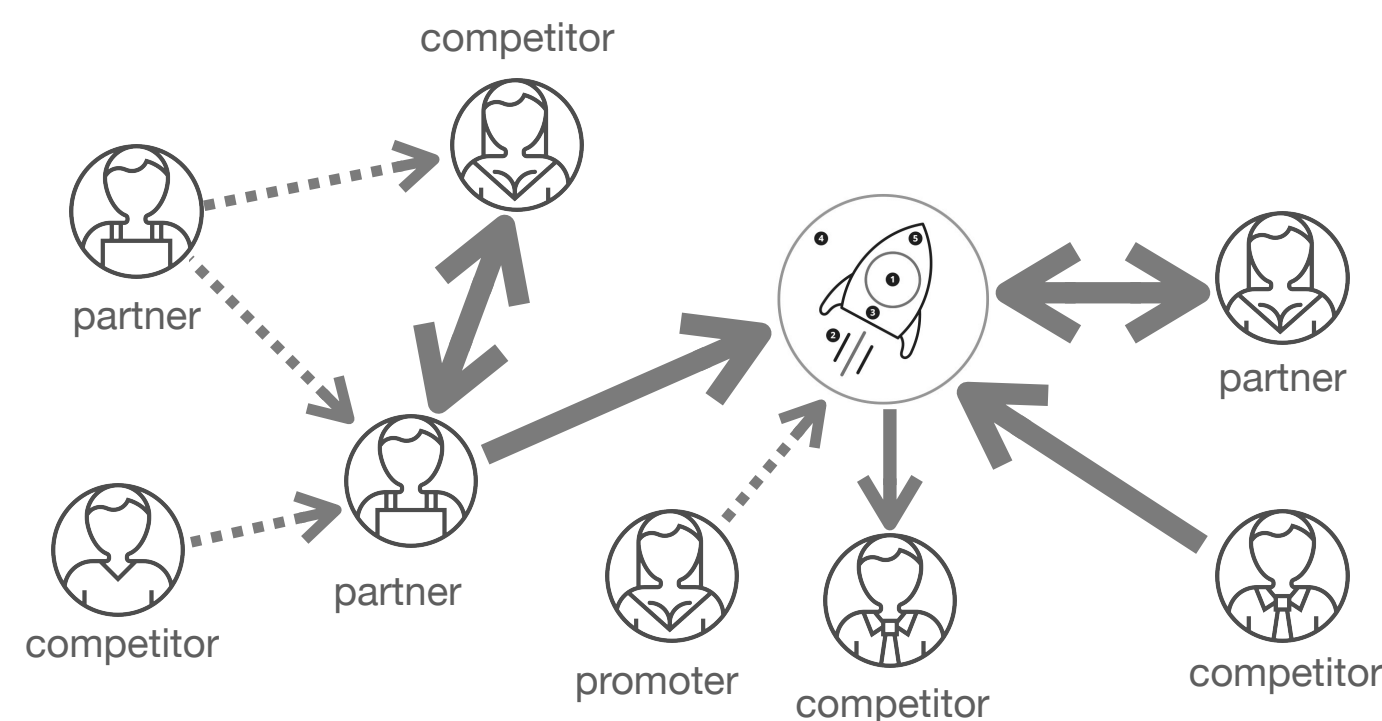


Focus คบคนที่ใช้ ไกล่คนที่ชอบ

อำนาจ (power)

ความสนใจ (interest)

Conceptual
Mapping



Source: Moonshot Canvas by Futur/10

SCENARIO

PROJECT

DATE

STAKEHOLDER MAP

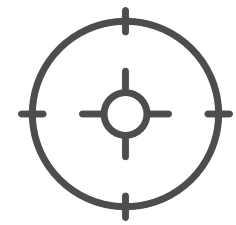


Find ค้นหาผู้ที่เกี่ยวข้อง

● คู่แข่ง (competitor)

● คู่ค้า (partner)

● คู่ใจ (promoter)

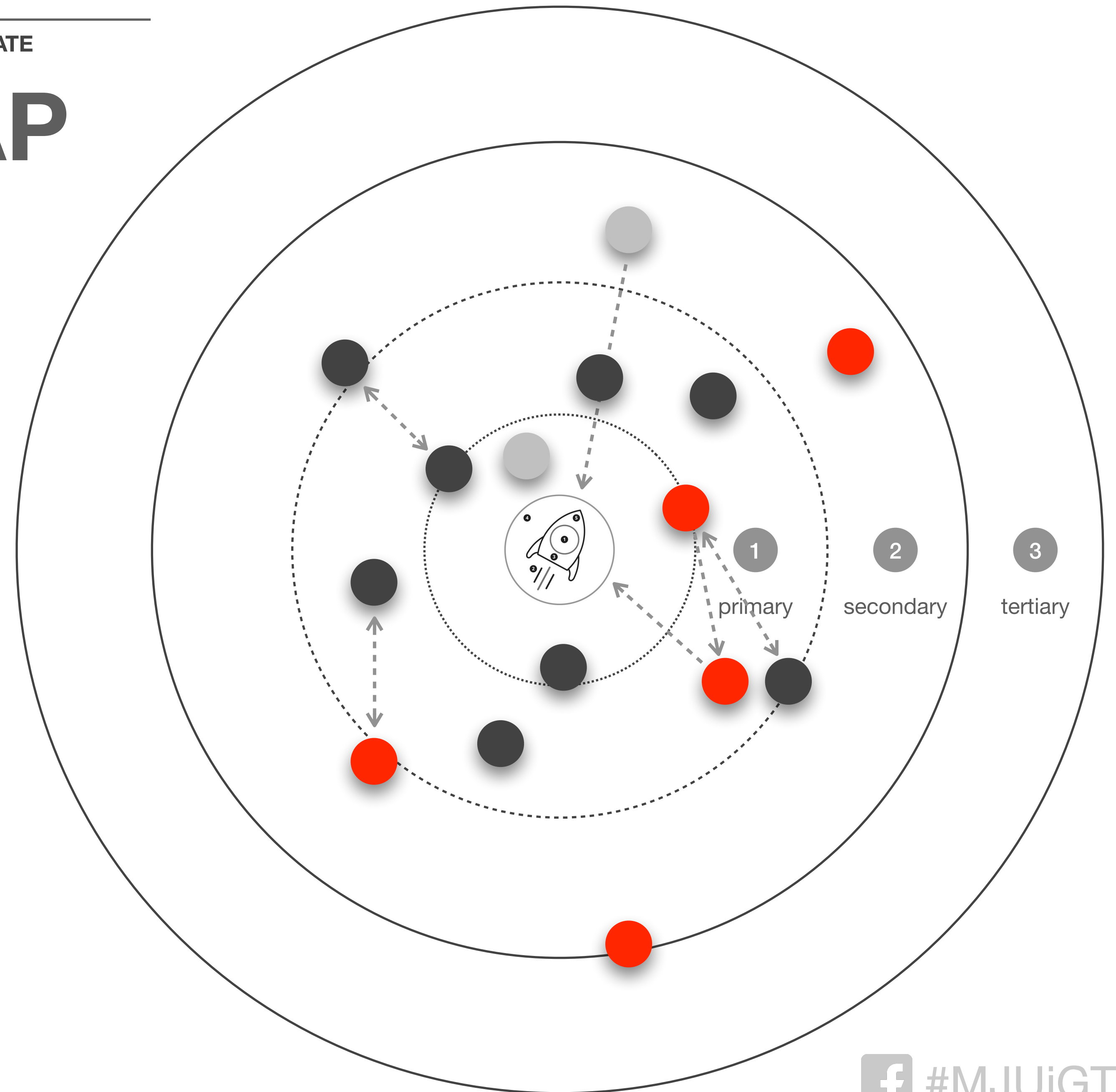
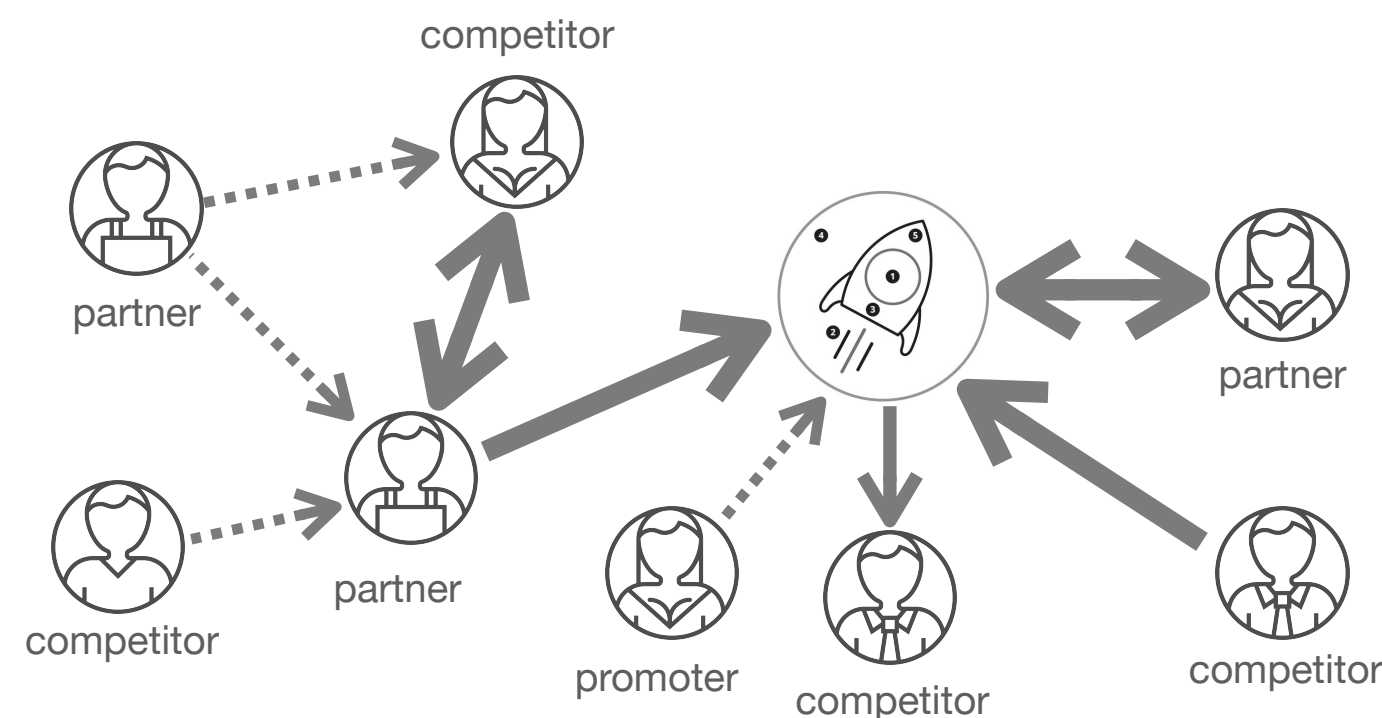


Focus คบคนที่ใช้ ไกล่คนที่ชอบ

อำนาจ (power)

ความสนใจ (interest)

Conceptual
Mapping



Source: Moonshot Canvas by Futur/io

SCENARIO

PROJECT

DATE

STAKEHOLDER MAP

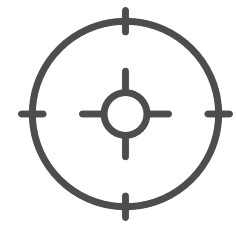


Find ค้นหาผู้ที่เกี่ยวข้อง

● คู่แข่ง (competitor)

● คู่ค้า (partner)

● คู่ใจ (promoter)

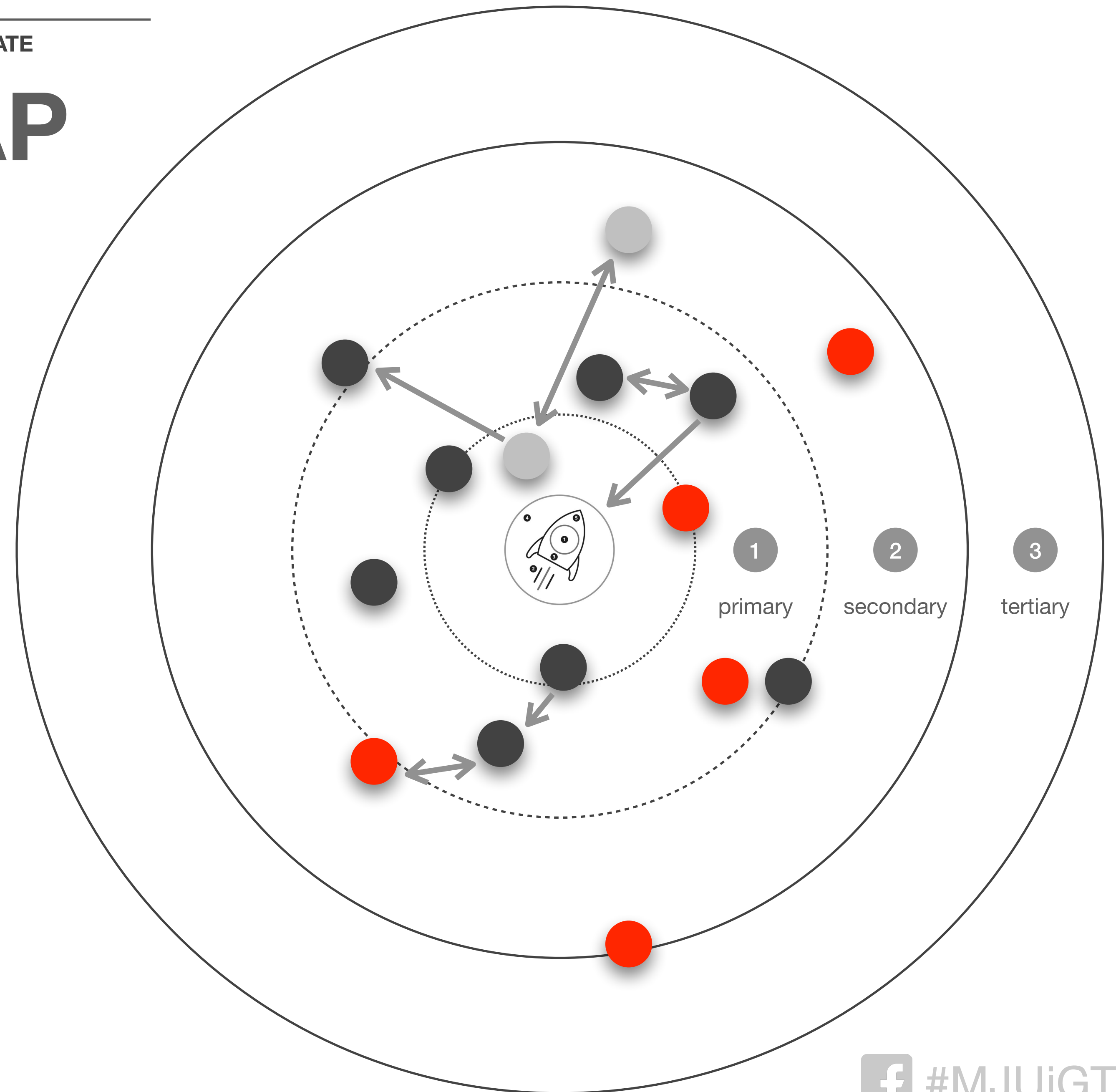
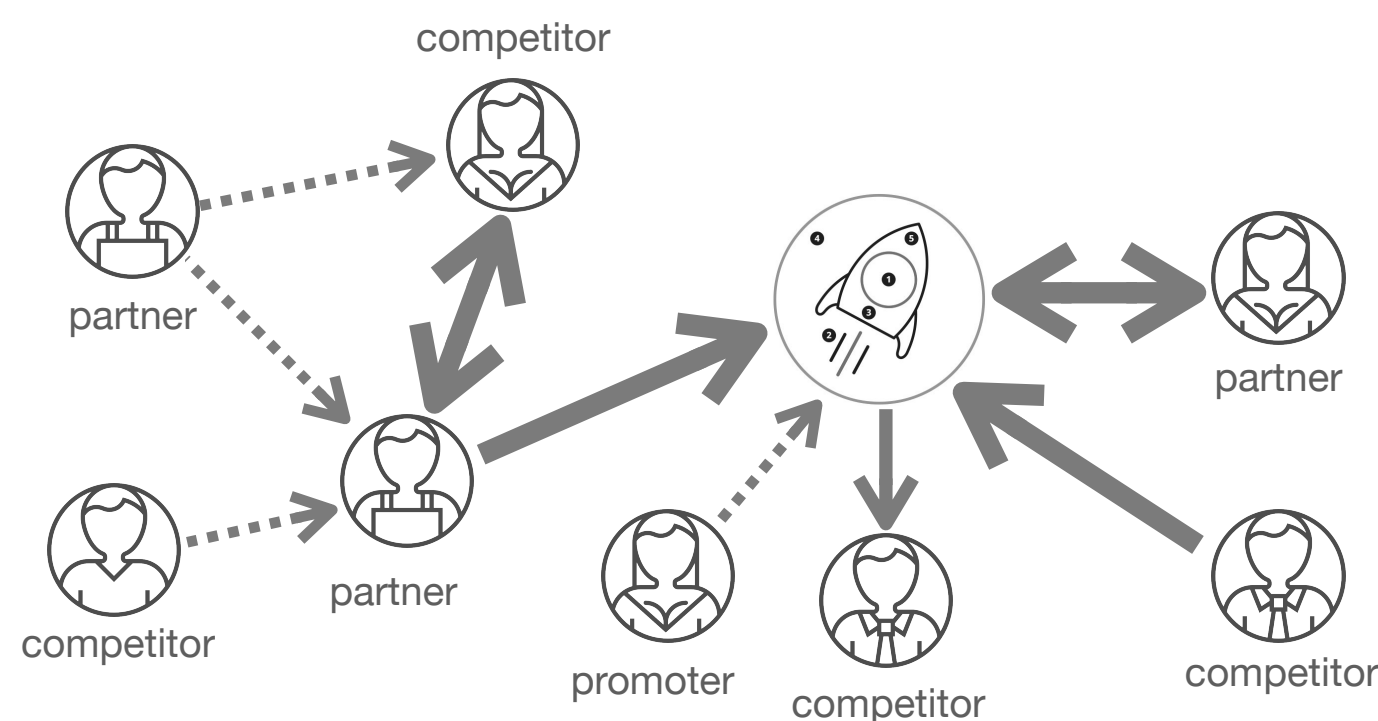


Focus คบคนที่ใช้ ไกล่คนที่ชอบ

อำนาจ (power)

ความสนใจ (interest)

Conceptual
Mapping



Source: Moonshot Canvas by Futur/10

SCENARIO

PROJECT

DATE

STAKEHOLDER MAP

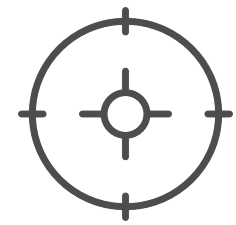


Find ค้นหาผู้ที่เกี่ยวข้อง

● คู่แข่ง (competitor)

● คู่ค้า (partner)

● คู่ใจ (promoter)

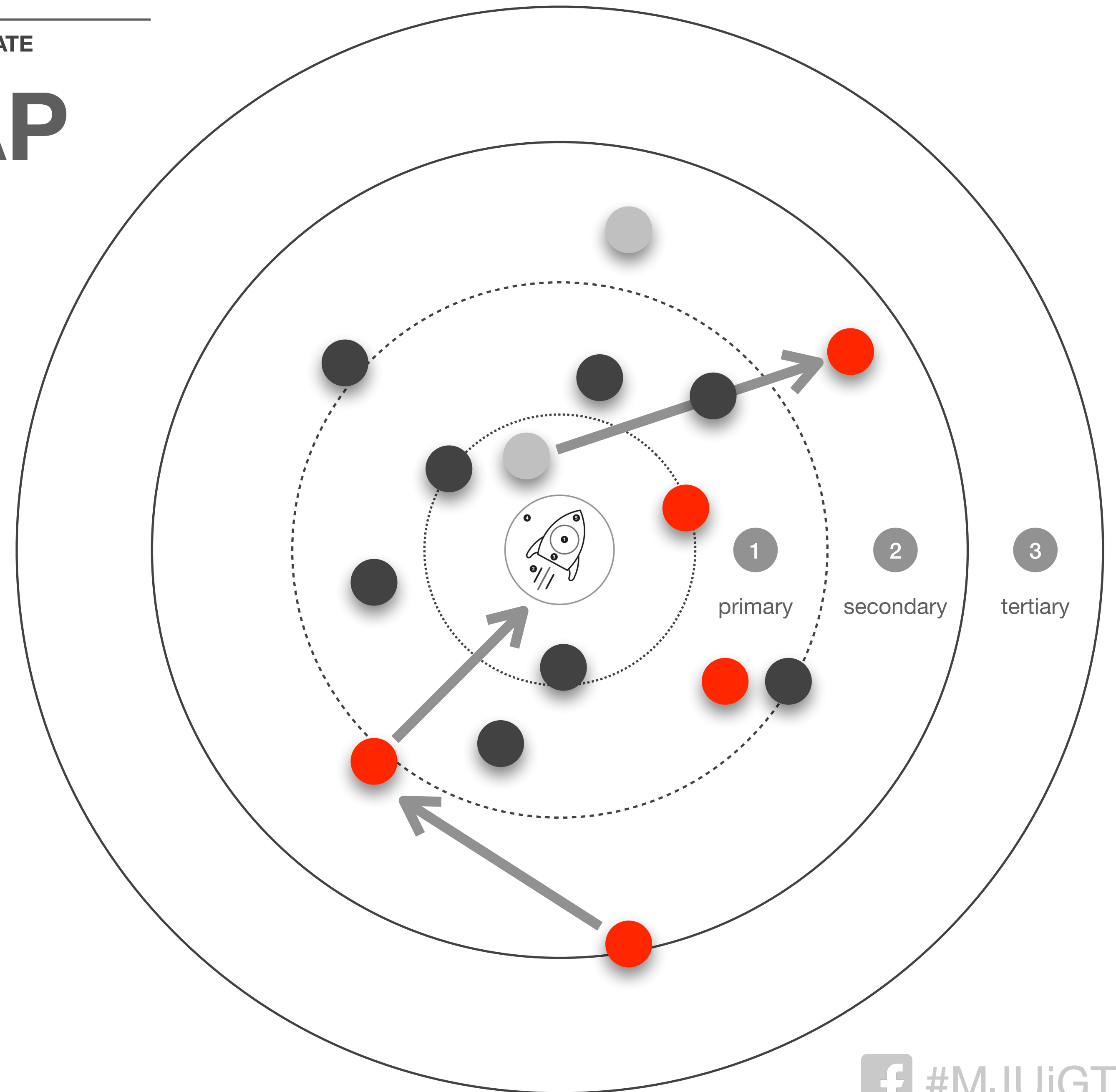
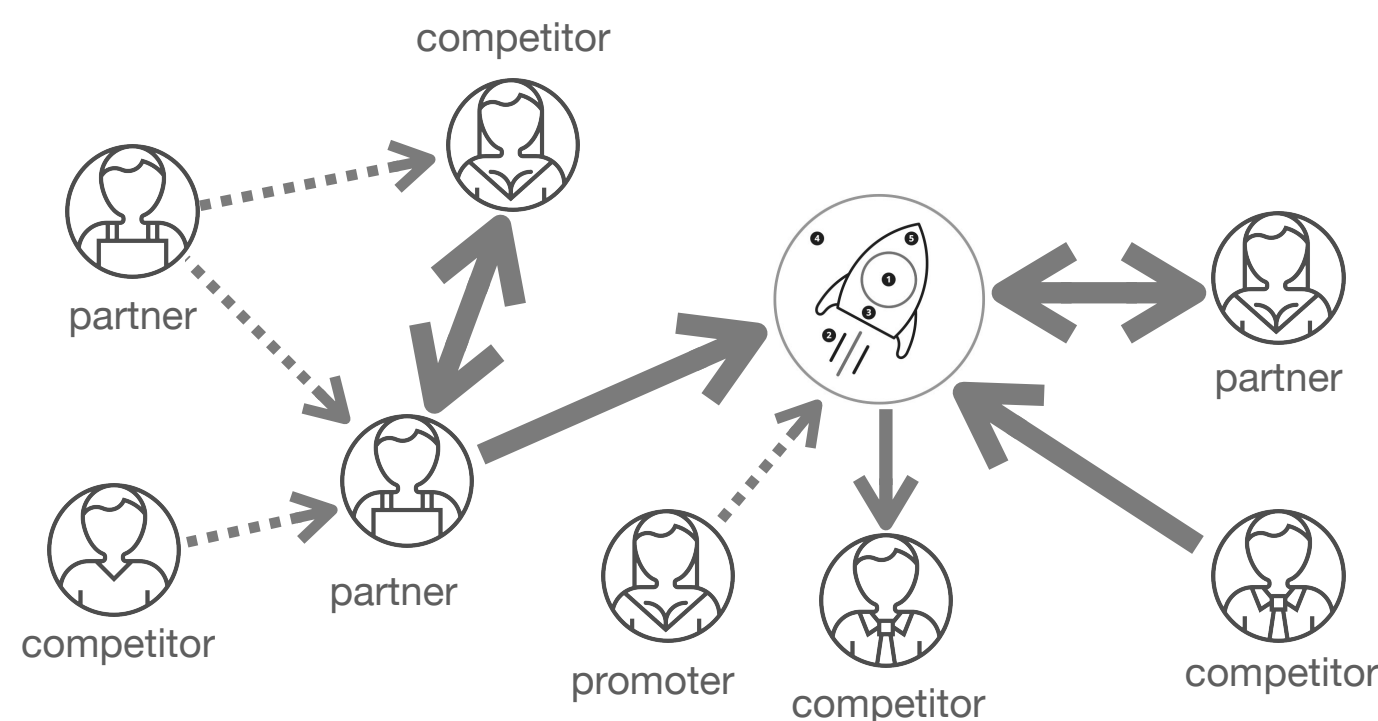


Focus คบคนที่ใช้ ไกล่คนที่ชอบ

อำนาจ (power)

ความสนใจ (interest)

Conceptual
Mapping



Source: Moonshot Canvas by Futur/io

SCENARIO

PROJECT

DATE

STAKEHOLDER MAP

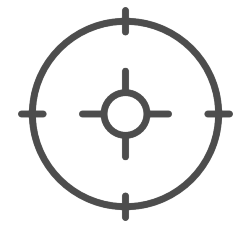


Find ค้นหาผู้ที่เกี่ยวข้อง

● คู่แข่ง (competitor)

● คู่ค้า (partner)

● คู่ใจ (promoter)

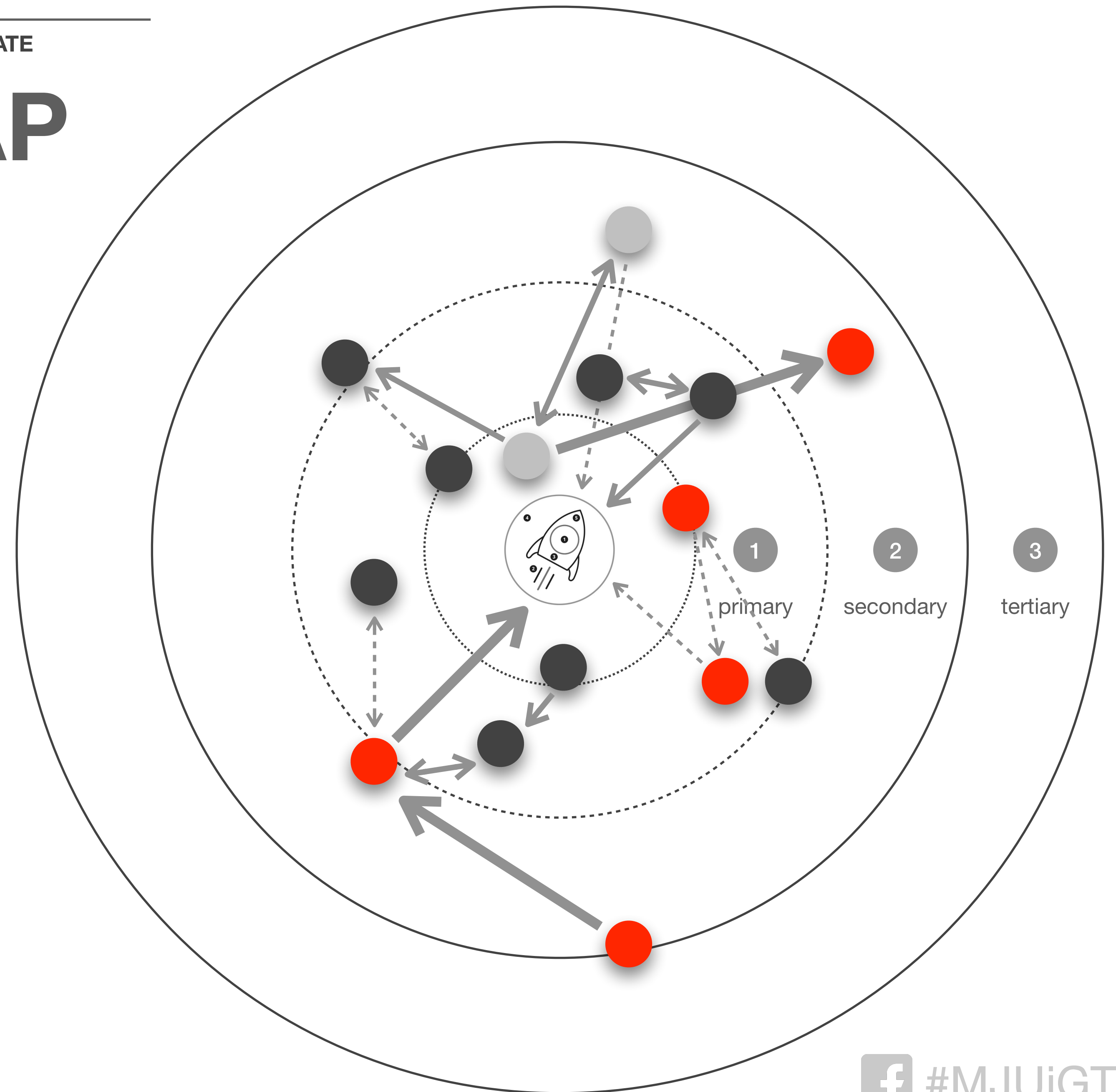
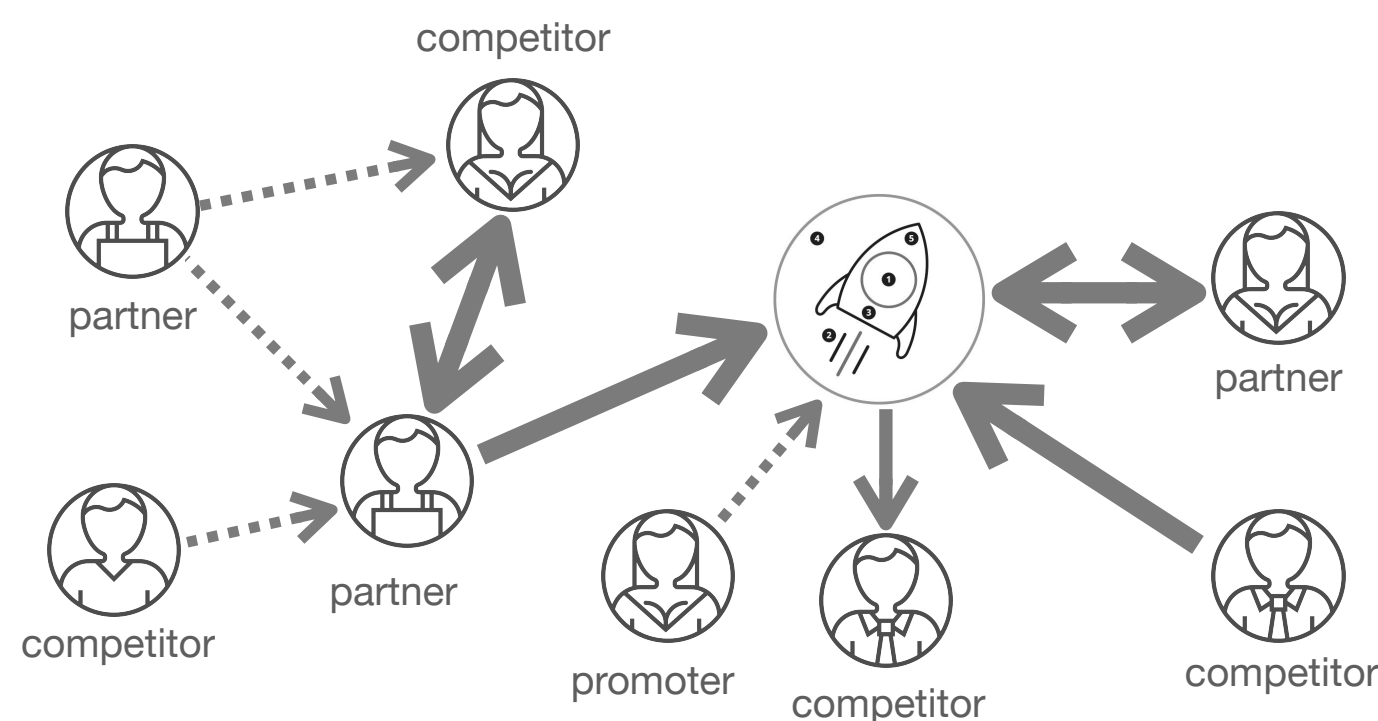


Focus คบคนที่ใช้ ไกล่คนที่ชอบ

อำนาจ (power)

ความสนใจ (interest)

Conceptual
Mapping



Source: Moonshot Canvas by Futur/io

SCENARIO

PROJECT

DATE

STAKEHOLDER MAP

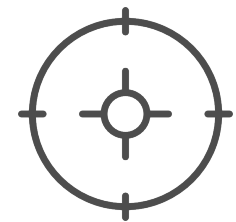


Find ค้นหาผู้ที่เกี่ยวข้อง

● คู่แข่ง (competitor)

● คู่ค้า (partner)

● คู่ใจ (promoter)

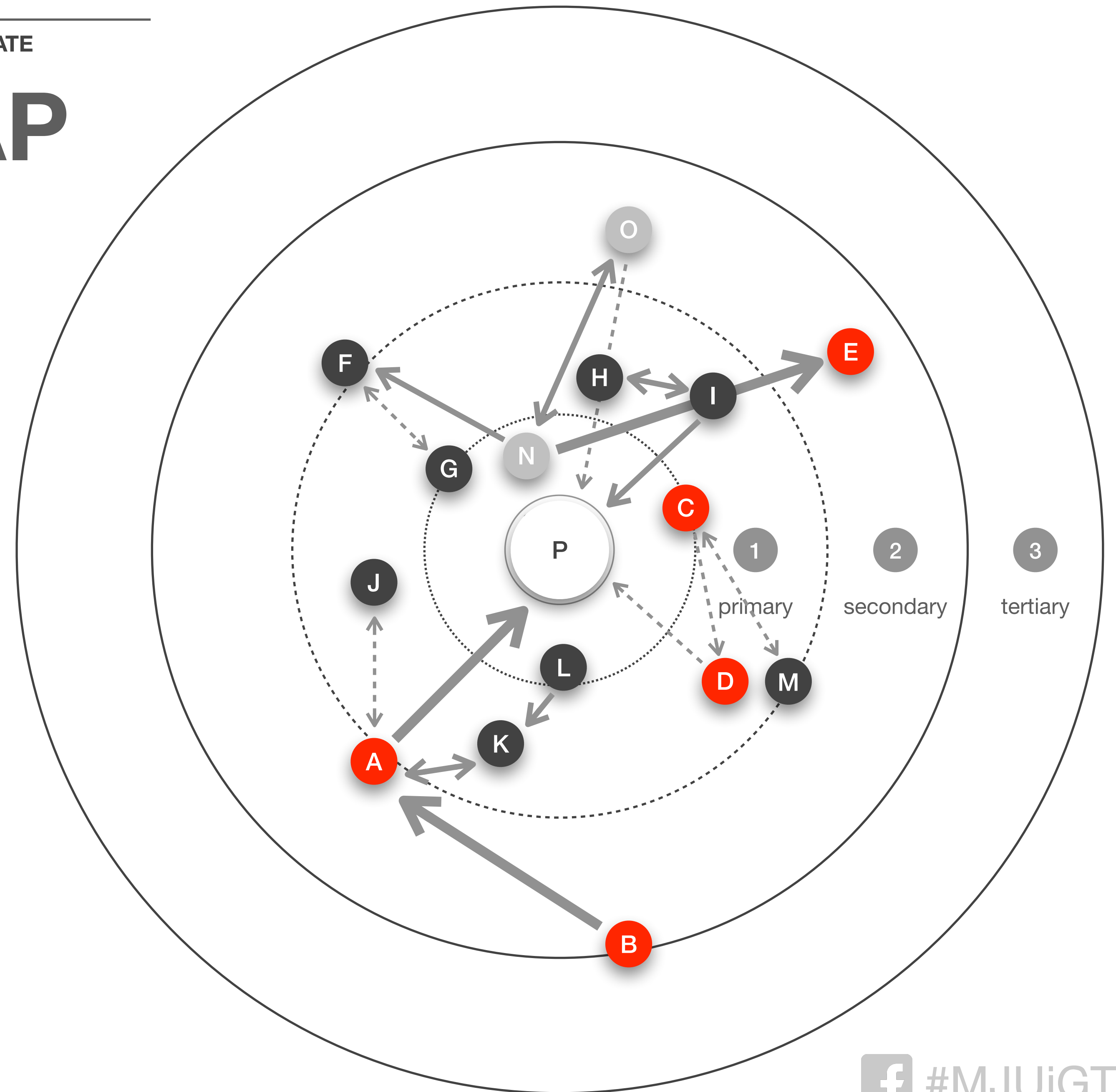
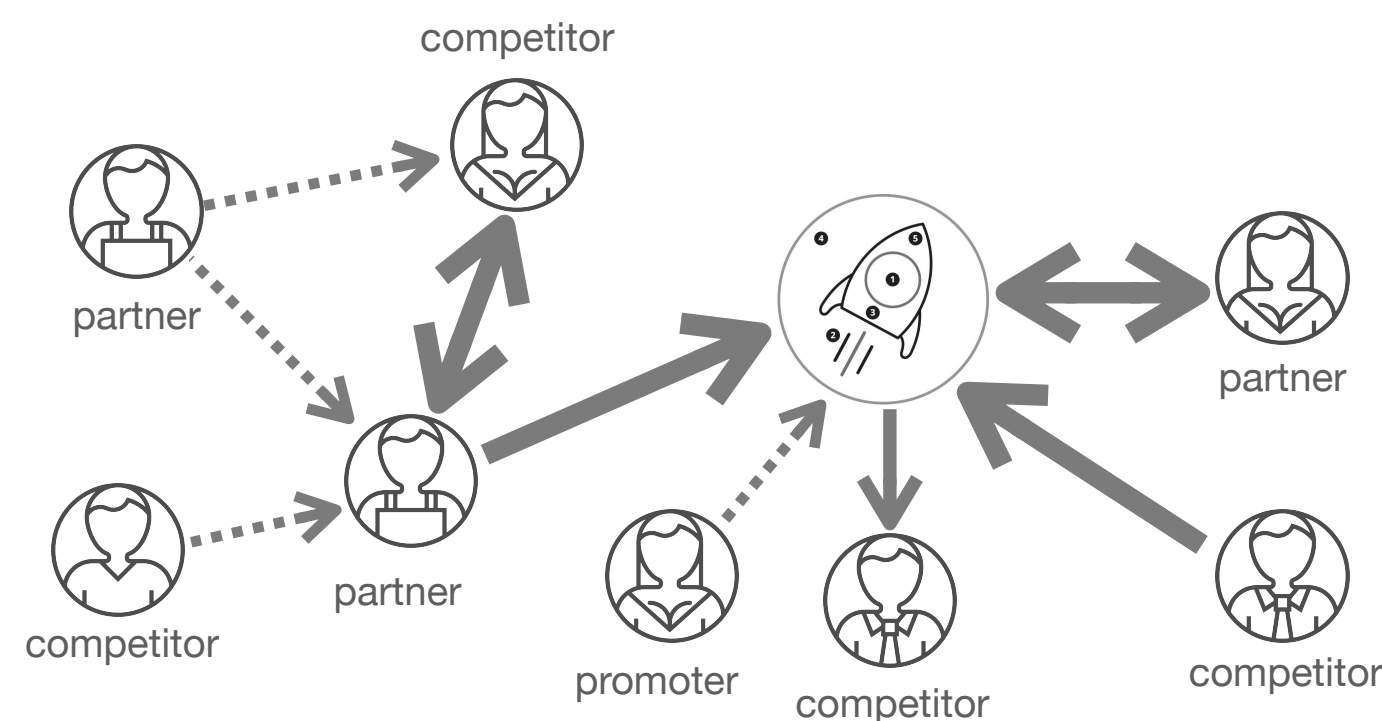


Focus คบคนที่ใช่ ใกล้คนที่ชอบ

อำนาจ (power)

ความสนใจ (interest)

Conceptual
Mapping



Source: Moonshot Canvas by Futur/10

SCENARIO

PROJECT

DATE

STAKEHOLDER MAP

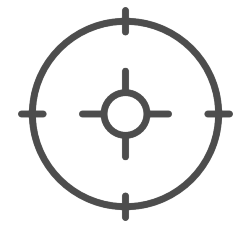


Find ค้นหาผู้ที่เกี่ยวข้อง

● คู่แข่ง (competitor)

● คู่ค้า (partner)

● คู่ใจ (promoter)

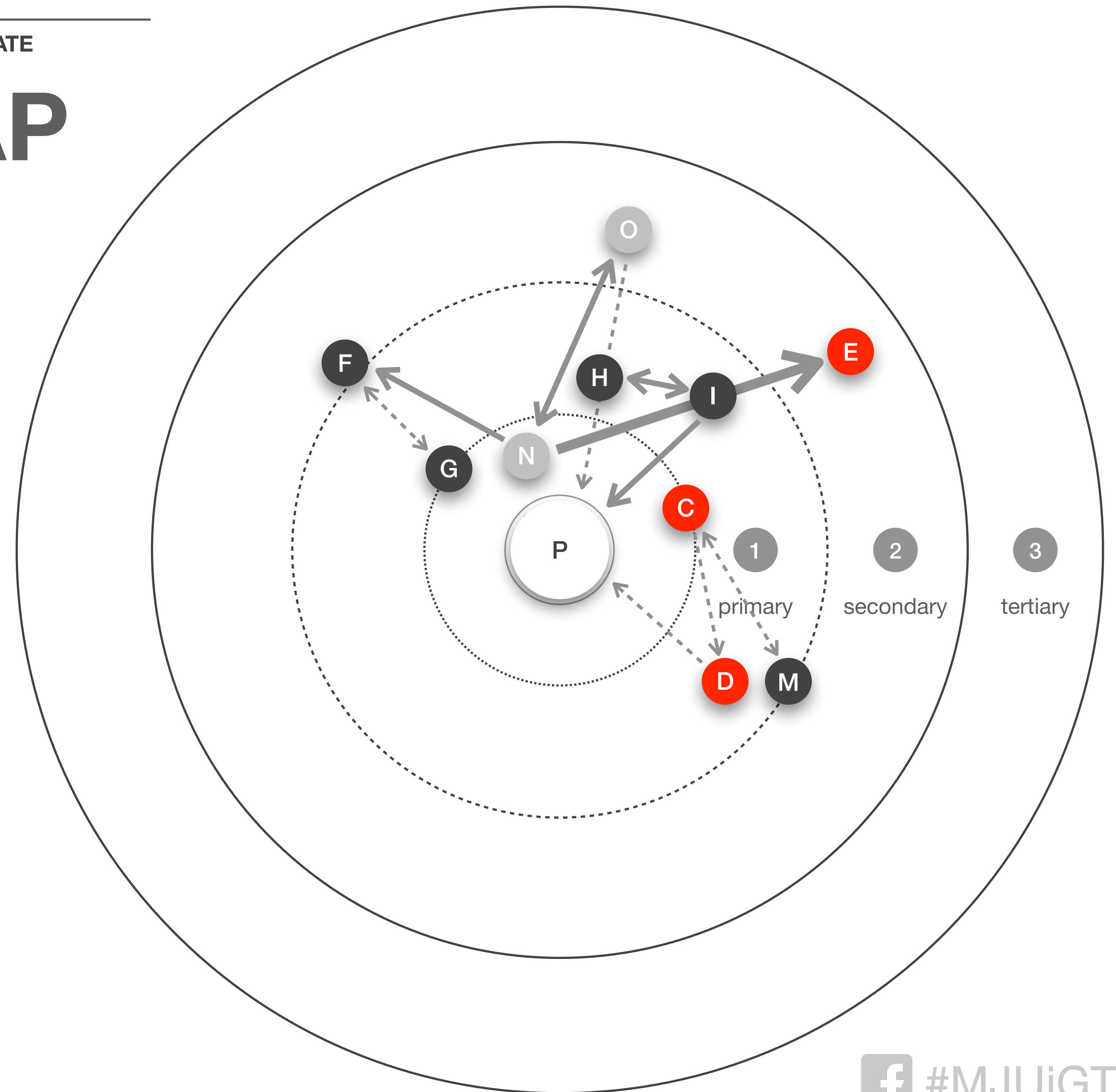
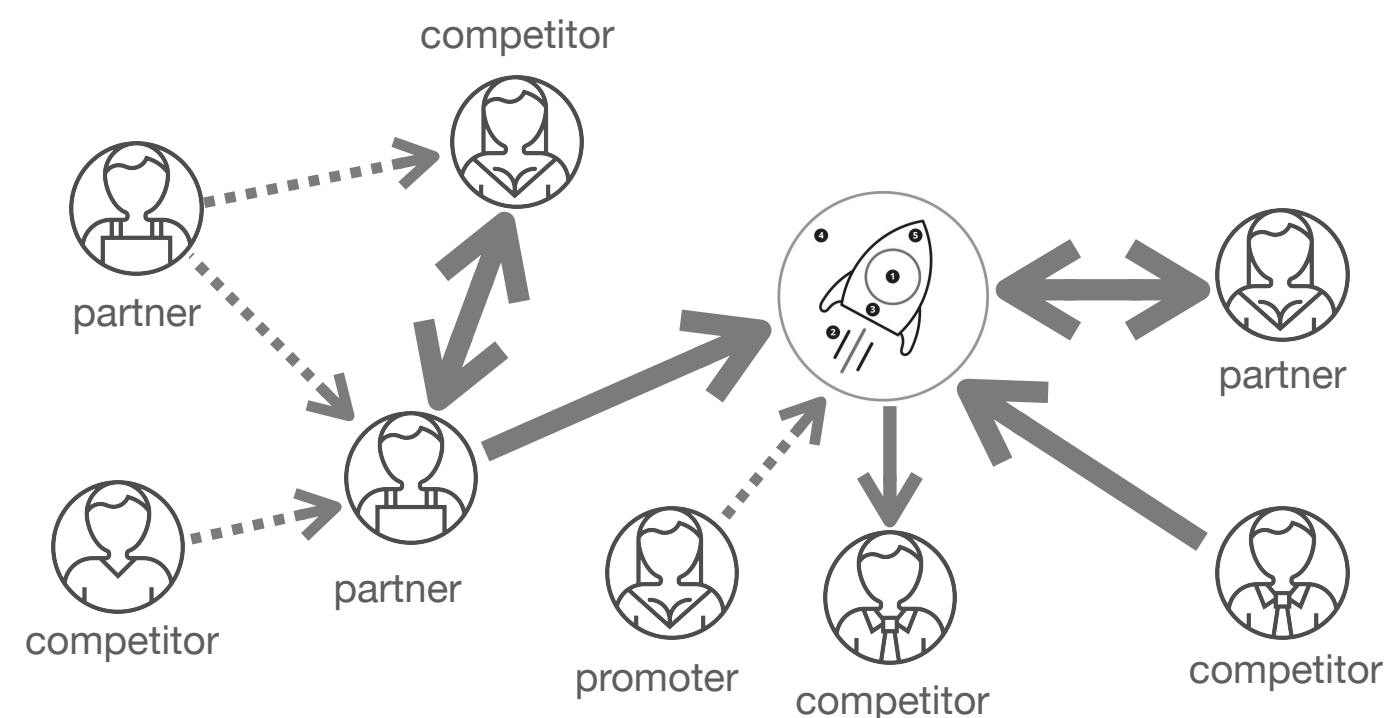


Focus คบคนที่ใช่ ใกล้คนที่ชอบ

อำนาจ (power)

ความสนใจ (interest)

Conceptual Mapping



Source: Moonshot Canvas by Futur/10

SCENARIO

PROJECT

DATE

STAKEHOLDER MAP

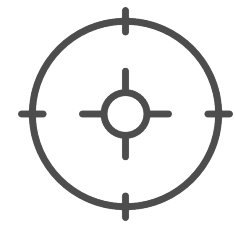


Find ค้นหาผู้ที่เกี่ยวข้อง

● คู่แข่ง (competitor)

● คู่ค้า (partner)

● คู่ใจ (promoter)

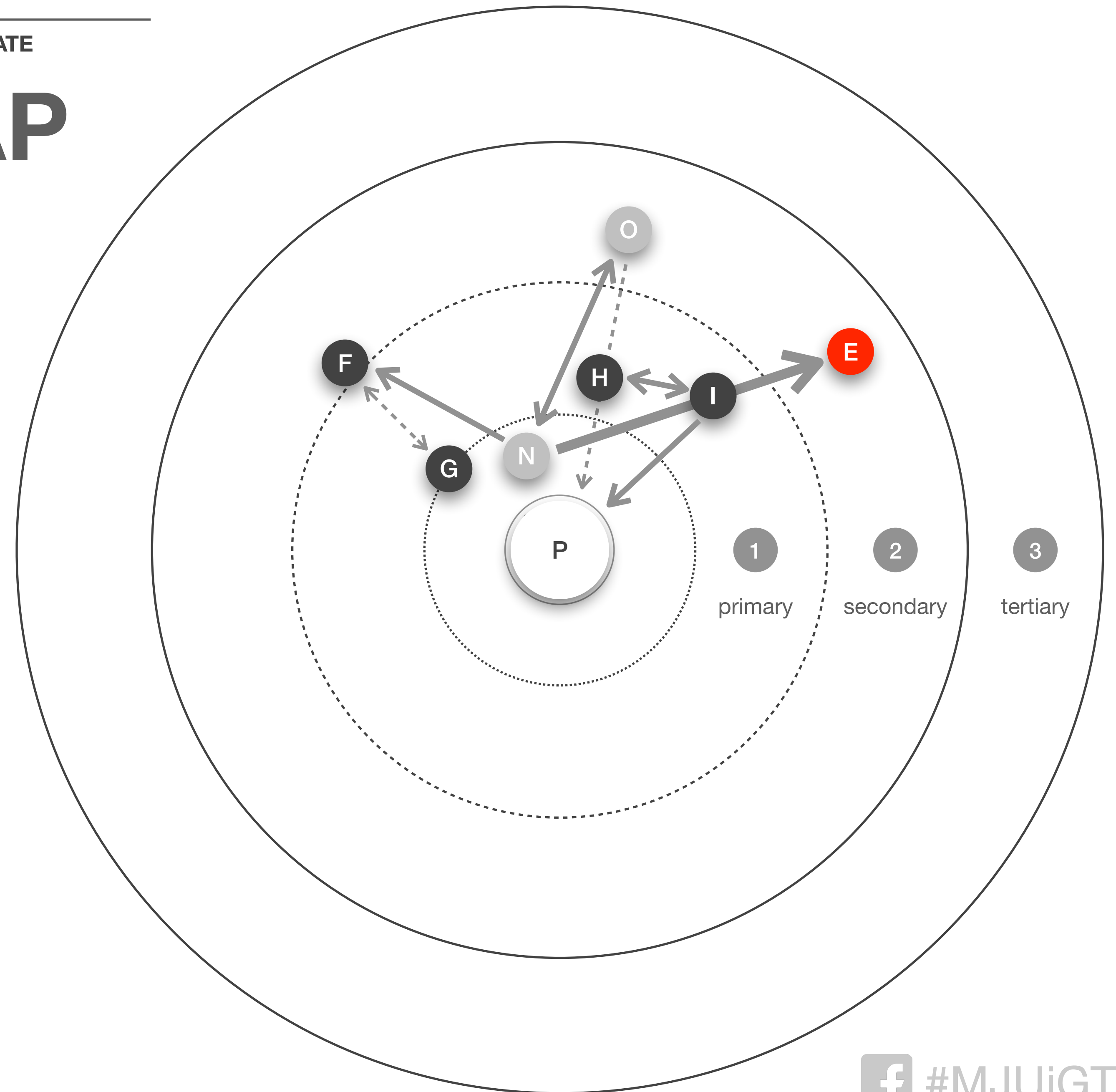
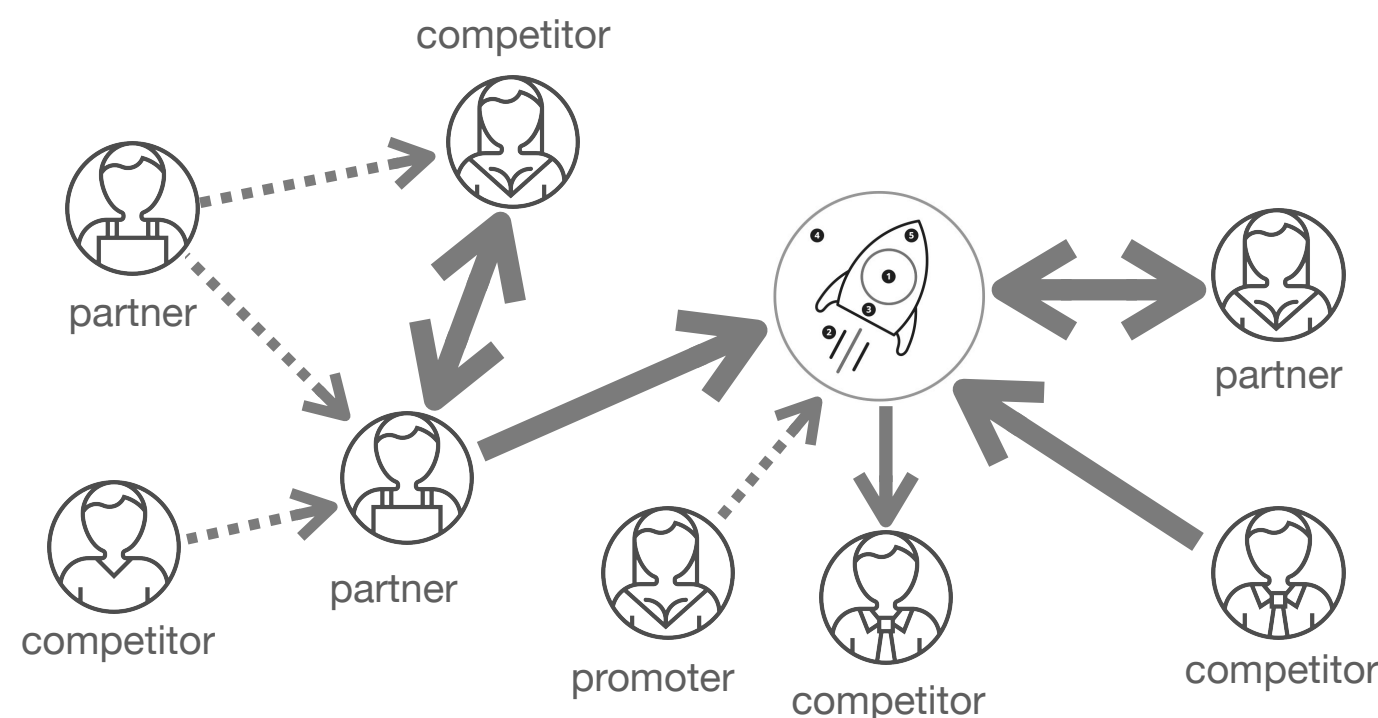


Focus คบคนที่ใช้ ไกลคนที่ชอบ

อำนาจ (power)

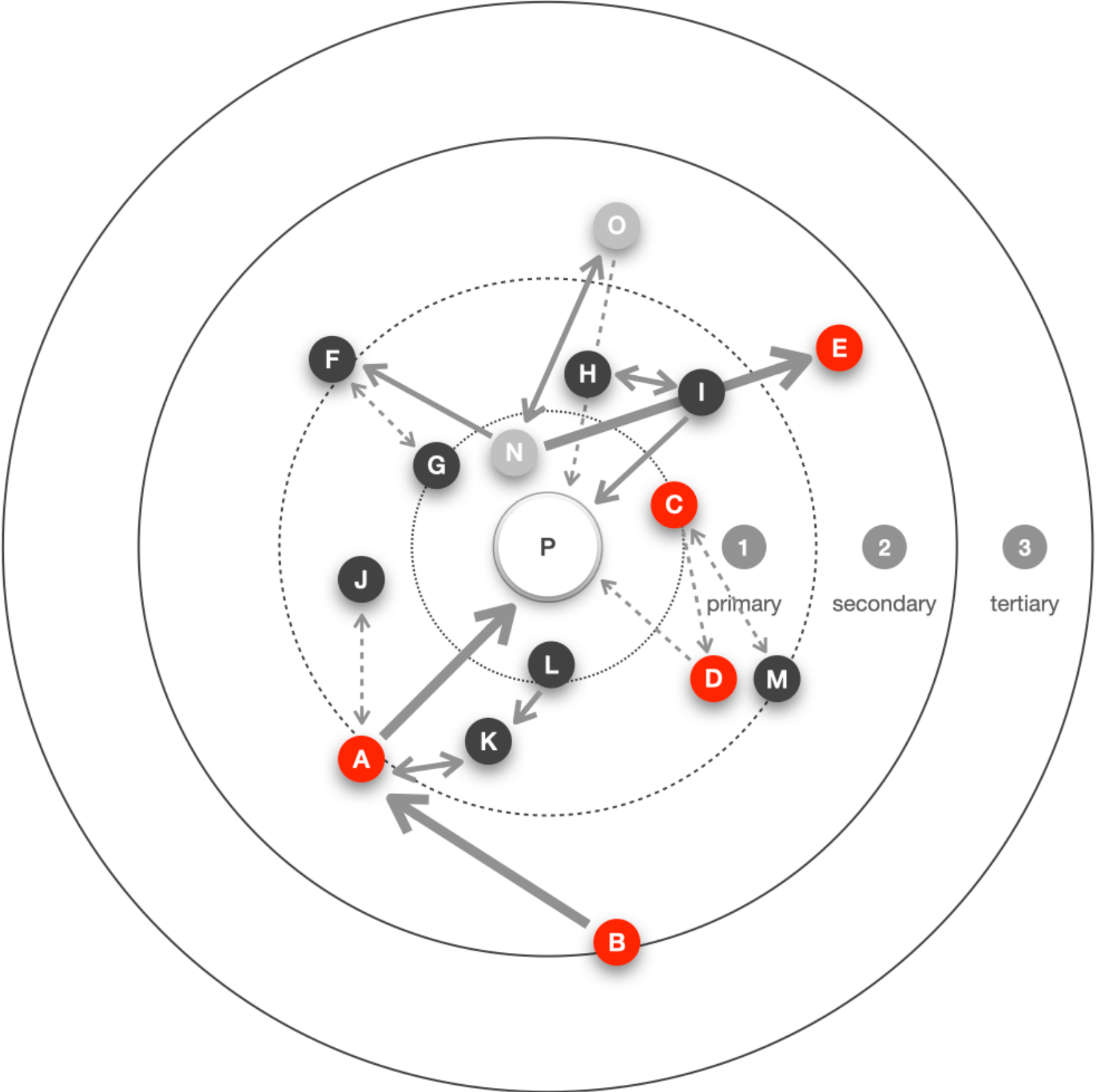
ความสนใจ (interest)

Conceptual
Mapping



Source: Moonshot Canvas by Futur/10

Stakeholder Map



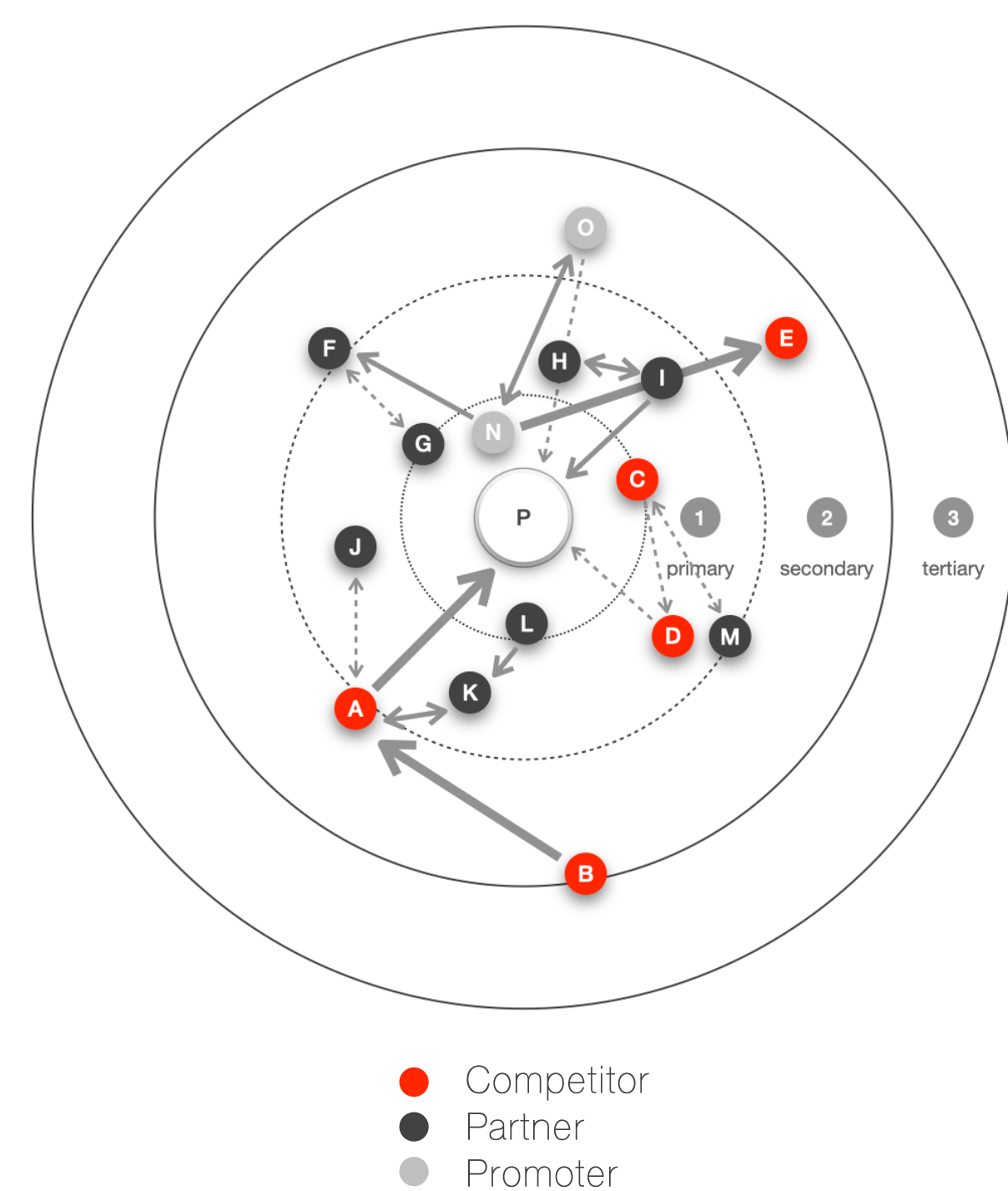
- Competitor
- Partner
- Promoter

Adjacency Matrix

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A										1	2					3
B	3															
C				1									1			
D																1
E																
F							1									
G						1										
H									2							
I								2								2
J	1															
K	2															
L																
M			1													
N					3	2										
O														2		1
P																

Source: Anuwat Churyen (2018), adapted from Theodore Jay Gordon (1994)

Cross Impact Analysis - CIA Data Visualisation - SNA

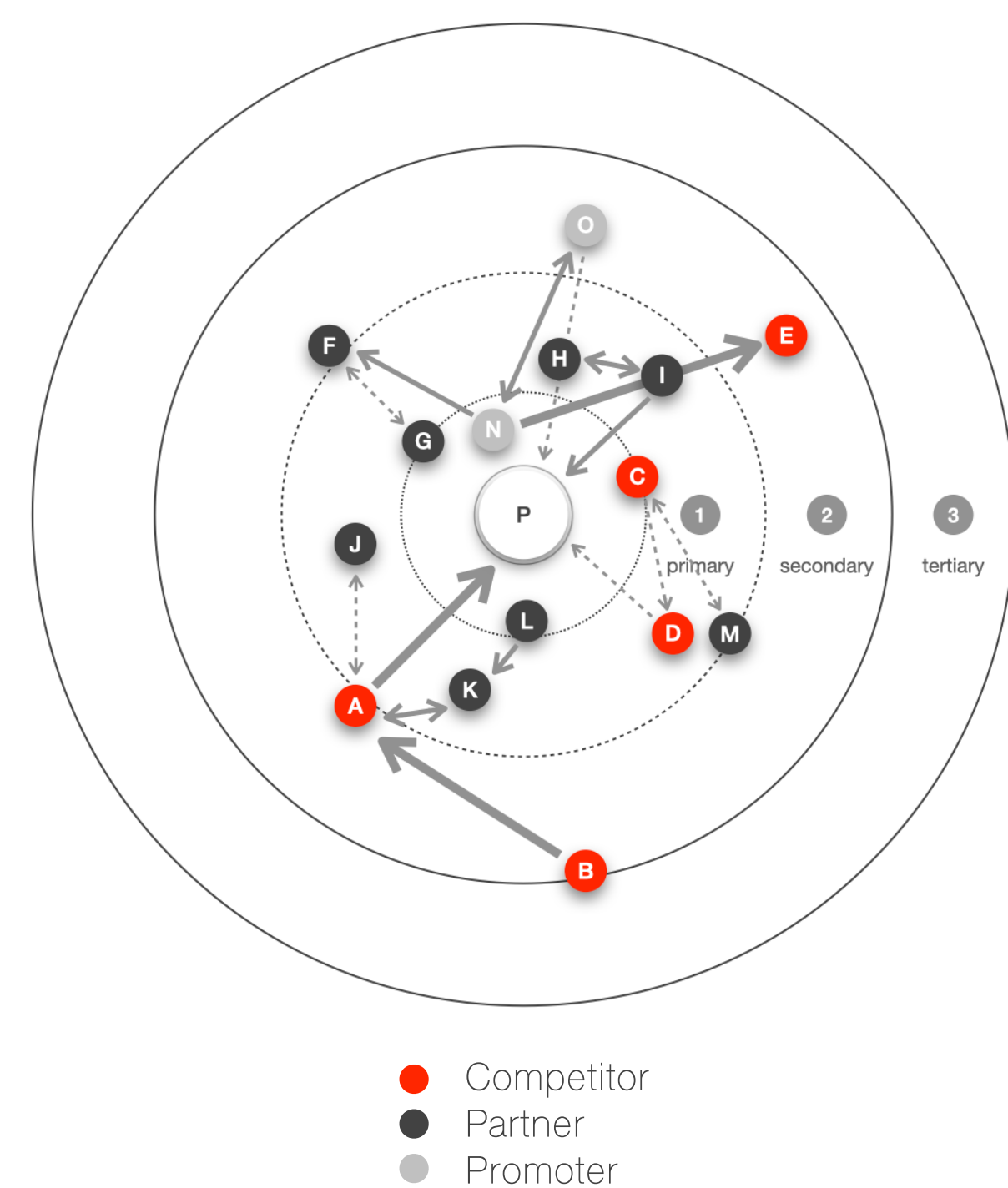


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A										1	2					3
B	3															
C				1								1				
D																1
E																
F							1									
G						1										
H									2							
I								2								2
J	1															
K	2															
L											2					
M			1													
N					3	2									2	
O														2		1
P																

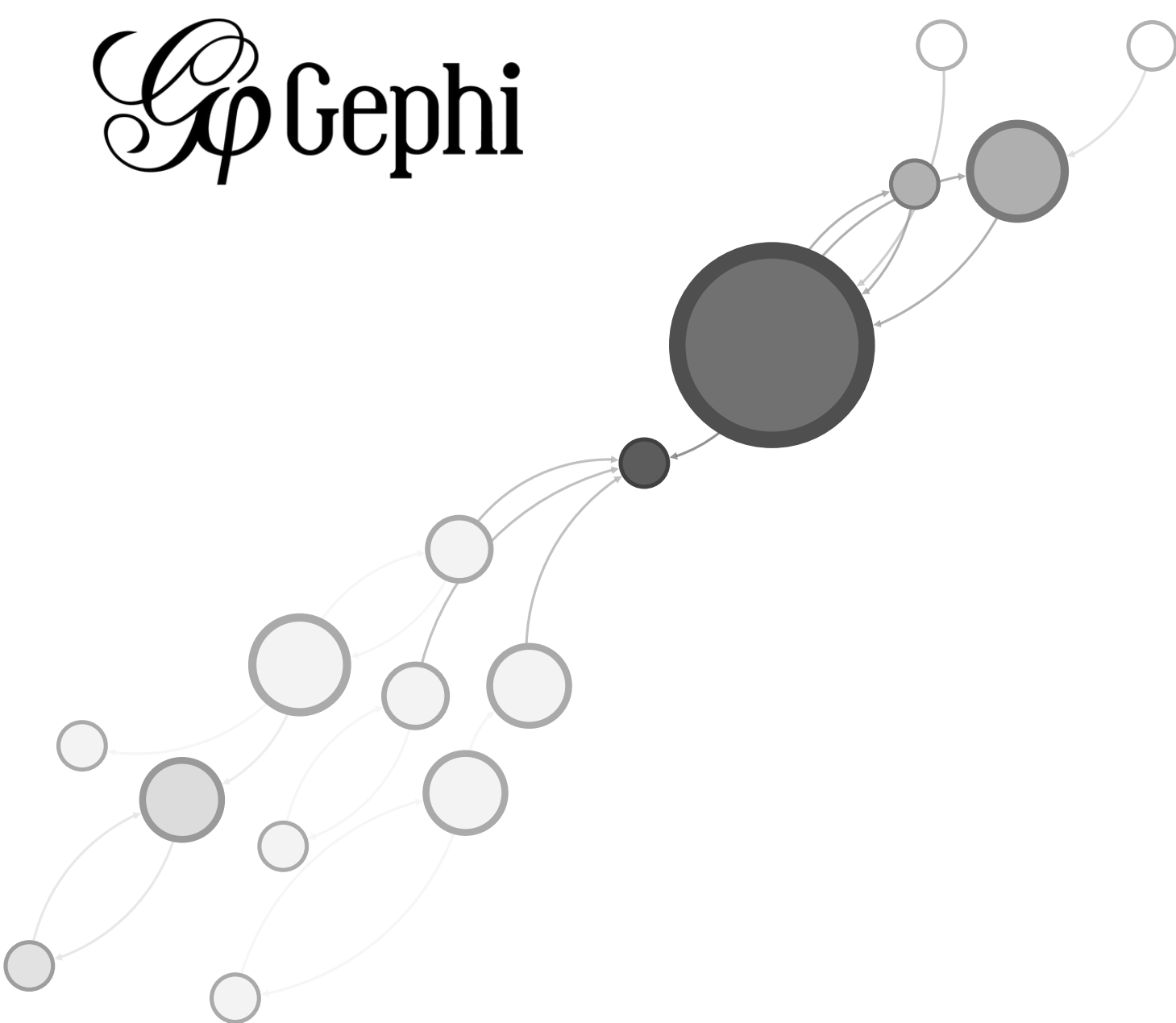


Source: Anuwat Churyen (2018), adapted from Theodore Jay Gordon (1994)

Cross Impact Analysis - CIA Data Visualisation - SNA

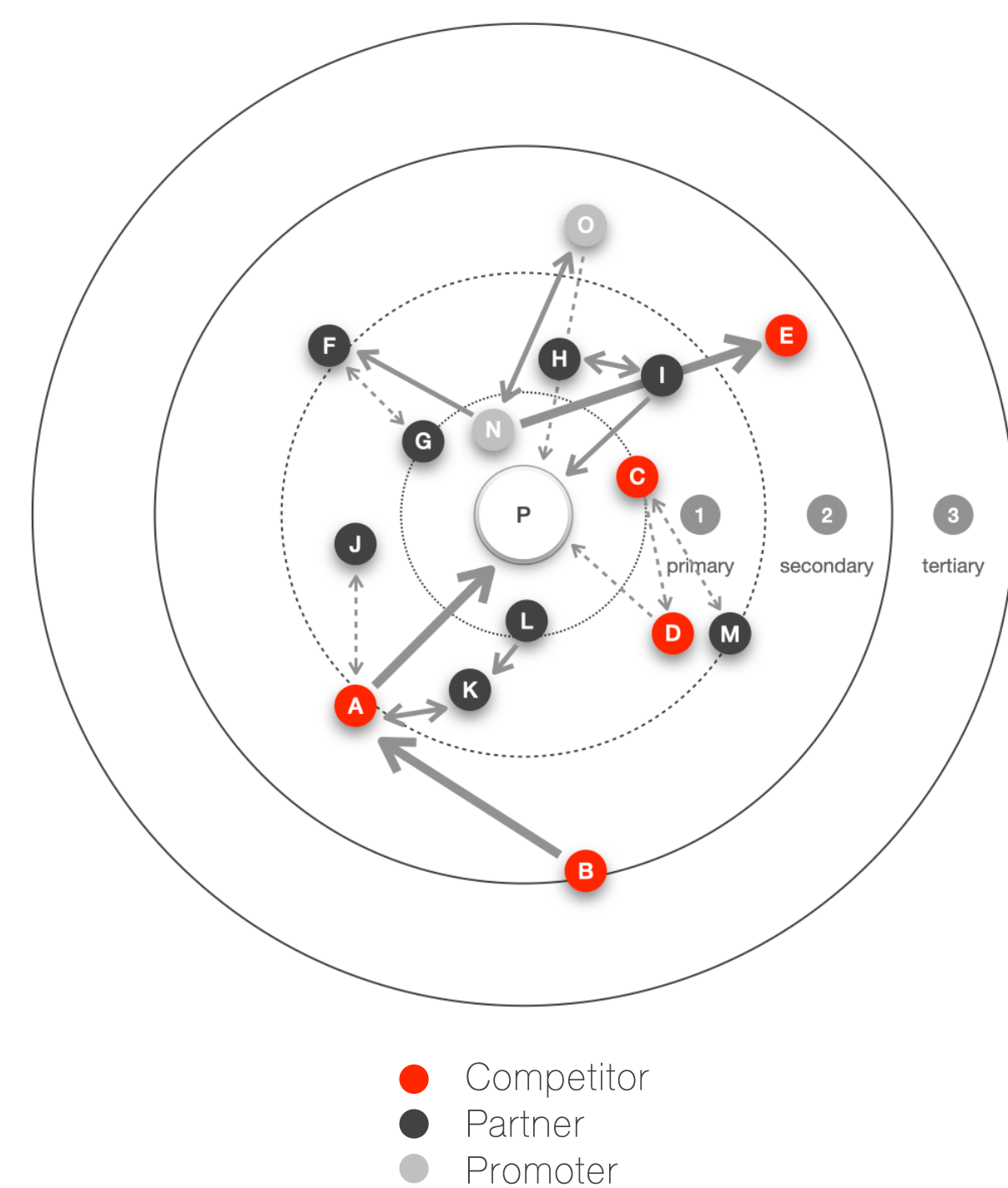


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A										1	2					3
B	3															
C				1								1				
D																1
E																
F							1									
G						1										
H									2							
I								2								2
J	1															
K	2															
L											2					
M			1													
N					3	2									2	
O														2		1
P																

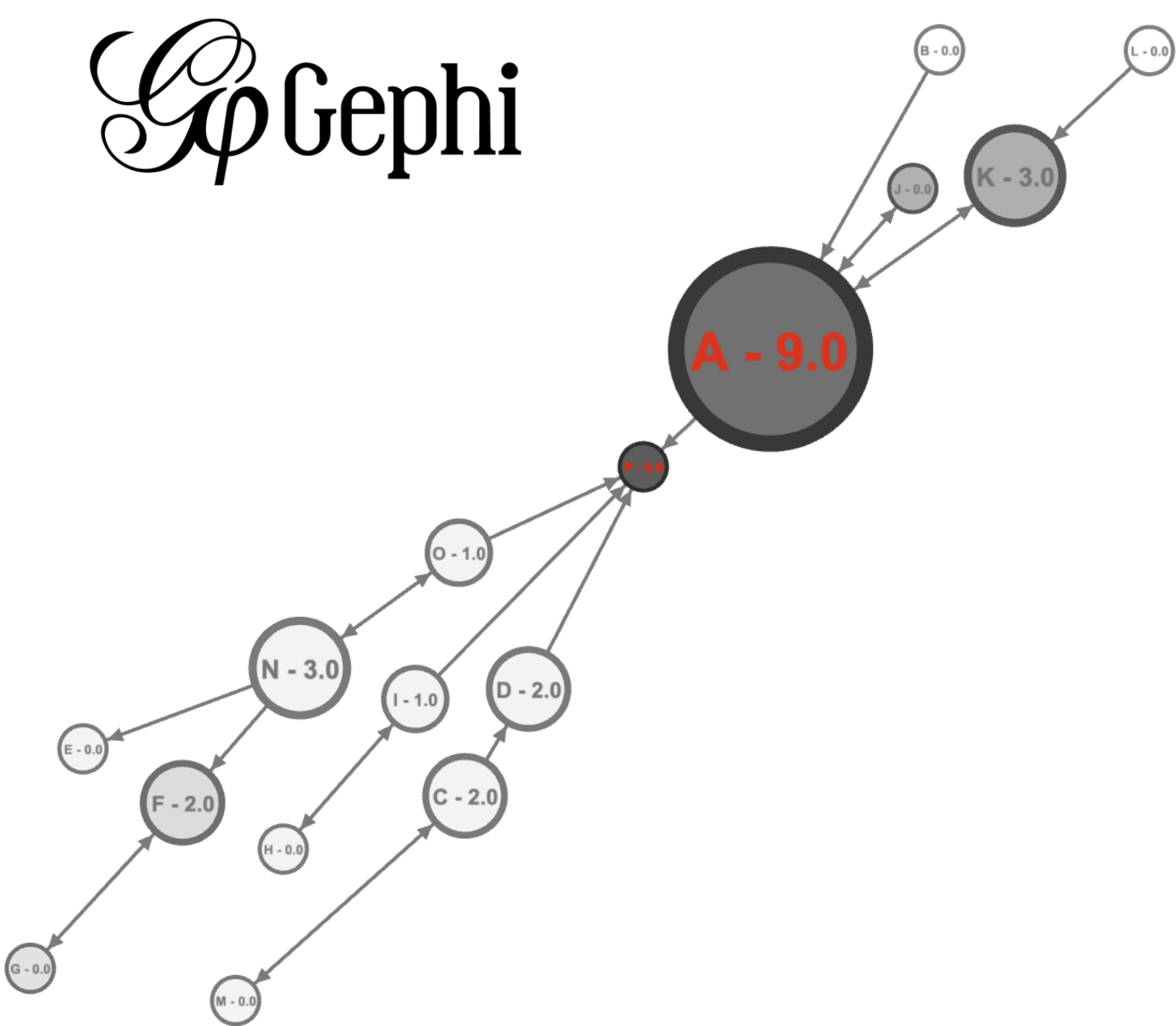


Source: Anuwat Churyen (2018), adapted from Theodore Jay Gordon (1994)

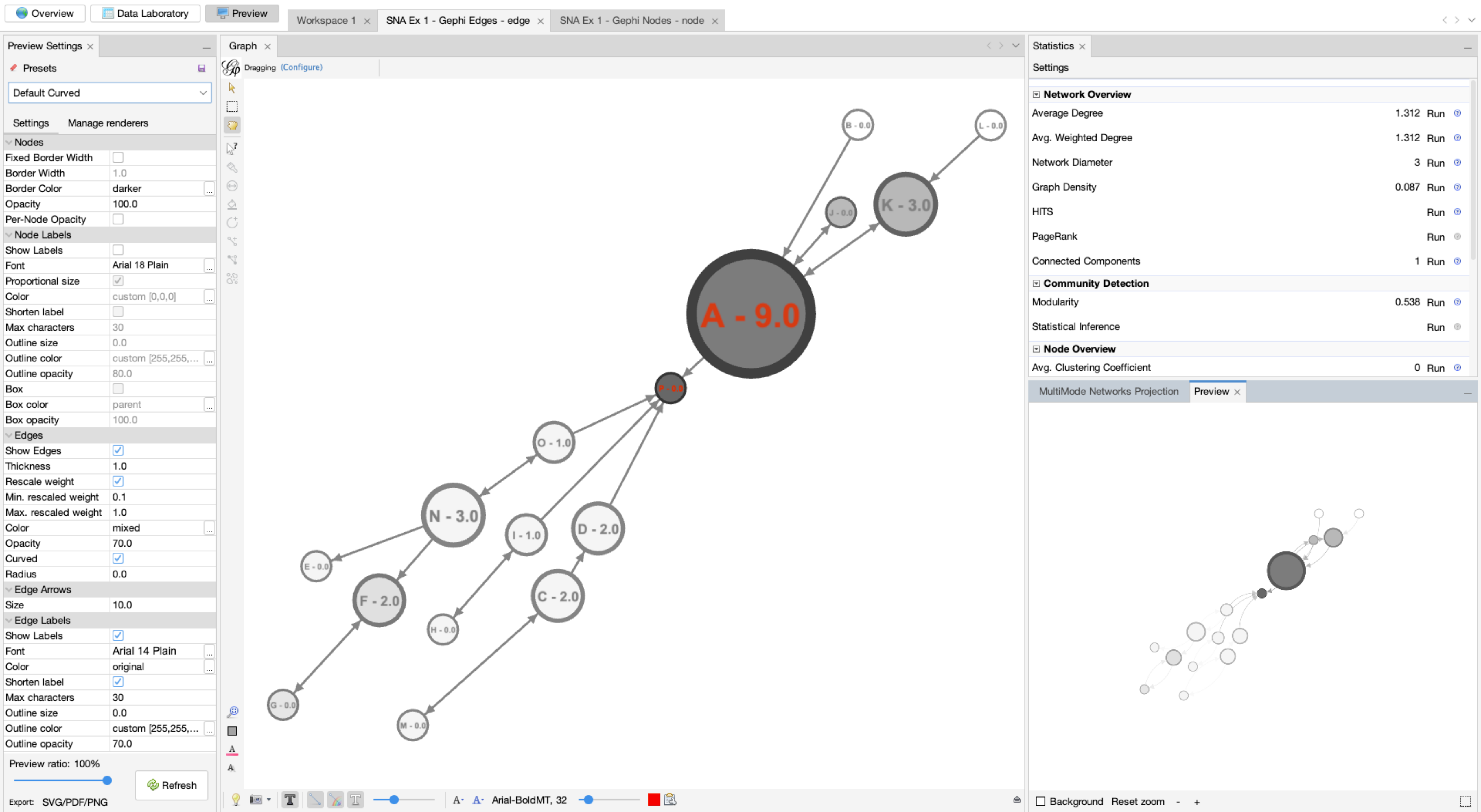
Cross Impact Analysis - CIA Data Visualisation - SNA



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A										1	2					3
B	3															
C				1								1				
D																1
E																
F							1									
G						1										
H									2							
I								2								2
J	1															
K	2															
L											2					
M			1													
N					3	2									2	
O														2		1
P																



Source: Anuwat Churyen (2018), adapted from Theodore Jay Gordon (1994)



The Business Model Canvas

Designed for:

Designed by:

Date:

Version:

Key Partners  PIM Power Interest Matrix ▽ ▽ ▽ CIA Cross Impact Analysis <td> Key Activities  CSI Customer Satisfaction Index ↓ IPA Importance Performance Analysis ↑ ESI Employee Satisfaction Index Key  </td> <td> Value Propositions  </td> <td> Customer Relationships  </td> <td> Customer Segments  </td>	Key Activities  CSI Customer Satisfaction Index ↓ IPA Importance Performance Analysis ↑ ESI Employee Satisfaction Index Key 	Value Propositions 	Customer Relationships 	Customer Segments 
Cost Structure 	Revenue Streams 			



This work is licensed under the Creative Commons Attribution-Share Alike 3.0 Unported License. To view a copy of this license, visit: <http://creativecommons.org/licenses/by-sa/3.0/> or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.

DESIGNED BY: Strategyzer AG
The makers of Business Model Generation and Strategyzer

 **Strategyzer**
strategyzer.com

Cross Impact Analysis - CIA Data Visualisation - SNA

1. Prioritisation 2. Association  3. Data Preparation  4. Data Visualisation

A (max)
B
C
D
E

F
G
H
I
J (min)

A -> B
B -> C
C -> D
D -> E
E -> n;

A -> B (1)
A -> C (3)
A -> D (0)
A -> E (1)

If A then B
Scenario

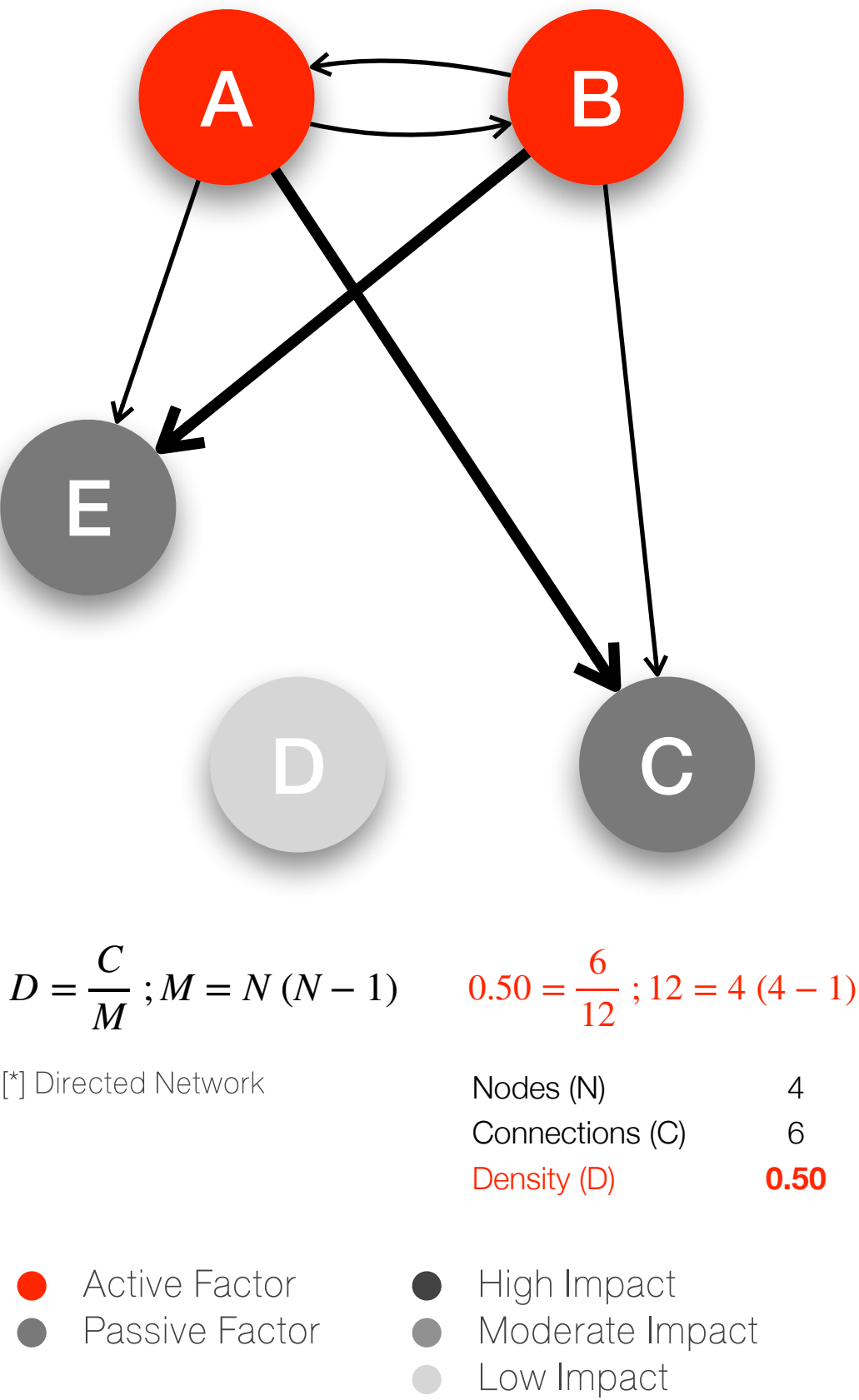
symmetrical

	A	B	C	D	E
A		1	3	0	1
B	1		1	0	3
C	1	2		2	0
D	2	3	0		0
E	1	0	3	1	

asymmetrical

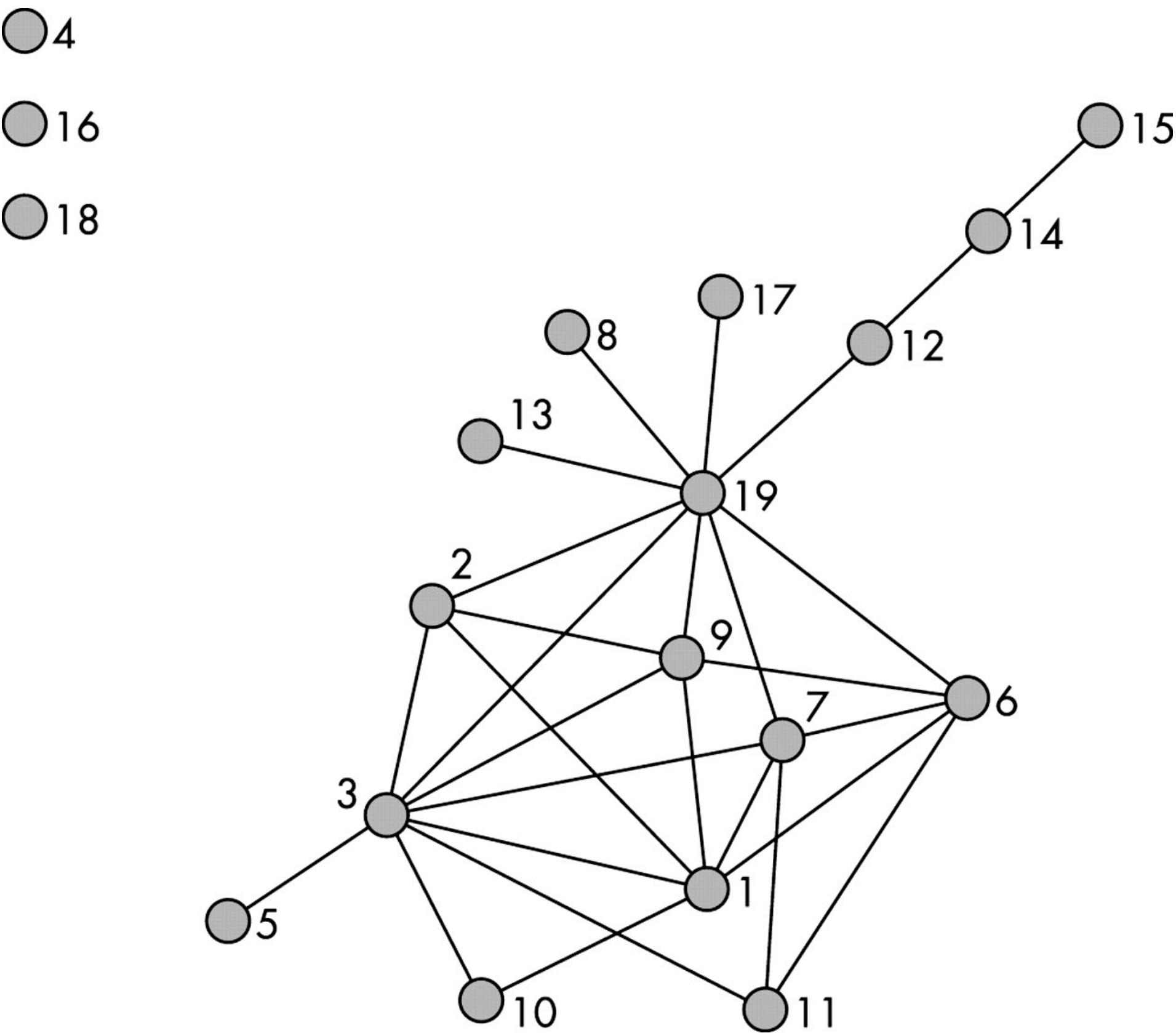
	F	G	H	I	J
A		2	3	0	1
B	1		1	0	3
C	1	2		2	0
D	2	3	0		0
E	1	0	3	1	

Source Who	Target Suing Who	Value Impact Level
A	B	1
A	C	3
A	D	0
A	E	1
B	A	1
B	C	1
B	D	0
B	E	3



Source: Anuwat Churyen (2018), adapted from Theodore Jay Gordon (1994)

Cross Impact Analysis - CIA Data Visualisation - SNA



COHESION

UNIT OF ANALYSIS

proximity

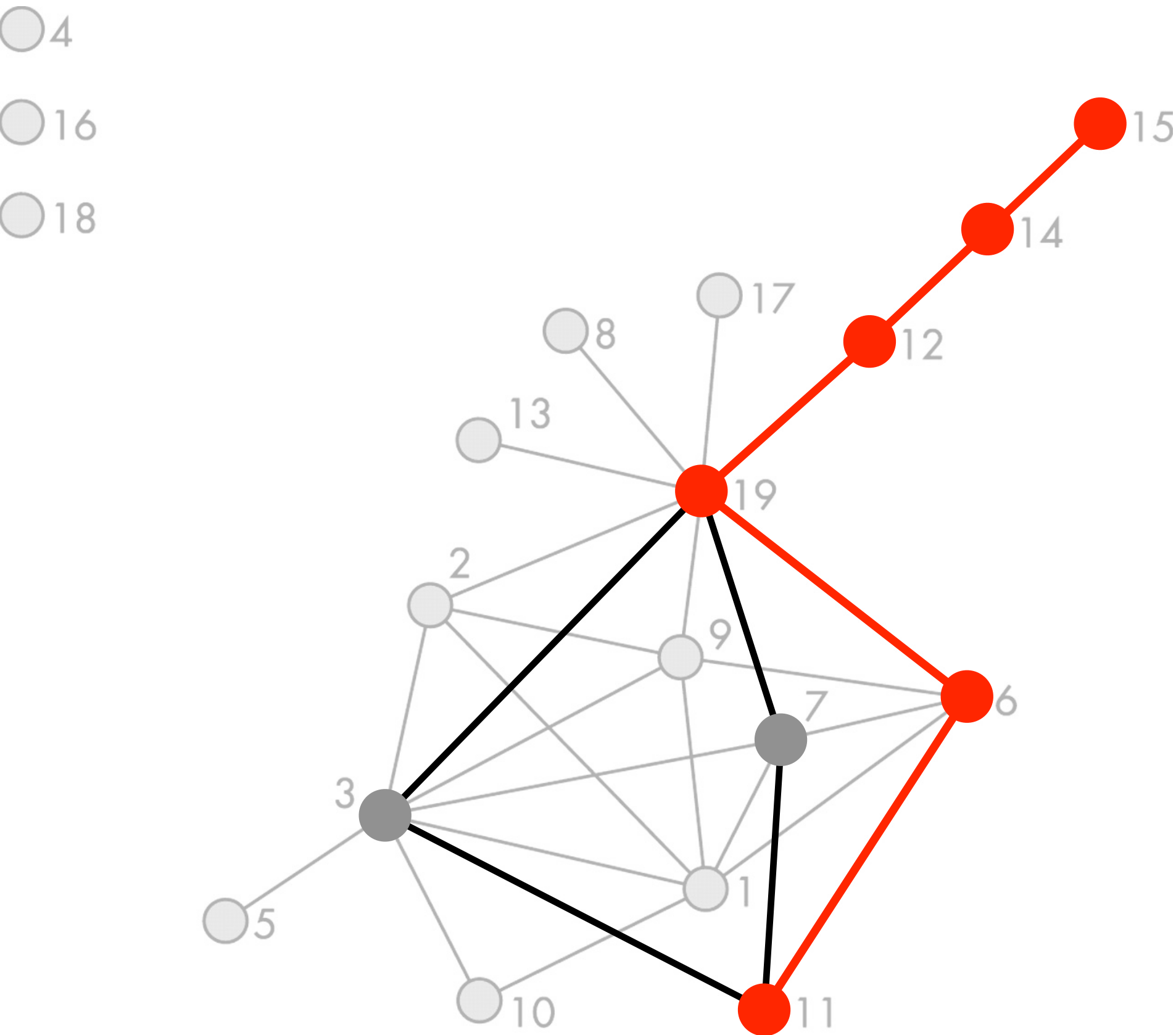
reachability

density

modularity

Source: Penelope Hawe, Cynthia Webster & Alan Shiell (2004), Journal of Epidemiology Community Health

Cross Impact Analysis - CIA Data Visualisation - SNA



COHESION

UNIT OF ANALYSIS

proximity

reachability

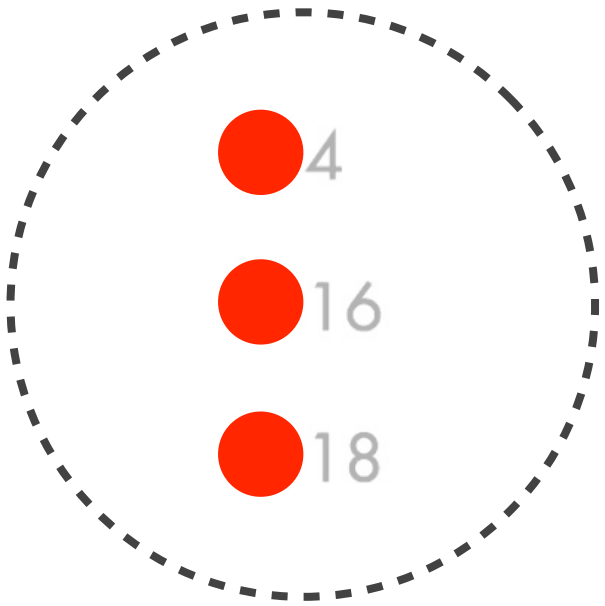
density

modularity

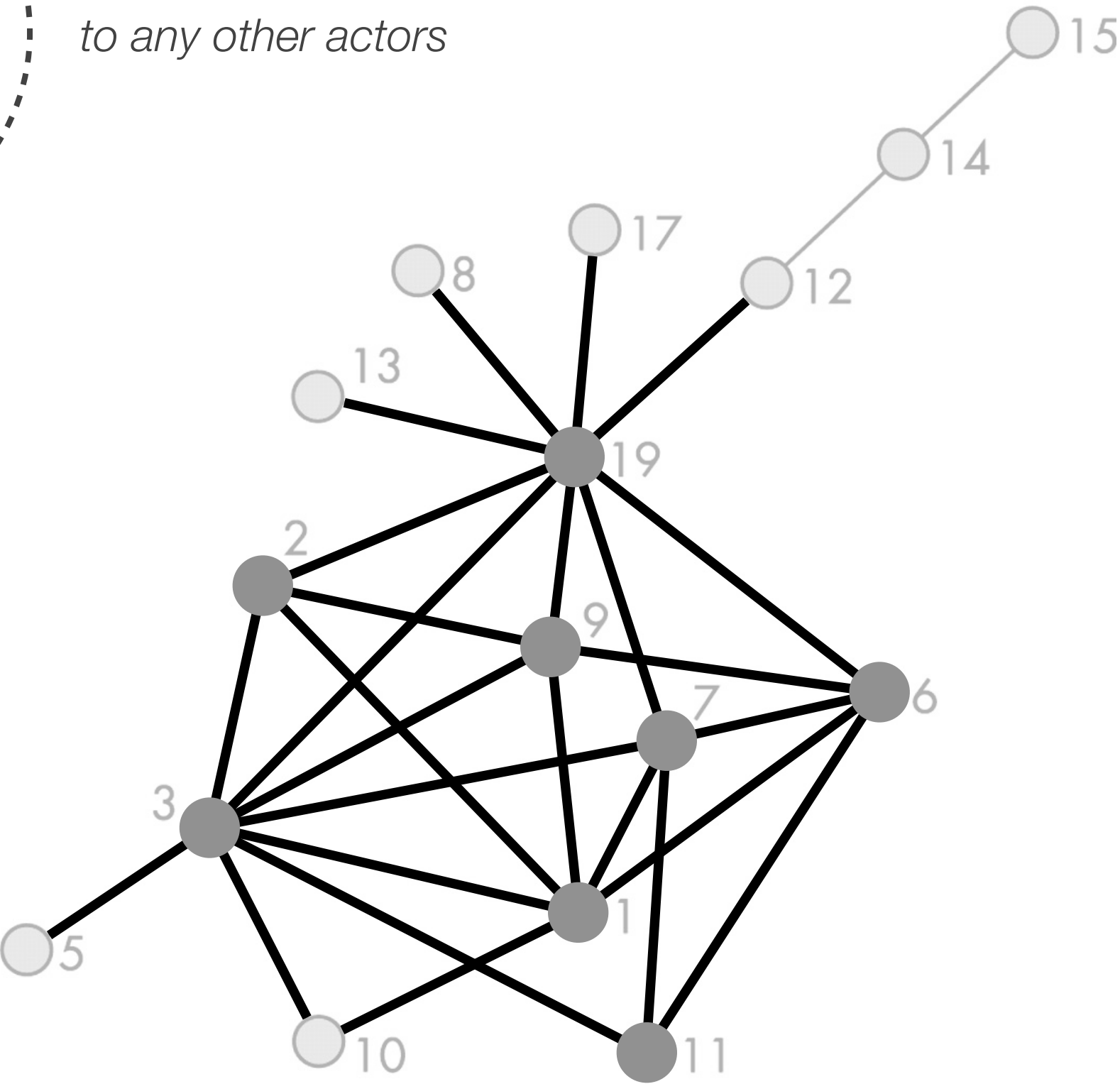
calculate the **shortest route**; actor 15 is a distance of 5 from actor 11. This is the notion of “*degrees of separation*” made familiar to many by a popular play.

Source: Penelope Hawe, Cynthia Webster & Alan Shiell (2004), Journal of Epidemiology Community Health

Cross Impact Analysis - CIA Data Visualisation - SNA



isolates
actors who are not connected to any other actors



COHESION

UNIT OF ANALYSIS

proximity

reachability

density

modularity

measures whether **actors within a network are related**, either directly or indirectly, to all other actors. *Actors who are not connected to any other actors are called isolates.* With the exception of the three isolates (actors 4, 16, and 18), all of the remaining actors.

Source: Penelope Hawe, Cynthia Webster & Alan Shiell (2004), Journal of Epidemiology Community Health



UNIT OF ANALYSIS

reachability

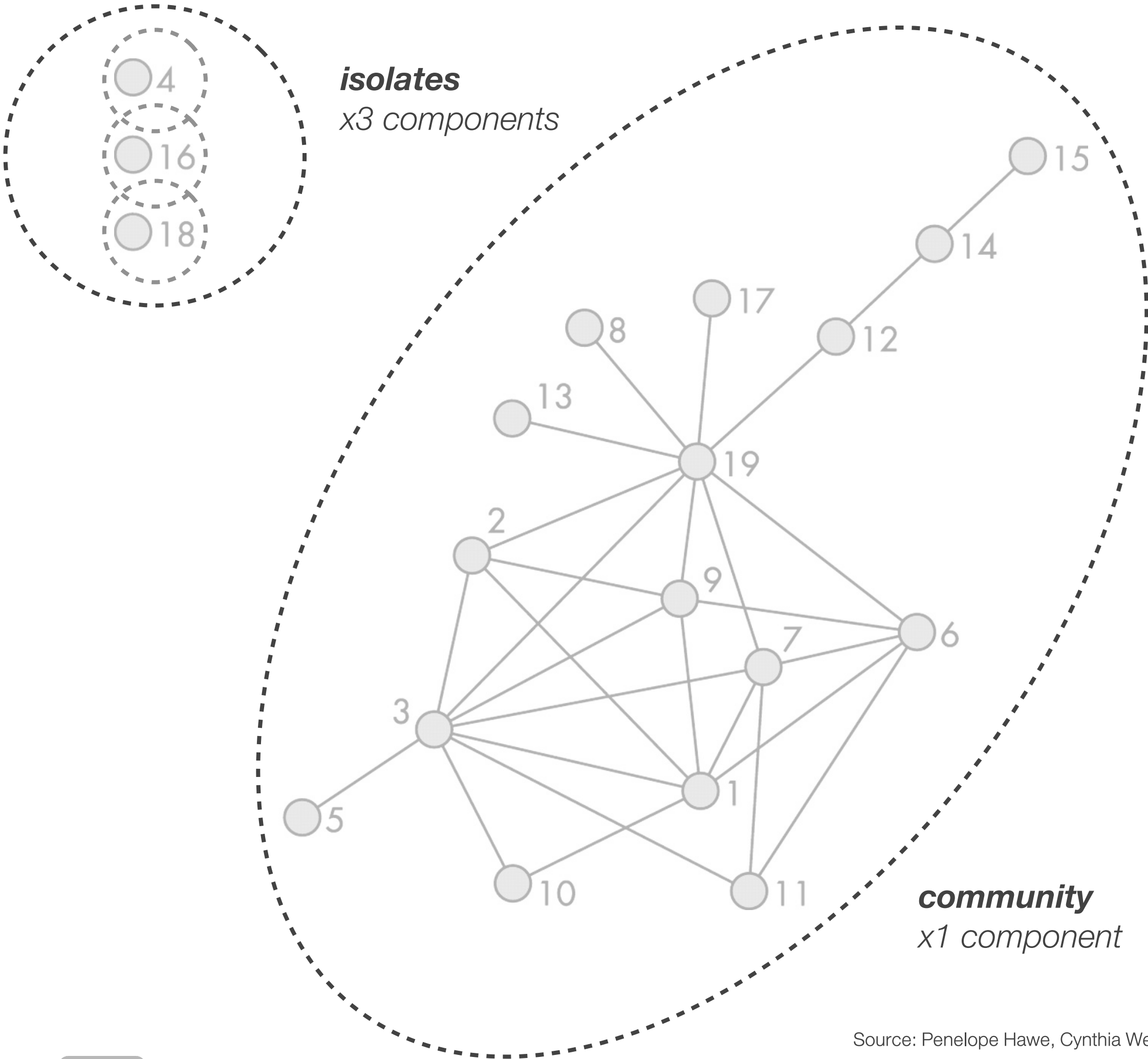
explore **density of a network** is the total number of relational ties divided by the total possible number of relational ties. *There are 56 ties out of a possible 342 for the interorganisational network, giving a density of **0.164**.*

modularity

 @mjuigtc

#iGTCCoLAB

Cross Impact Analysis - CIA Data Visualisation - SNA



COHESION

UNIT OF ANALYSIS

proximity

reachability

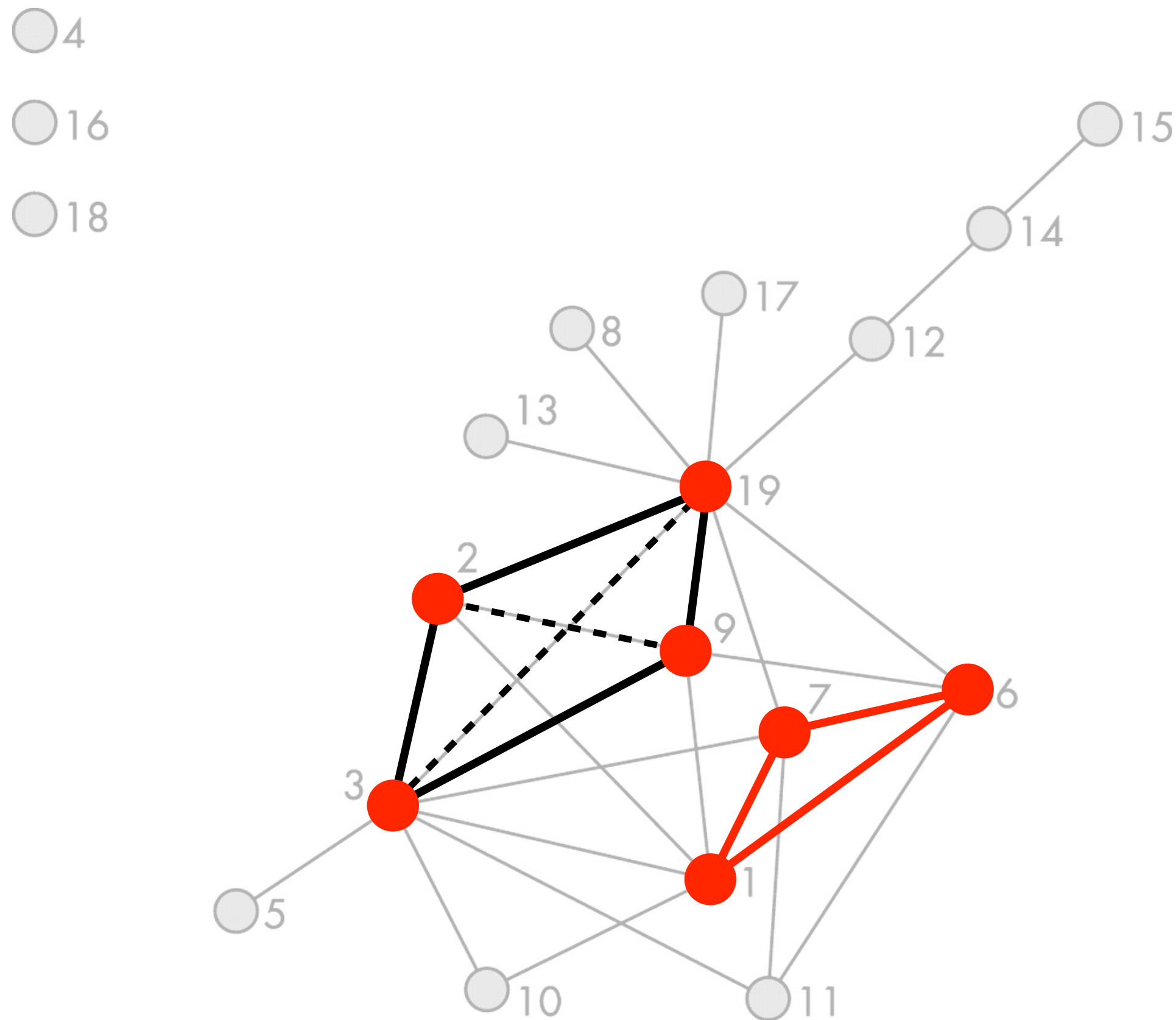
density

modularity

A **component** is a portion of the network in which all actors are connected, directly or indirectly, by at least one tie. By definition, each isolate is a separate component. *There are four components*, one large component and three isolates.

Source: Penelope Hawe, Cynthia Webster & Alan Shiell (2004), Journal of Epidemiology Community Health

Cross Impact Analysis - CIA Data Visualisation - SNA



COHESION

UNIT OF ANALYSIS

proximity

reachability

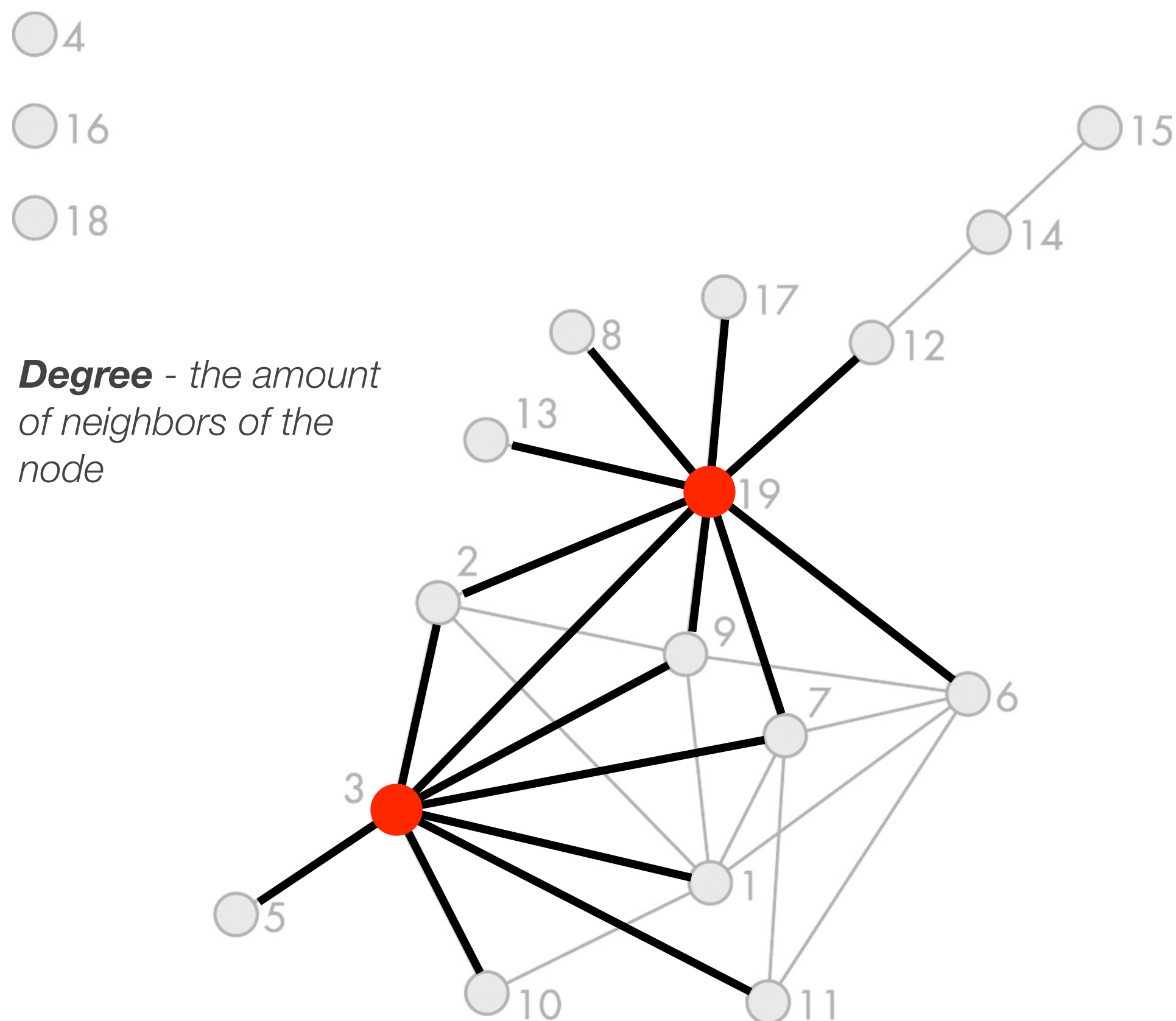
density

modularity

A **clique** is a subgroup of actors who are all directly connected to one another and no additional network member exists who is also connected to all members of the subgroup. A total of 11 cliques are found: **{1,6,7}**; {6,7,11}; {6,7,19}; {3,7,19}; {3,7,11}; {1,3,7}; {1,3,10}; {1,2,3, 9}; **{2,3,9,19}**; {6,9,19}; {1,6,9}.

Source: Penelope Hawe, Cynthia Webster & Alan Shiell (2004), Journal of Epidemiology Community Health

Cross Impact Analysis - CIA Data Visualisation - SNA



POSITON

UNIT OF ANALYSIS

popularity

productivity

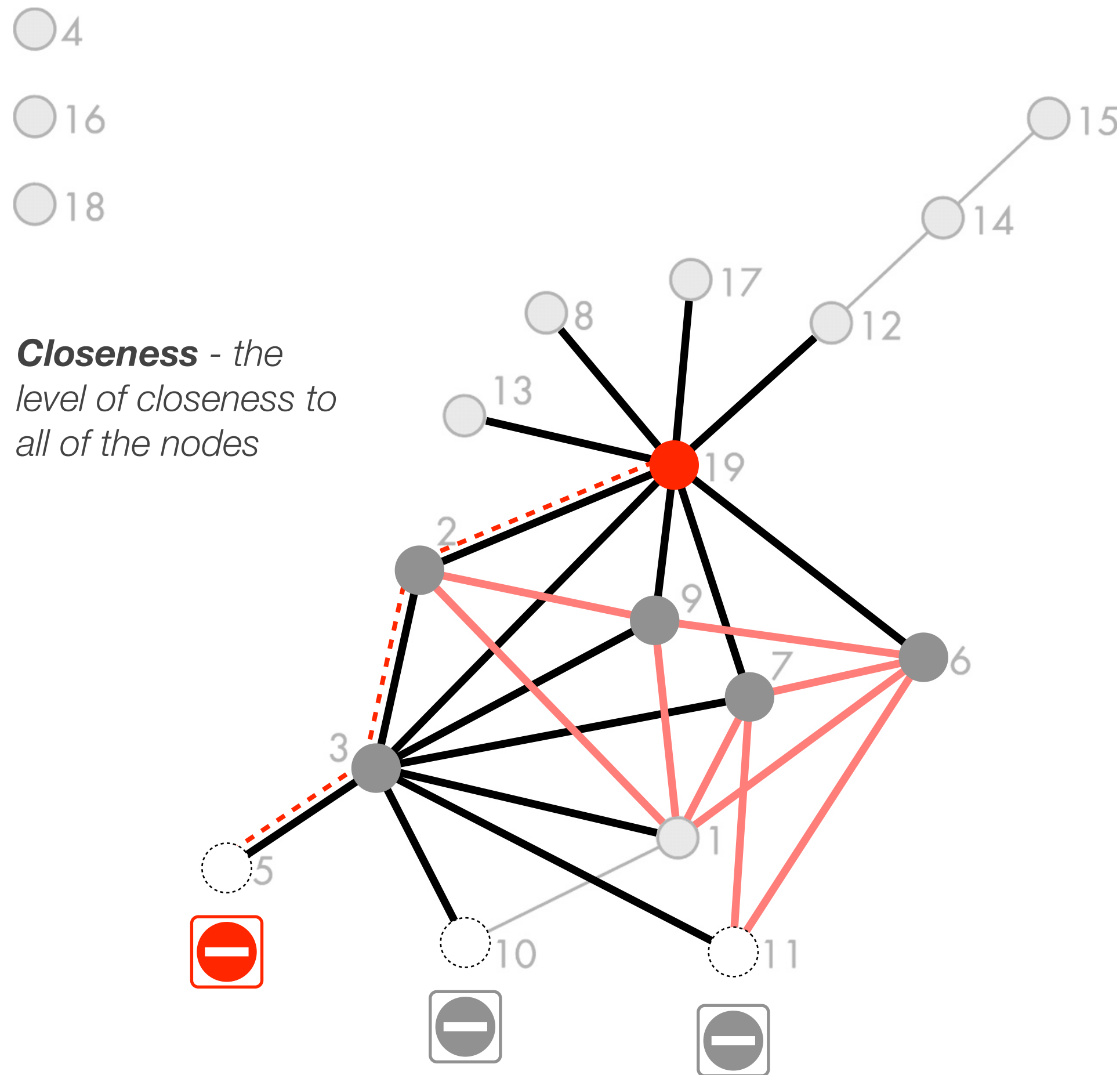
connectivity

principality

Degree Centrality is the sum of all other actors who are directly connected to ego. It signifies activity or popularity. Lots of ties coming in and lots of ties coming out of an actor would increase degree centrality. Actor 19 has the highest degree centrality with nine direct ties and actor 3 is the next most central with eight direct ties.

Source: Penelope Hawe, Cynthia Webster & Alan Shiell (2004), Journal of Epidemiology Community Health

Cross Impact Analysis - CIA Data Visualisation - SNA



POSITON

popularity

productivity

connectivity

principality

UNIT OF ANALYSIS

Closeness Centrality is based on the notion of distance. If an actor is close to all others in the network, a distance of no more than one, then she or he is not dependent on any other to reach everyone in the network. Closeness measures independence or efficiency. Actor 19 is the most independent actor with a total of only 22 ties connecting it to all other organisations in the component, while actor 3 requires 25 ties.

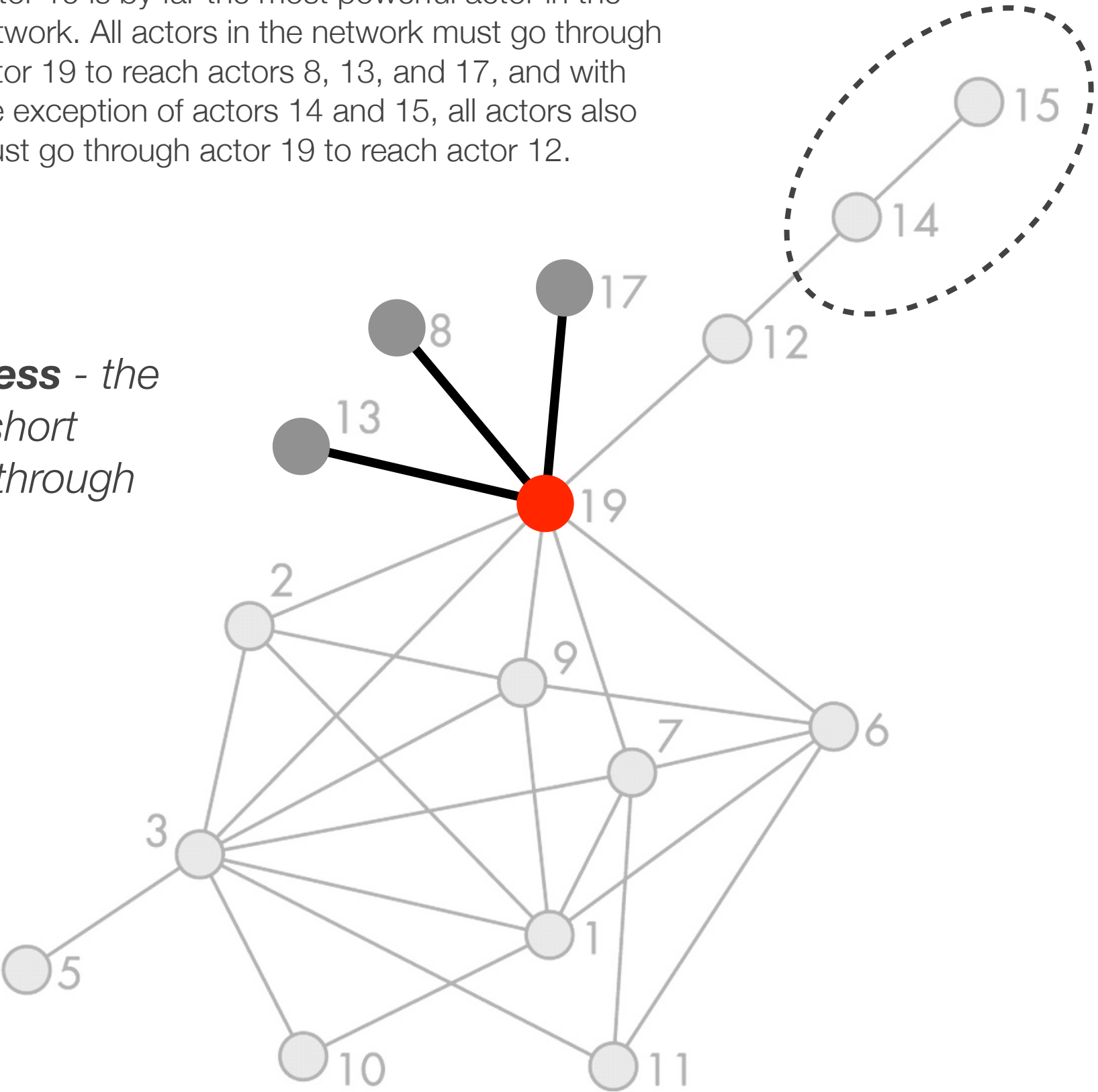
Source: Penelope Hawe, Cynthia Webster & Alan Shiell (2004), Journal of Epidemiology Community Health

Cross Impact Analysis - CIA Data Visualisation - SNA

4
16
18

Actor 19 is by far the most powerful actor in the network. All actors in the network must go through actor 19 to reach actors 8, 13, and 17, and with the exception of actors 14 and 15, all actors also must go through actor 19 to reach actor 12.

Betweenness - the amount of short path going through the node



POSITON

popularity

productivity

connectivity

principality

UNIT OF ANALYSIS

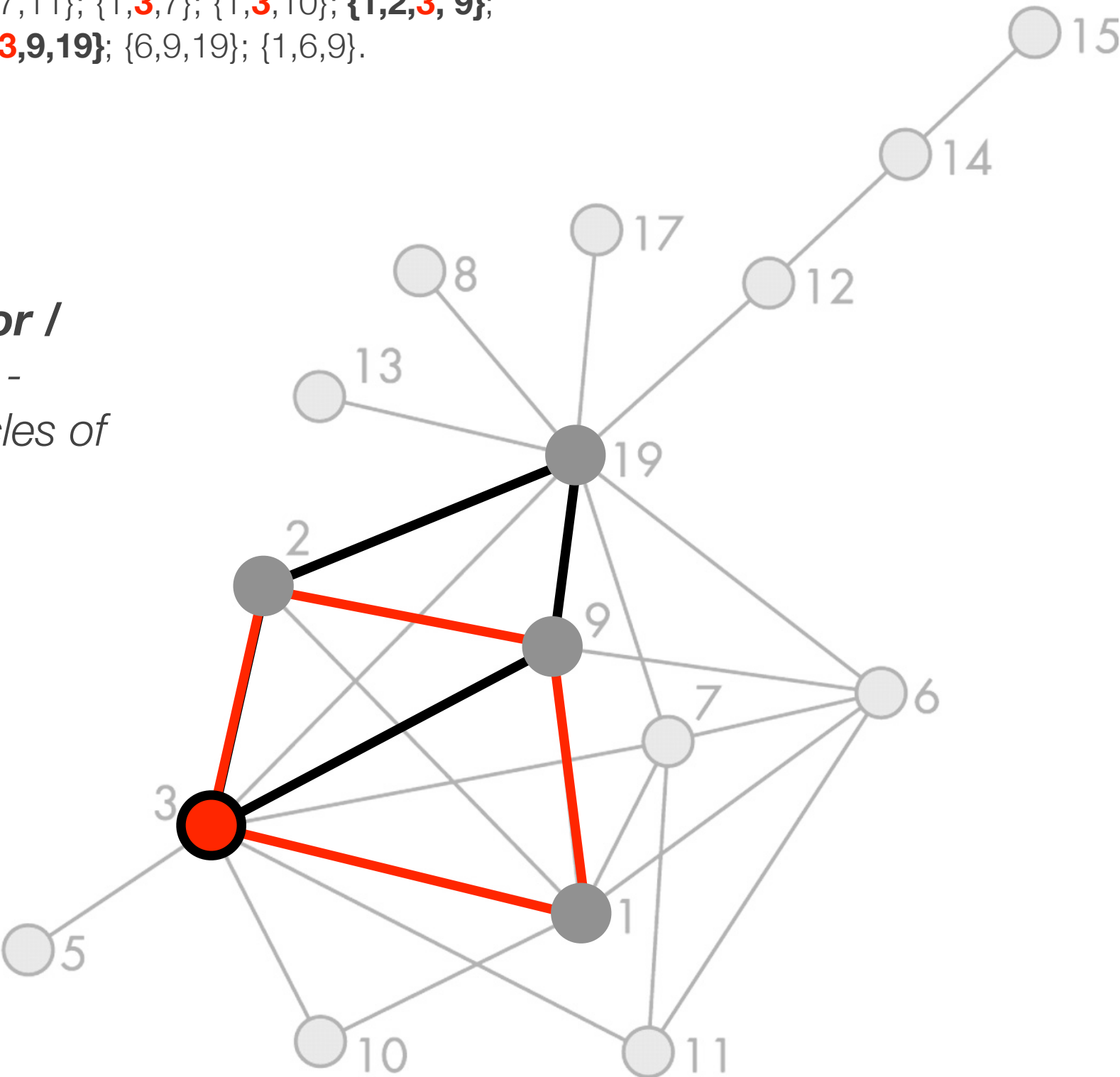
Betweenness Centrality is the number of times an actor connects pairs of other actors, who otherwise would not be able to reach one another. It is a measure of the potential for control as an actor who is high in “betweenness” is able to act as a gatekeeper controlling the flow of resources between the alters that he or she connects.

Source: Penelope Hawe, Cynthia Webster & Alan Shiell (2004), Journal of Epidemiology Community Health

Cross Impact Analysis - CIA Data Visualisation - SNA

A total of 11 cliques are found:
{1,6,7}; {6,7,11}; {6,7,19}; {3,7,19};
{3,7,11}; {1,3,7}; {1,3,10}; {1,2,3,9};
{2,3,9,19}; {6,9,19}; {1,6,9}.

Eigenvector / PageRank -
iterative circles of
neighbours



POSITON

UNIT OF ANALYSIS

popularity

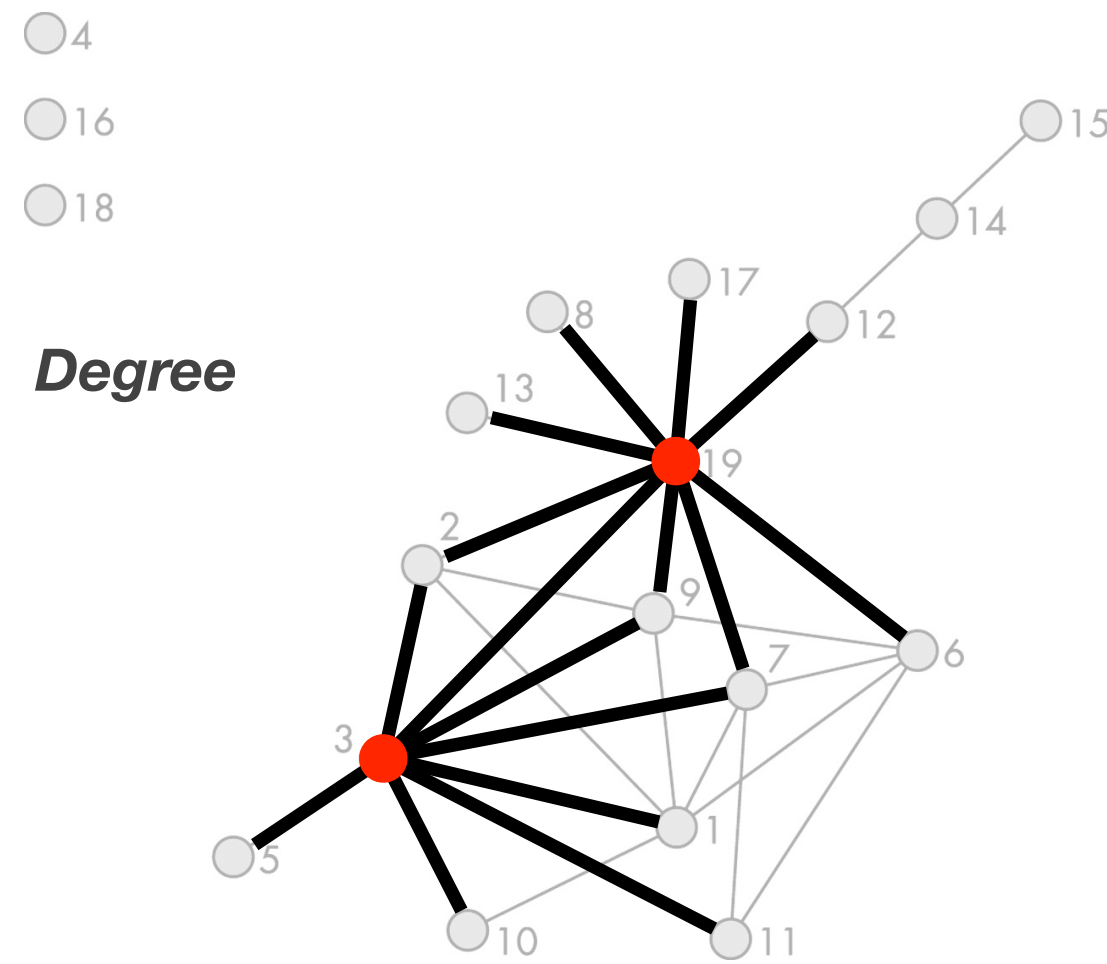
productivity

connectivity

principality

Eigenvector Centrality is an algorithm that measures the transitive influence of nodes. Relationships originating from high-scoring nodes contribute more to the score of a node than connections from low-scoring nodes. A high eigenvector score means that a node is connected to many nodes who themselves have high scores. (Neo4j, 2023)

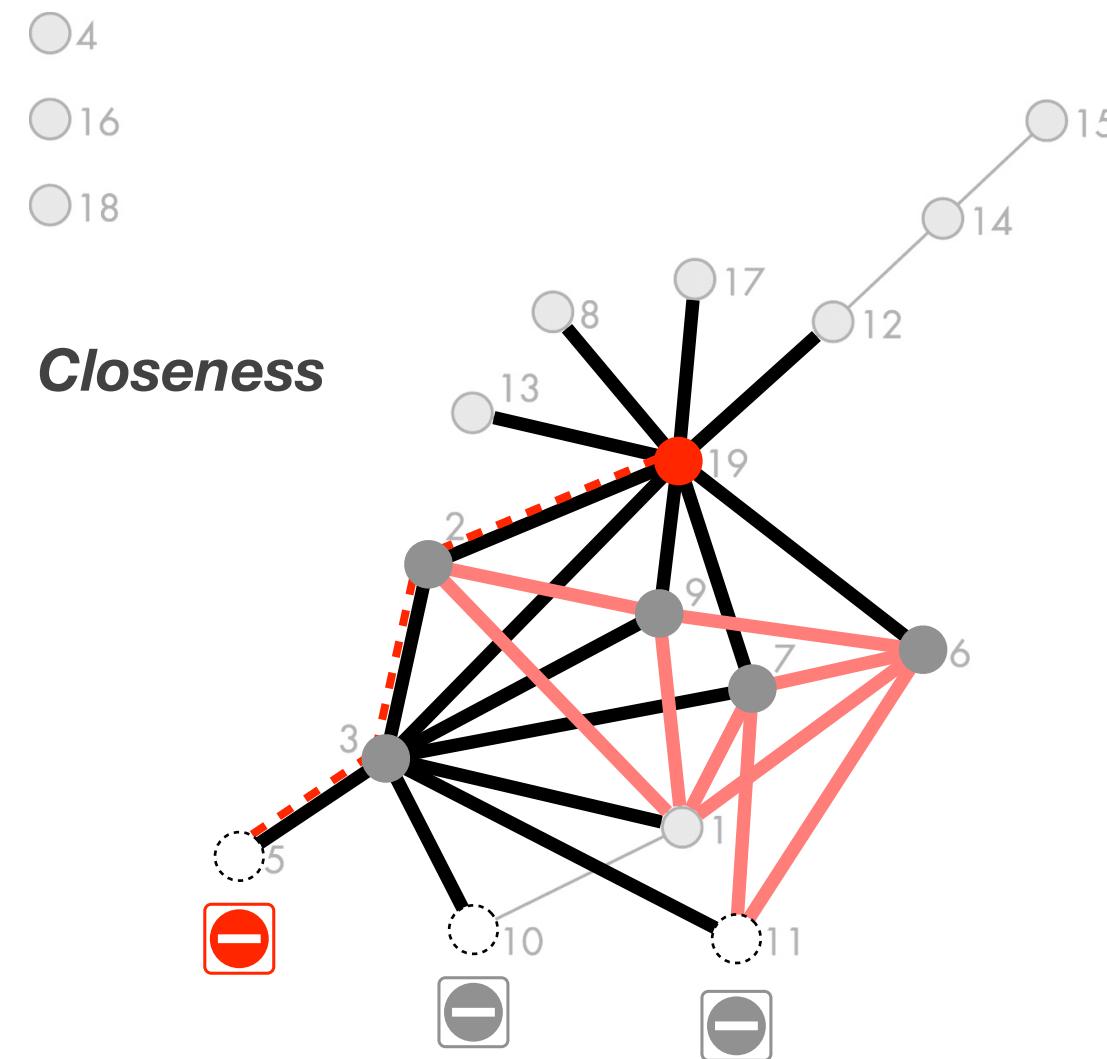
Source: Penelope Hawe, Cynthia Webster & Alan Shiell (2004), Journal of Epidemiology Community Health



Degree

popularity

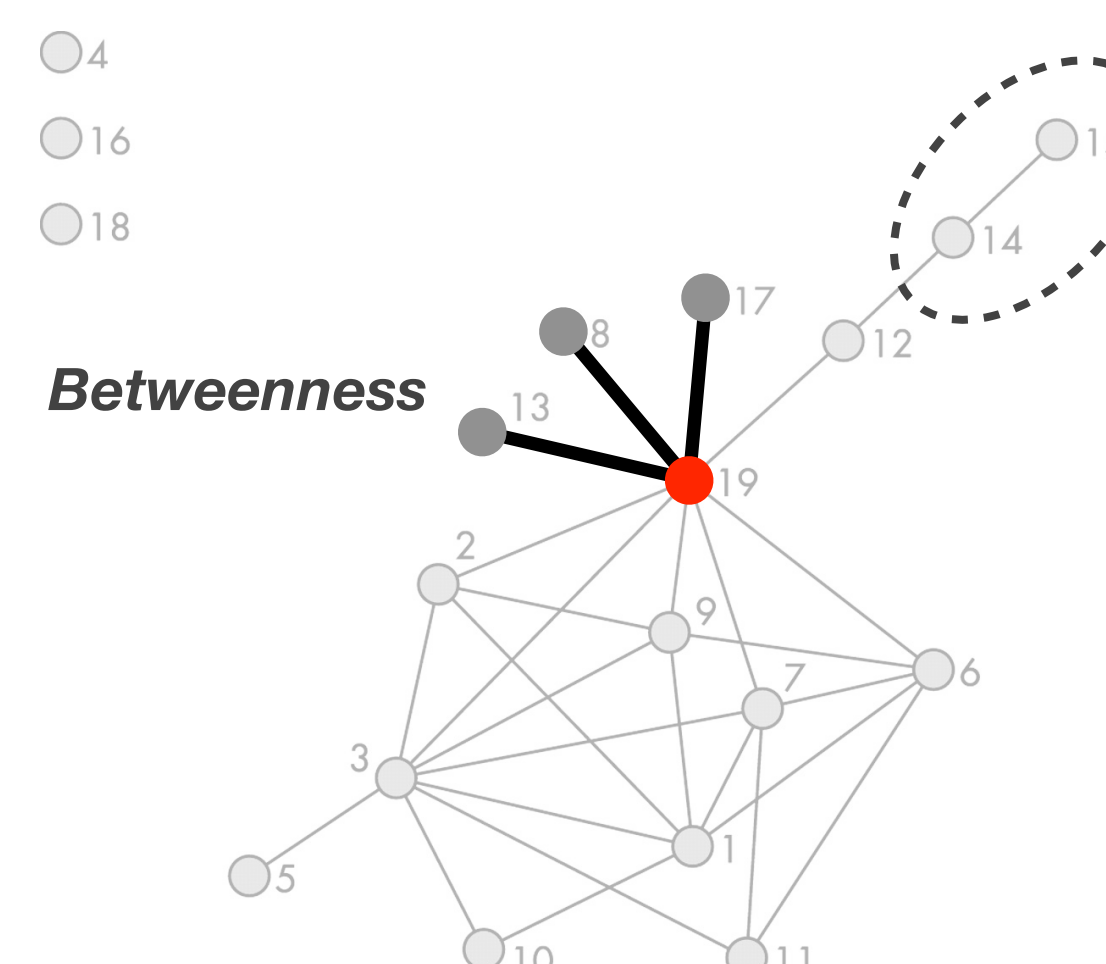
จุดเชื่อมต่อ “ท่อส่ง” ความสัมพันธ์
เมื่อมองหา “โอกาส”
อยาก สร้างเครือข่าย ขยายความ
ร่วมมือ หรือ อยากได้เพื่อนร่วม
อุดมการณ์ ควรทำความรู้จัก
Degree Centrality บอกจุดเชื่อม
ต่อ หรือ ศูนย์กลางกระจายความ
สัมพันธ์ทั้งหมดของจุด (node)
ใดจุดหนึ่งเท่านั้น



Closeness

productivity

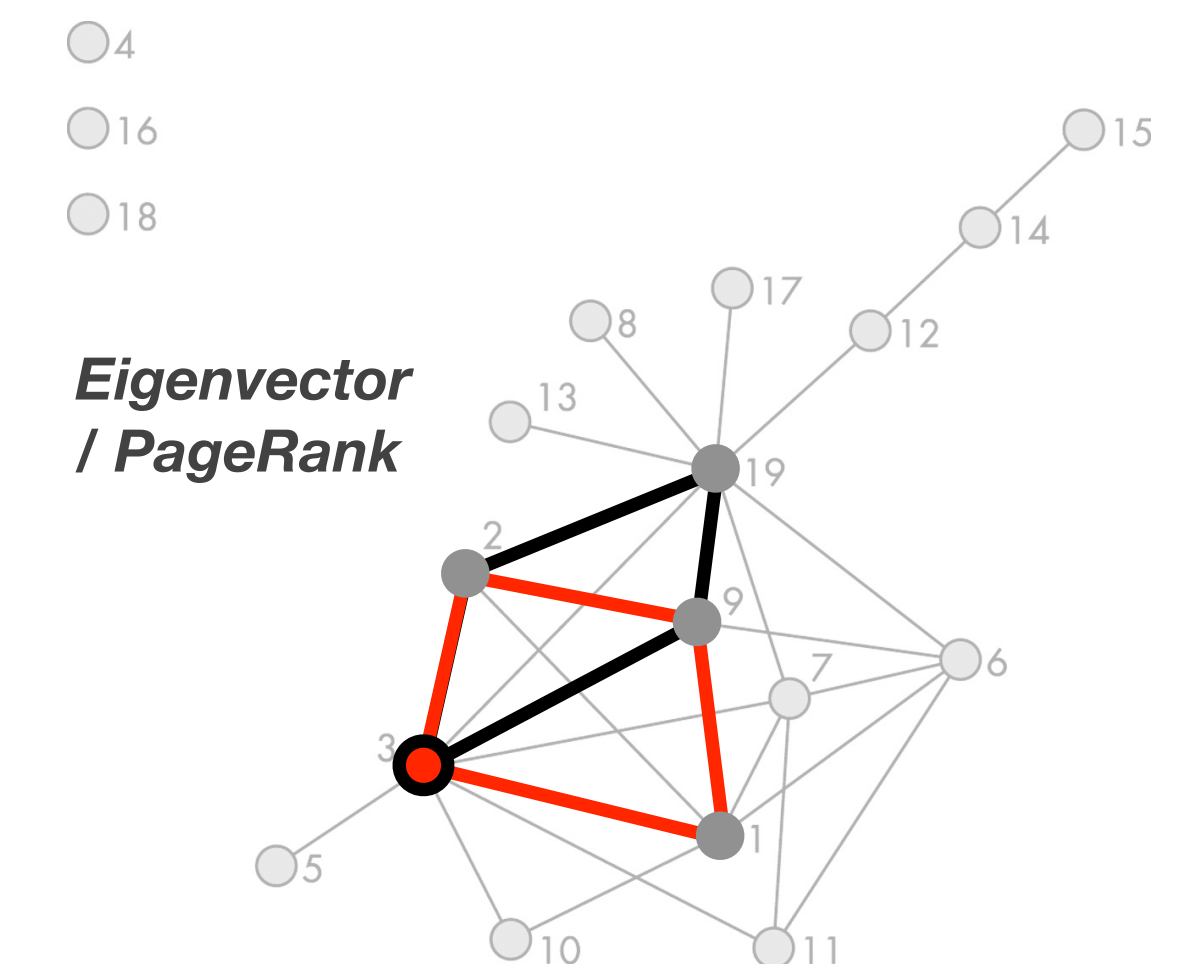
เจาะพื้นที่กลางใจ
ใกล้ “ไฟแดง” เมื่อต้องการคลุก
“วงใน” อยากเริ่มสร้างความ
สัมพันธ์ได้ไว แต่ยังไม่รู้จะเริ่ม
ทางไหนดี ควรเริ่มต้นสร้าง
ความสัมพันธ์ที่ดี หรือสร้าง
ความผูกพันที่ “ง่าย”
ได้ประโยชน์สูงสุดก่อน
(เกี่ยวข้องกับ shortest path)



Betweenness

connectivity

ค้นหา “หาใจประจำซอย”
อยากเข้าถึงง่ายต้องจ่าย
“ค่าบัตรผ่านประตู”
ค่า Betweenness Centrality
เทียบได้กับ “bridge” เป็น
ศูนย์กลาง “สะพาน / ชุมทาง”
การเชื่อมต่อ ทำหน้าที่เป็น
นายหน้า (Broker) หรือ
ตัวกลาง (Gatekeeper)



**Eigenvector
/ PageRank**

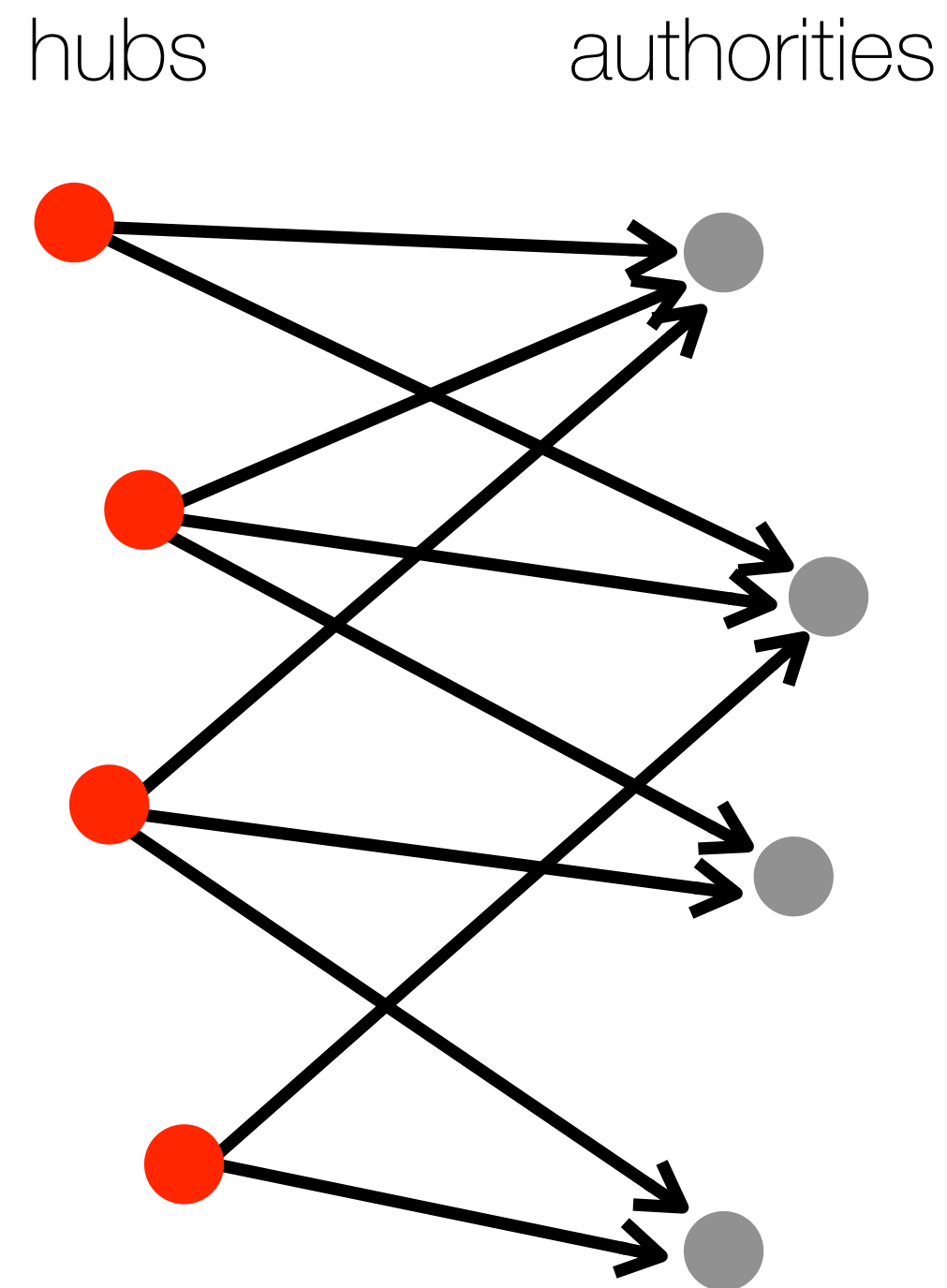
principality

สืบเสาะ “นายใหญ่ประจำเขต”
เมื่ออยากเข้าใกล้กลุ่มอิทธิพล
“ผู้คุมเกม”
ค่า Eigenvector Centrality
วัดจากเวกเตอร์ลักษณะเฉพาะ เพื่อค้นหา
ศูนย์กลางการเชื่อมต่อไปยังเครือข่ายที่มี
ความสัมพันธ์สูง หรือ อิทธิพลกว้างขวาง
“ลูกสมุนเสริมบารมี
/ ล้วงลือผู้กักตุนรายรอบกาย”

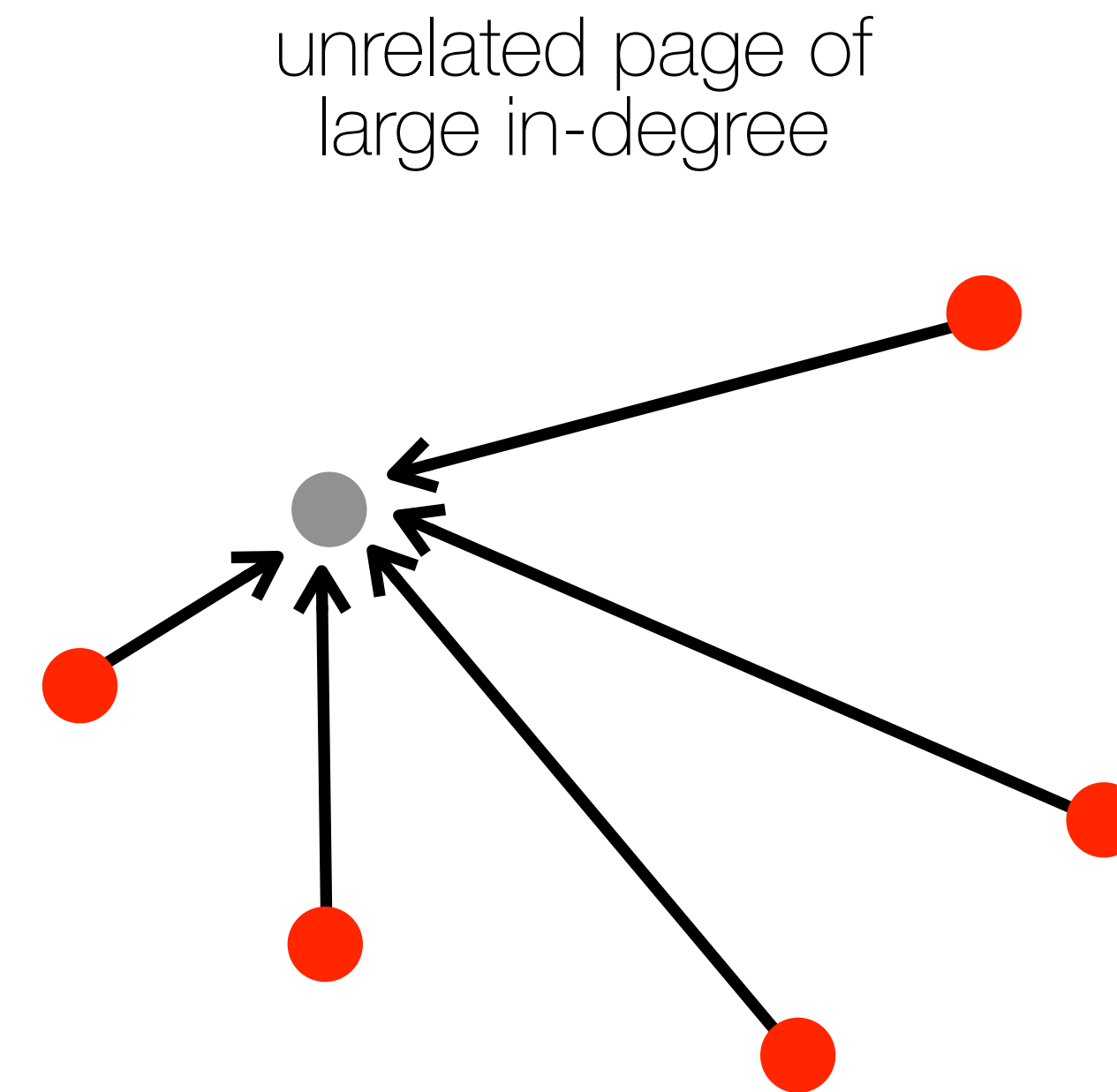
Source: Anuwat Churyen (2020) adapted from Penelope Hawe, Cynthia Webster & Alan Shiell (2004), Journal of Epidemiology Community Health

Hubs & Authorities

*a good hub is a page that points to many good authorities;
a good authority is a page that is pointed to by many good hubs.*



Hubs and Authorities



High In-Degree

Source: A Densely Linked Set of Hubs and Authorities (Kleinberg, 1999)

Preview Settings

Presets

Default Curved

Settings

Manage renderers

Nodes

Fixed Border Width

☐

Border Width

1.0

Border Color

darker

...

Opacity

100.0

Per-Node Opacity

☐

Node Labels

Show Labels

☐

Font

Arial 18 Plain

...

Proportional size

☒

Color

custom [0,0,0]

...

Shorten label

☐

Max characters

30

Outline size

0.0

Outline color

custom [255,255,...]

...

Outline opacity

80.0

Box

☐

Box color

parent

...

Box opacity

100.0

Edges

Show Edges

☒

Thickness

1.0

Rescale weight

☒

Min. rescaled weight

0.1

Max. rescaled weight

1.0

Color

mixed

...

Opacity

70.0

Curved

☒

Radius

0.0

Edge Arrows

Size

10.0

Edge Labels

Show Labels

☒

Font

Arial 14 Plain

...

Color

original

...

Shorten label

☒

Max characters

30

Outline size

0.0

Outline color

custom [255,255,...]

...

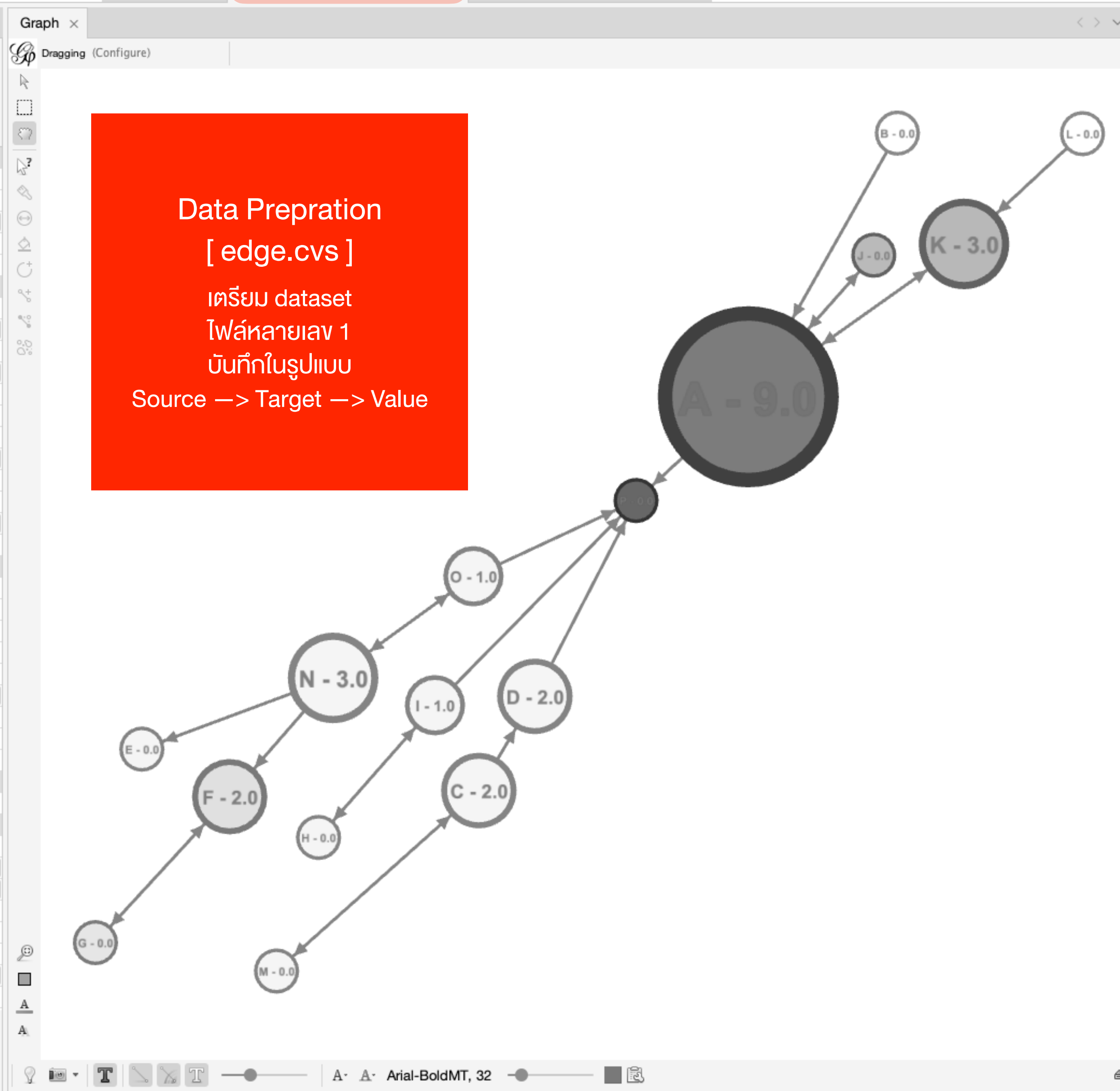
Outline opacity

70.0

Preview ratio: 100%

Refresh

Export: SVG/PDF/PNG



Statistics x

Settings

☒ Network Overview		
Average Degree	1.312	Run ?
Avg. Weighted Degree	1.312	Run ?
Network Diameter	3	Run ?
Graph Density	0.087	Run ?
HITS		Run ?
PageRank		Run ?
Connected Components	1	Run ?
☒ Community Detection		
Modularity	0.538	Run ?
Statistical Inference		Run ?
☒ Node Overview		
Avg. Clustering Coefficient	0	Run ?

MultiMode Networks Projection Preview x

☐ Background Reset zoom - +

Preview Settings ×

Presets

Default Curved

SettingsManage renderers

▼ Nodes

Fixed Border Width

☐

Border Width

1.0

Border Color

darker

...

Opacity

100.0

Per-Node Opacity

☐

▼ Node Labels

Show Labels

☐

Font

Arial 18 Plain

...

Proportional size

☒

Color

custom [0,0,0]

...

Shorten label

☐

Max characters

30

Outline size

0.0

Outline color

custom [255,255,...]

...

Outline opacity

80.0

Box

☐

Box color

parent

...

Box opacity

100.0

▼ Edges

Show Edges

☒

Thickness

1.0

Rescale weight

☒

Min. rescaled weight

0.1

Max. rescaled weight

1.0

Color

mixed

...

Opacity

70.0

Curved

☒

Radius

0.0

▼ Edge Arrows

Size

10.0

▼ Edge Labels

Show Labels

☒

Font

Arial 14 Plain

...

Color

original

...

Shorten label

☒

Max characters

30

Outline size

0.0

Outline color

custom [255,255,...]

...

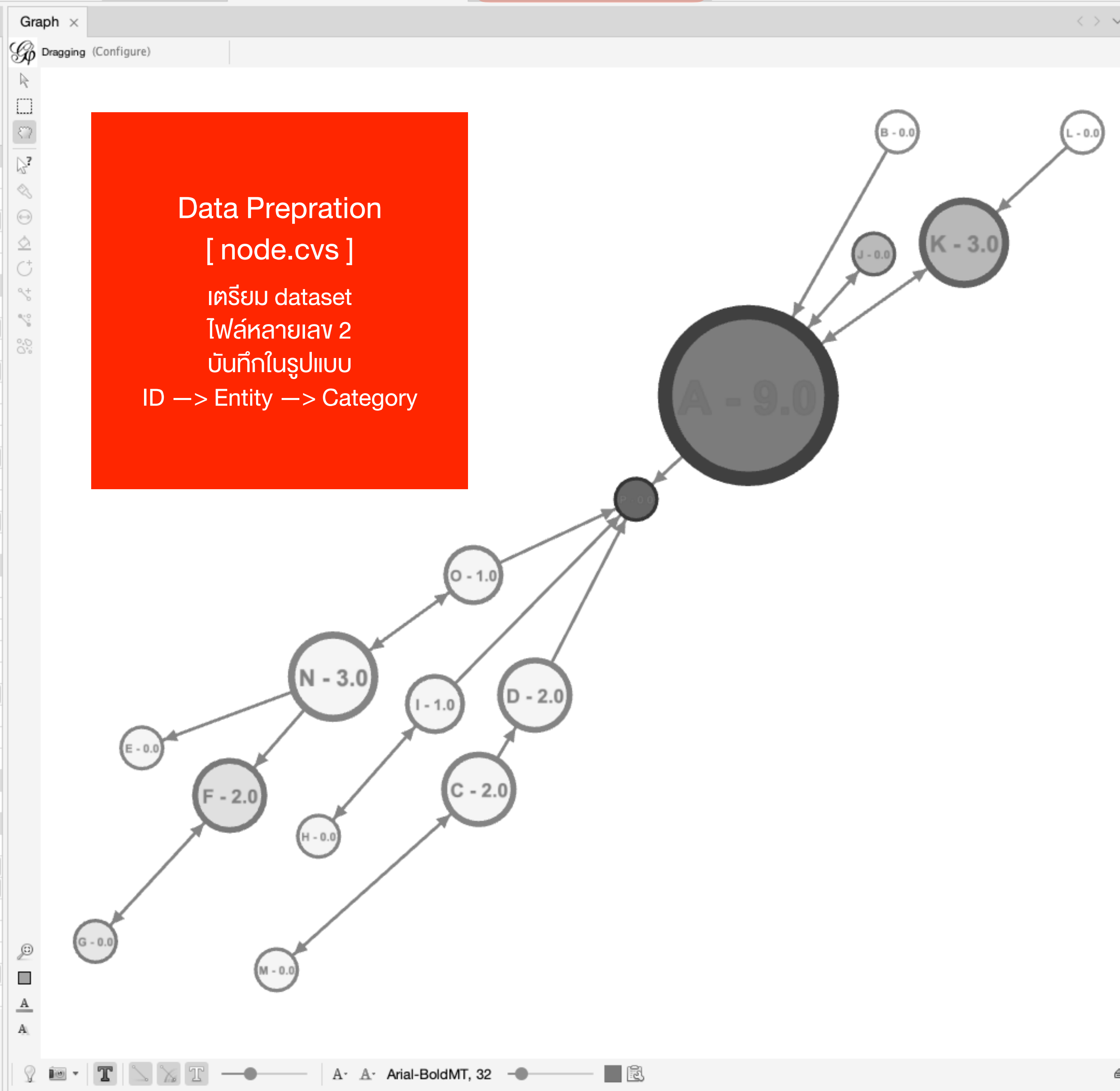
Outline opacity

70.0

Preview ratio: 100%

Refresh

Export: SVG/PDF/PNG



Statistics ×

Settings

☒ Network Overview		
Average Degree	1.312	Run ?
Avg. Weighted Degree	1.312	Run ?
Network Diameter	3	Run ?
Graph Density	0.087	Run ?
HITS		Run ?
PageRank		Run ?
Connected Components	1	Run ?
☒ Community Detection		
Modularity	0.538	Run ?
Statistical Inference		Run ?
☒ Node Overview		
Avg. Clustering Coefficient	0	Run ?

MultiMode Networks Projection Preview ×

☐ Background Reset zoom - +

Overview

Data Laboratory

Preview

Workspace 1 x SNA Ex 1 - Gephi Edges - edge x SNA Ex 1 - Gephi Nodes - node x

Preview Settings x

Presets

Default Curved

SettingsManage renderers

Nodes

Fixed Border Width

Border Width

Border Color

Opacity

Per-Node Opacity

Node Labels

Show Labels

Font

Proportional size

Color

Shorten label

Max characters

Outline size

Outline color

Outline opacity

Box

Box color

Box opacity

Edges

Show Edges

Thickness

Rescale weight

Min. rescaled weight

Max. rescaled weight

Color

Opacity

Curved

Radius

Edge Arrows

Size

Edge Labels

Show Labels

Font

Color

Shorten label

Max characters

Outline size

Outline color

Outline opacity

Preview ratio: 100%

Export: SVG/PDF/PNG

Refresh

Graph x

Dragging (Configure)

Statistics x

Settings

Network Overview

Average Degree

Avg. Weighted Degree

Network Diameter

Graph Density

HITS

PageRank

Connected Components

Community Detection

Modularity

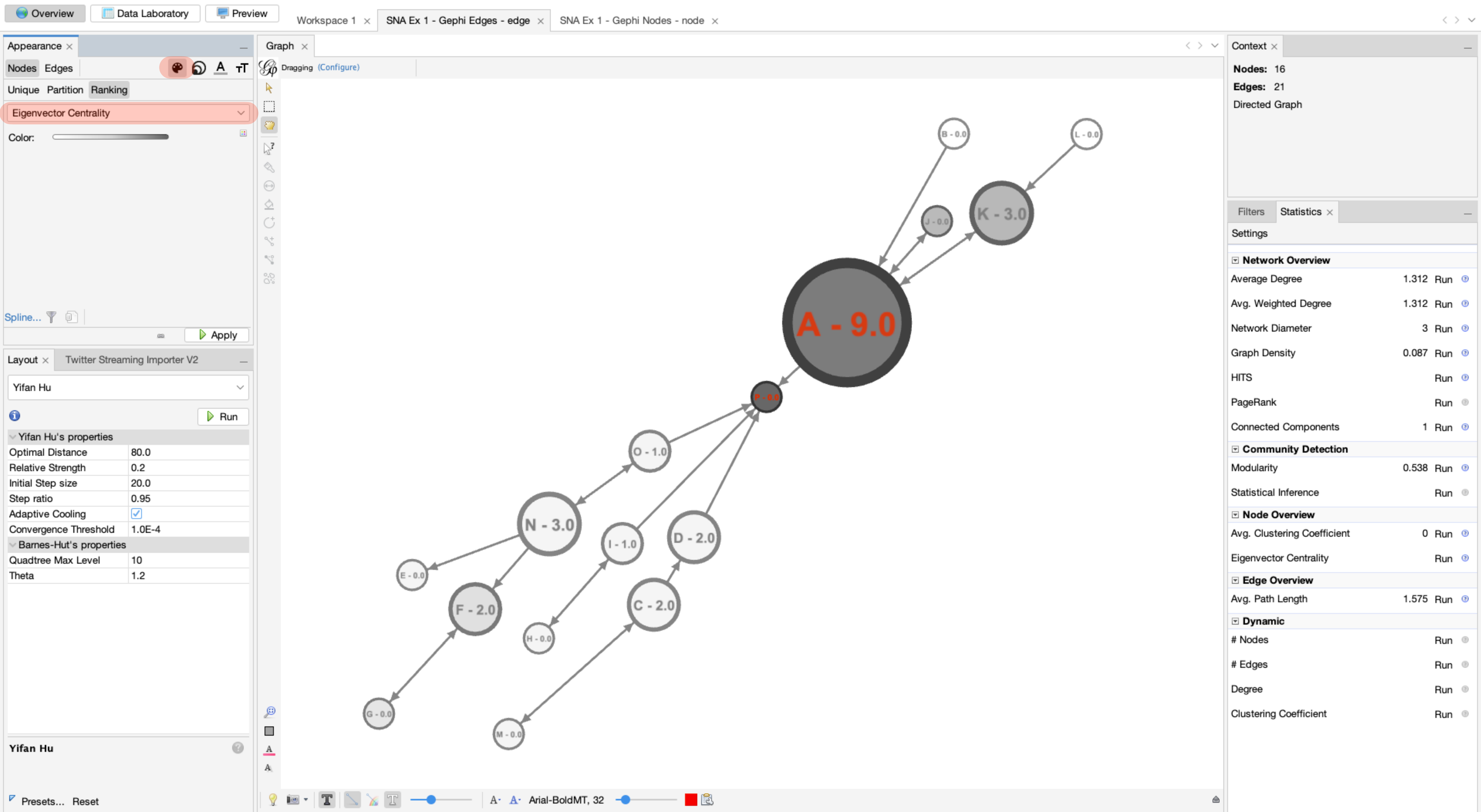
Statistical Inference

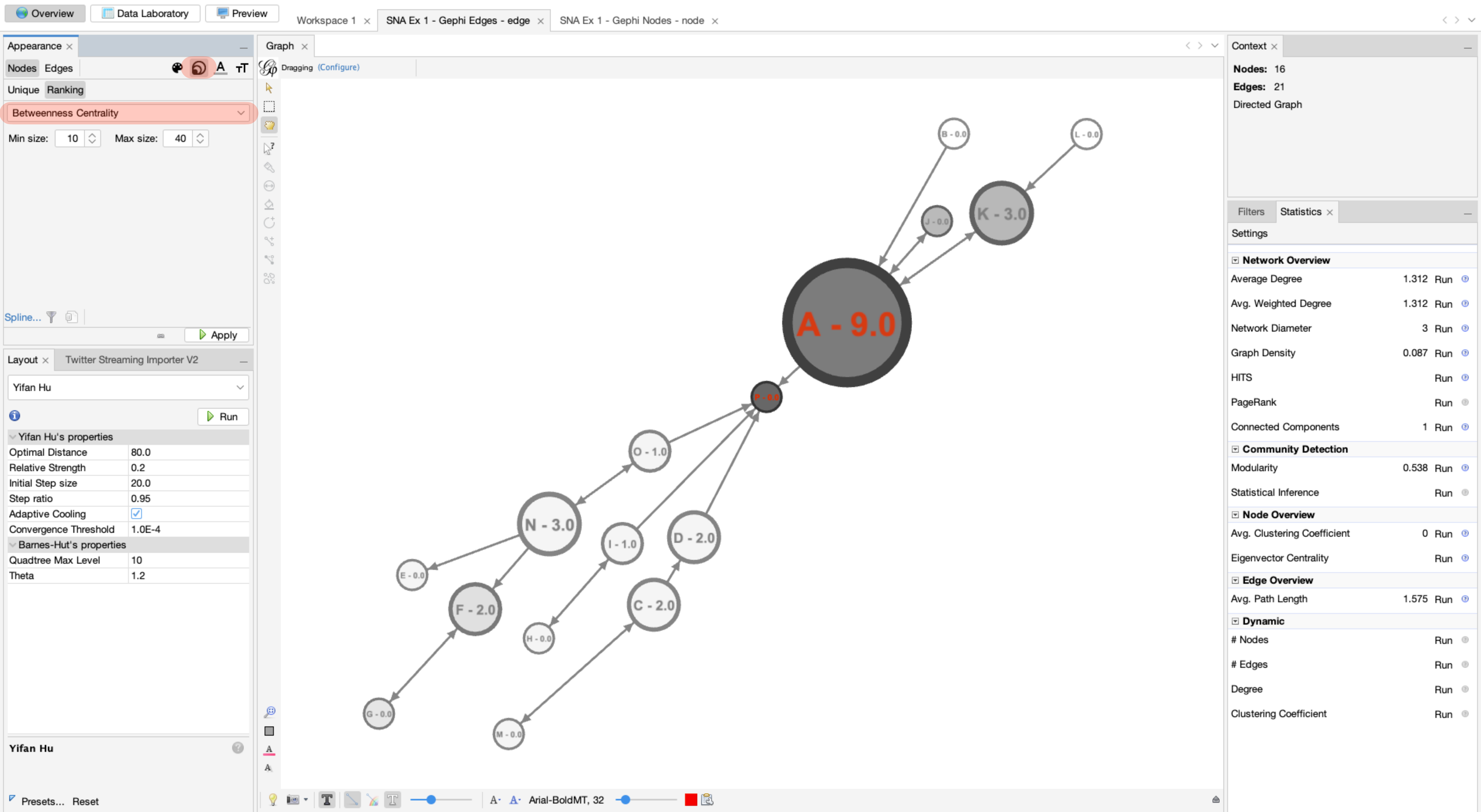
Node Overview

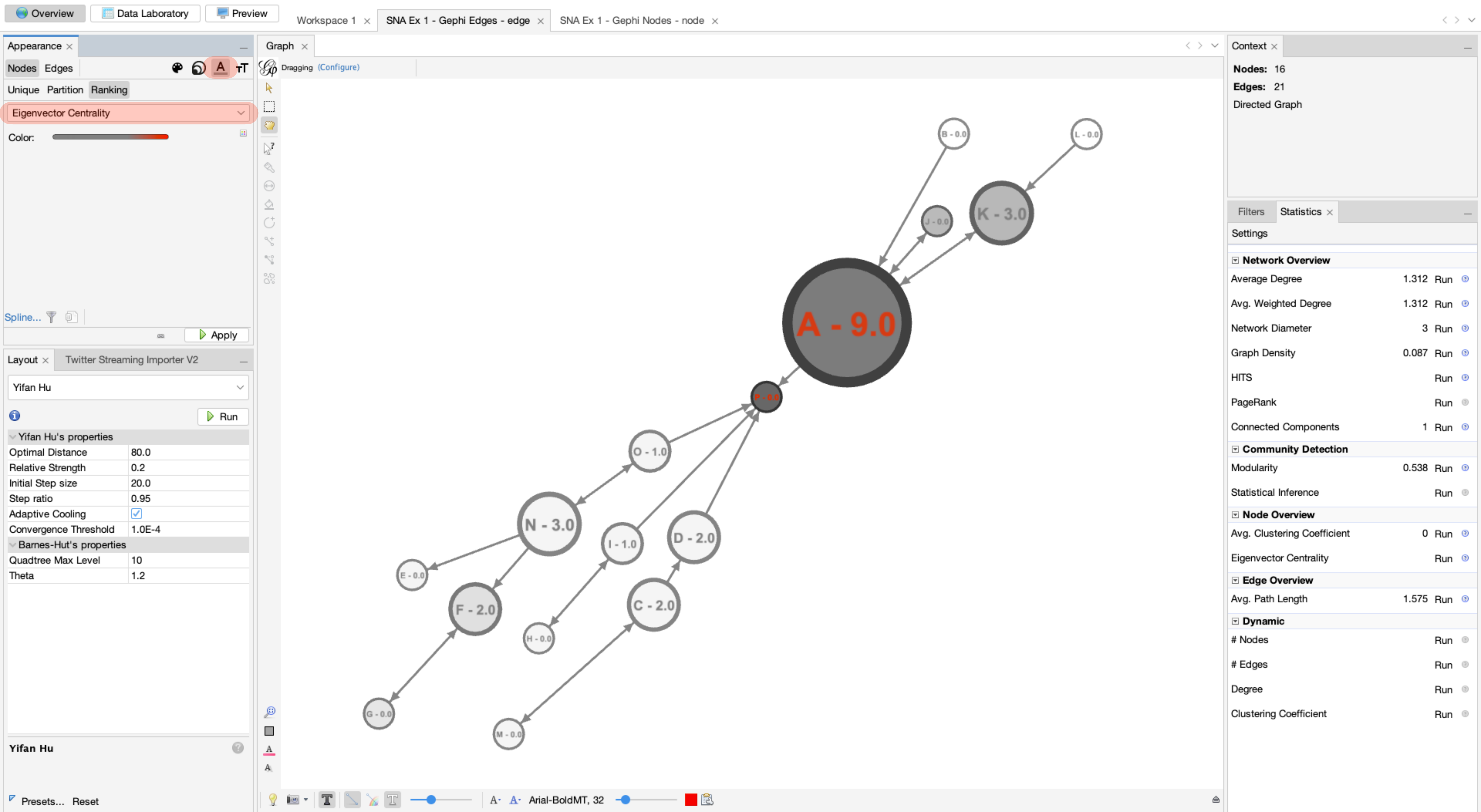
Avg. Clustering Coefficient

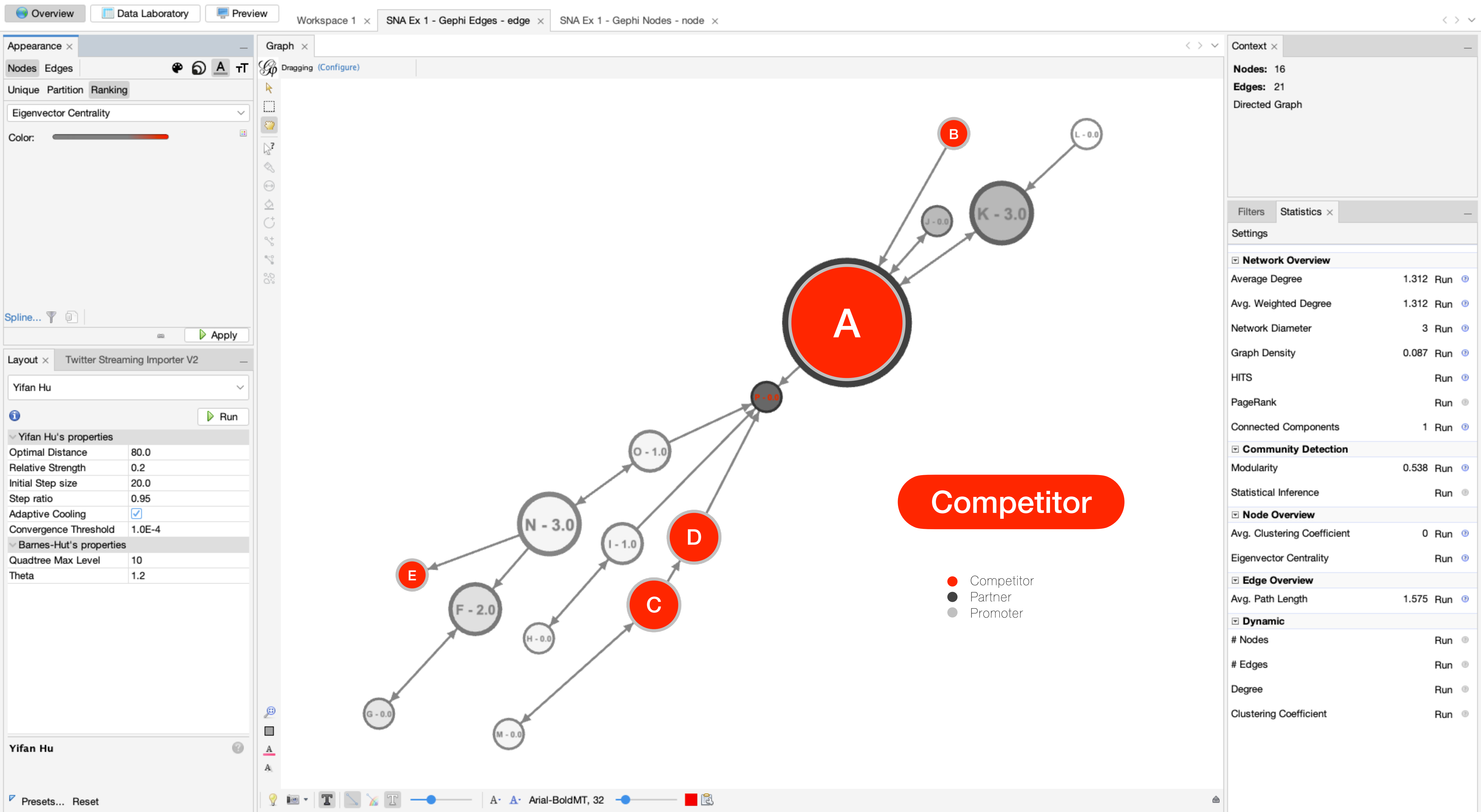
MultiMode Networks ProjectionPreview x

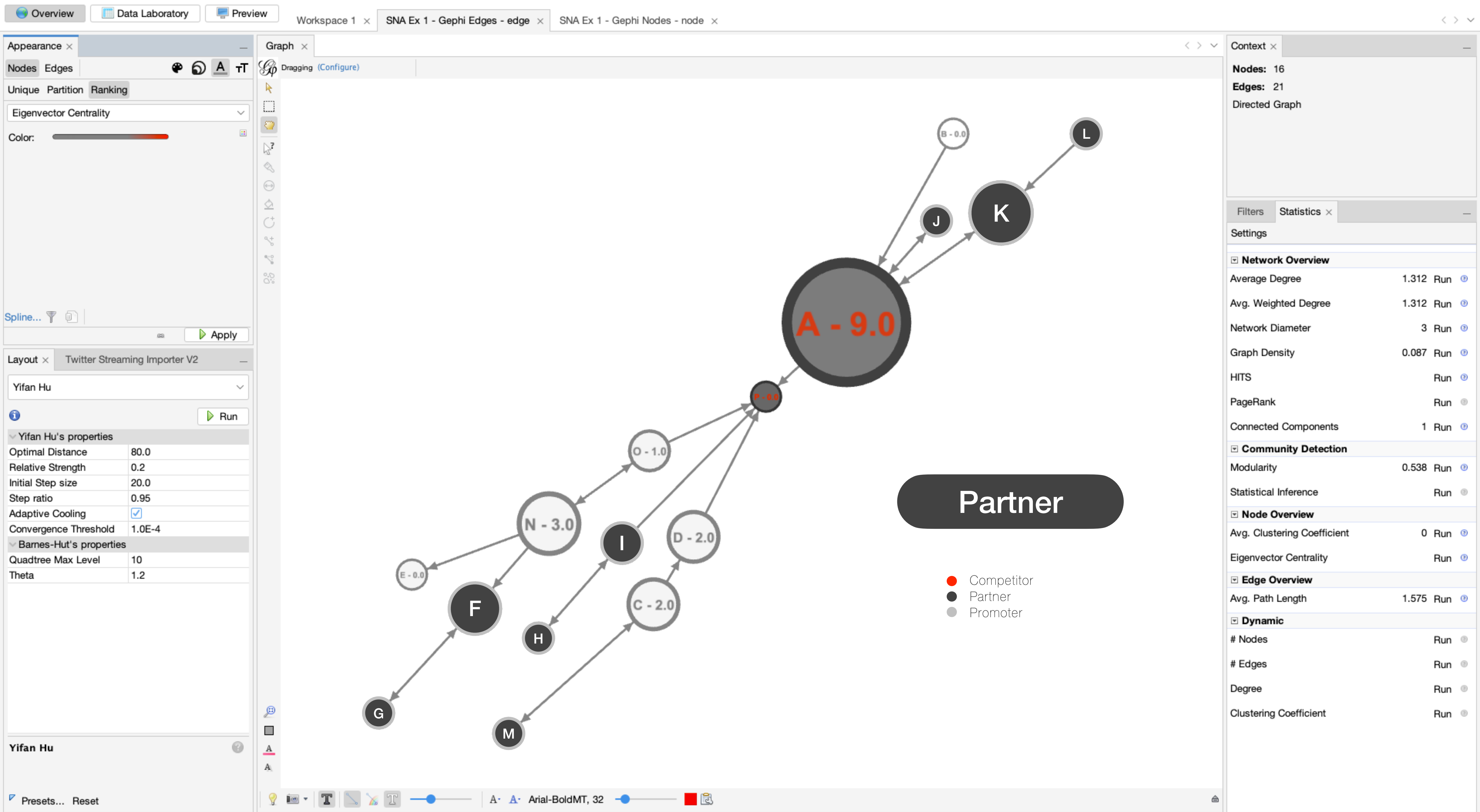
Statistics Setting
[metrics]
หน้าต่างแสดงผลค่าสถิติ
อาทิ Density,
Centrality,
Modularity
เป็นต้น

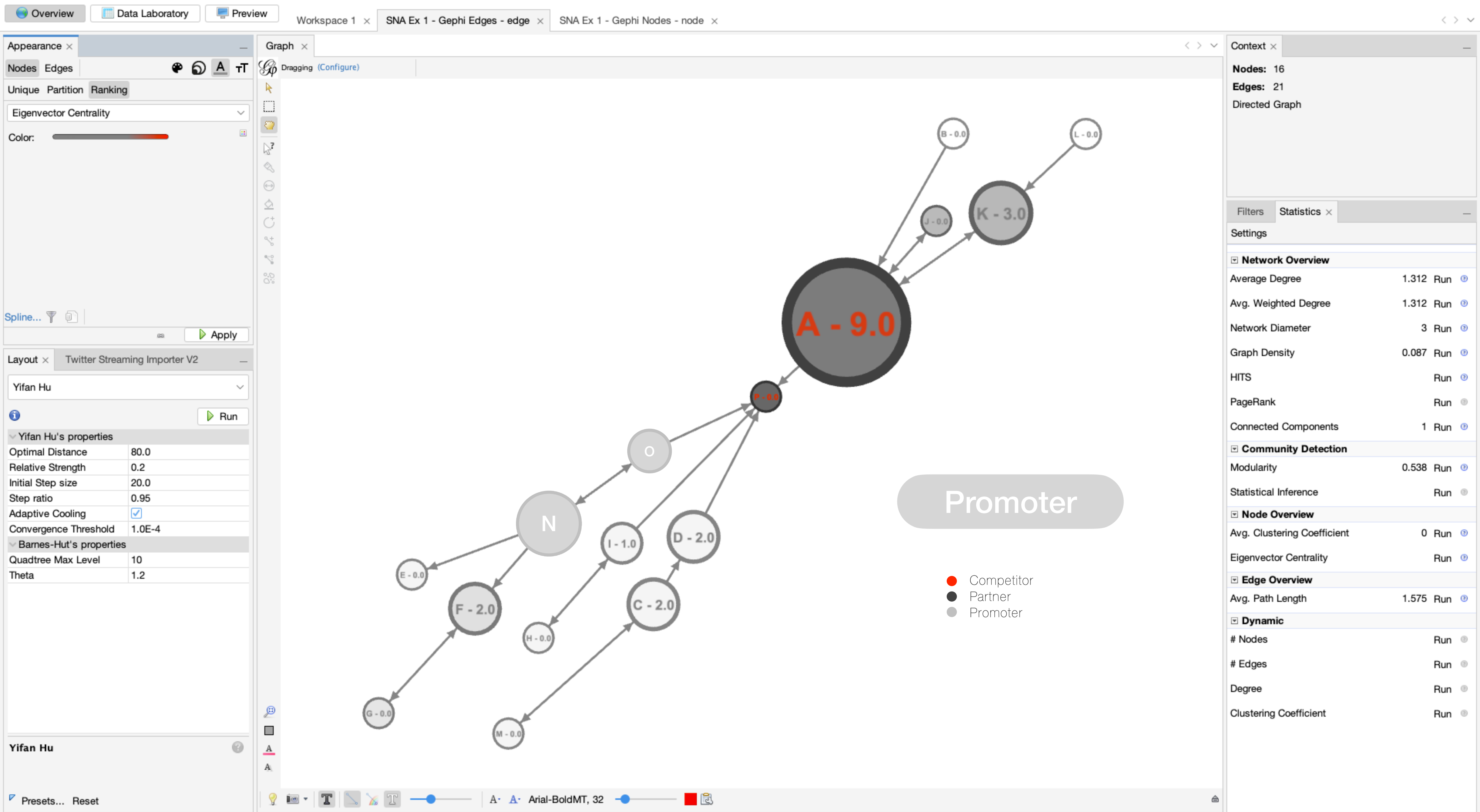


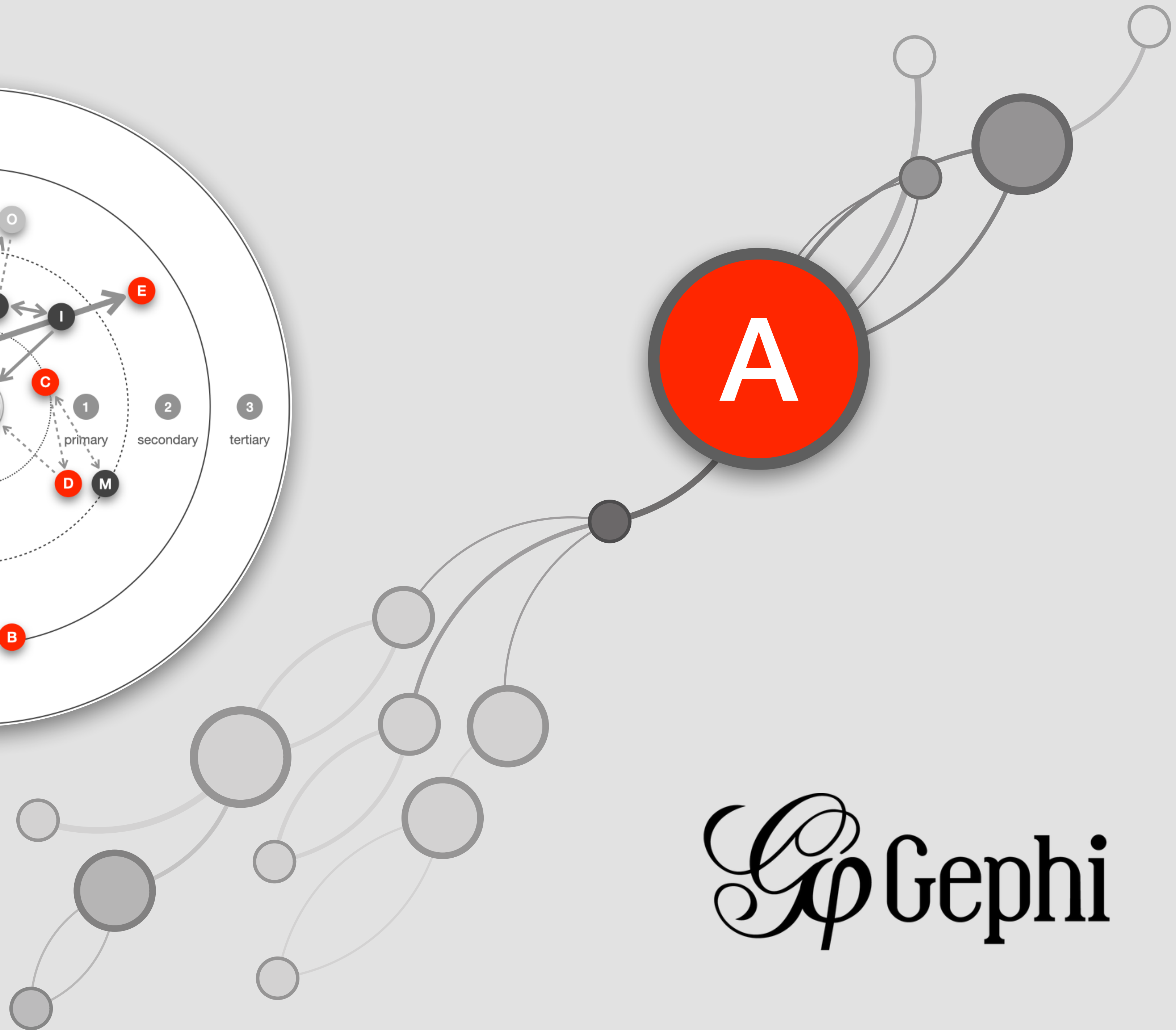




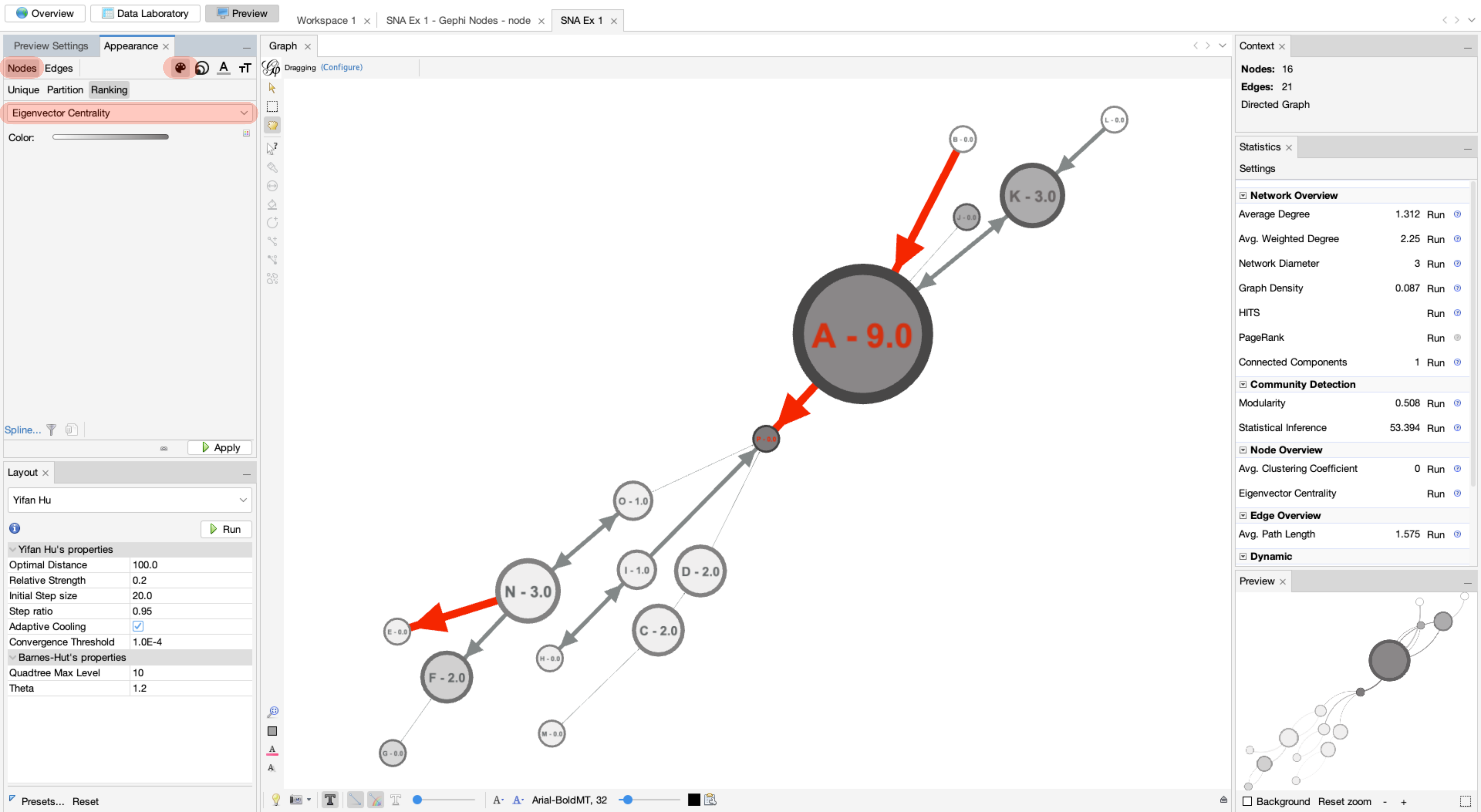


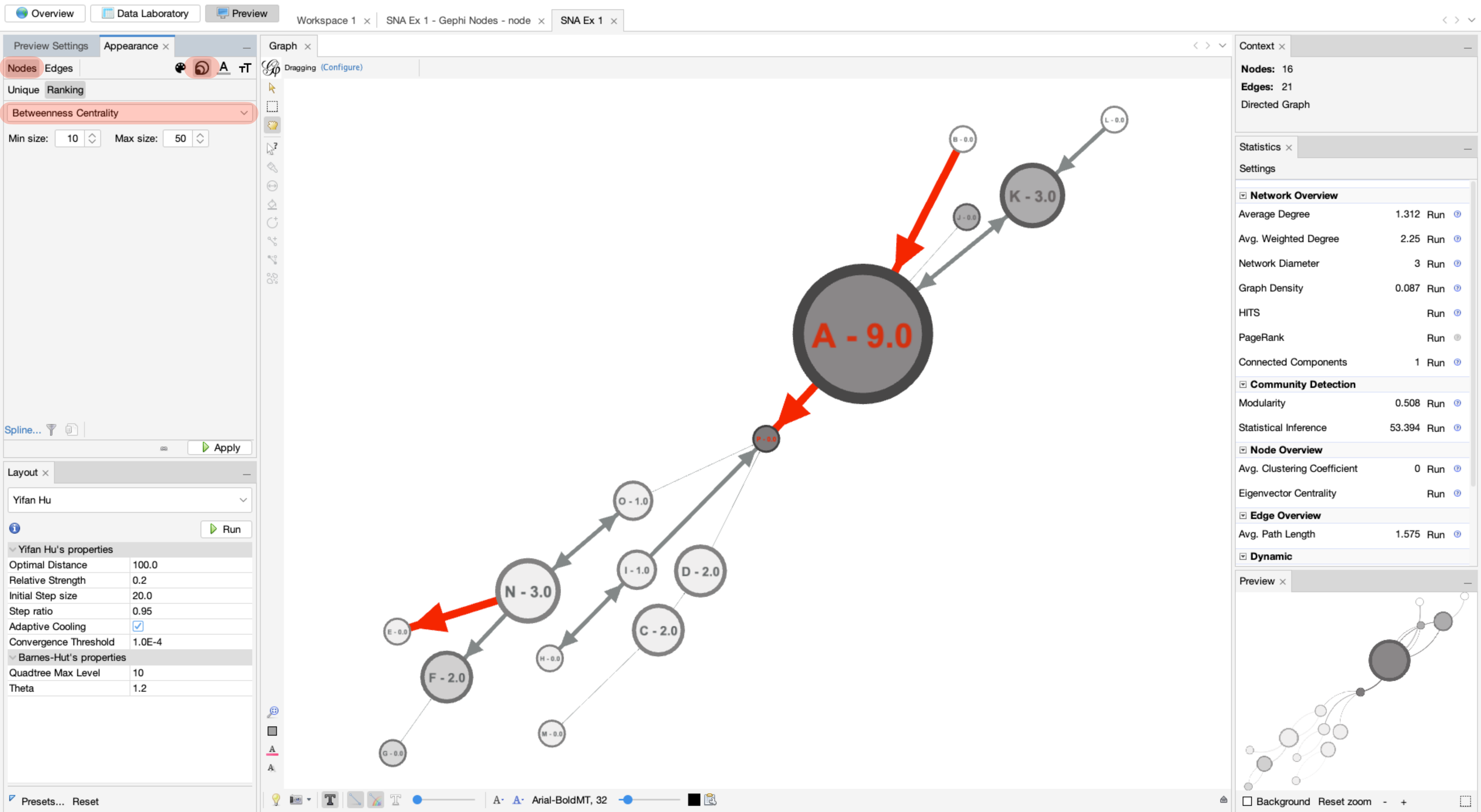


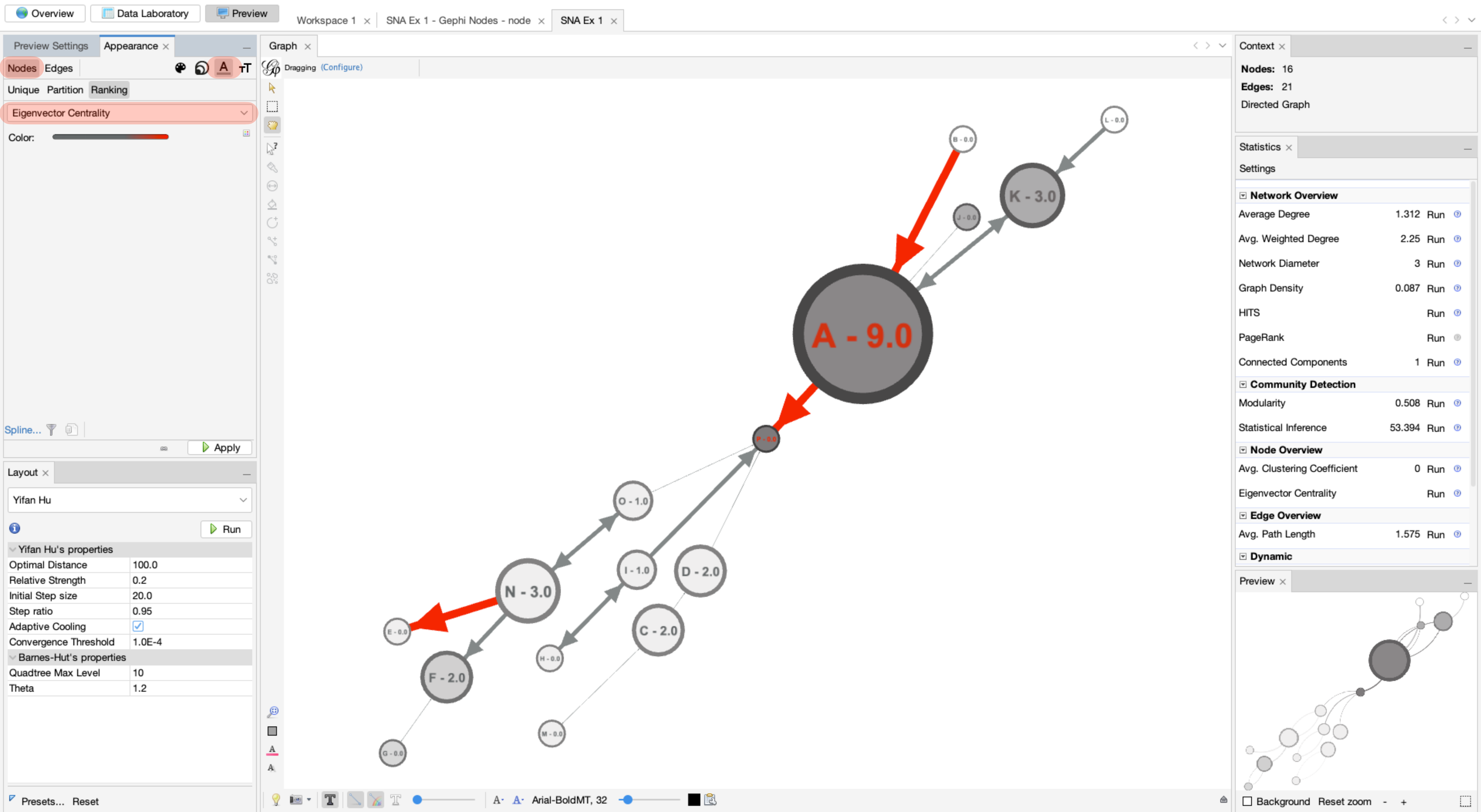


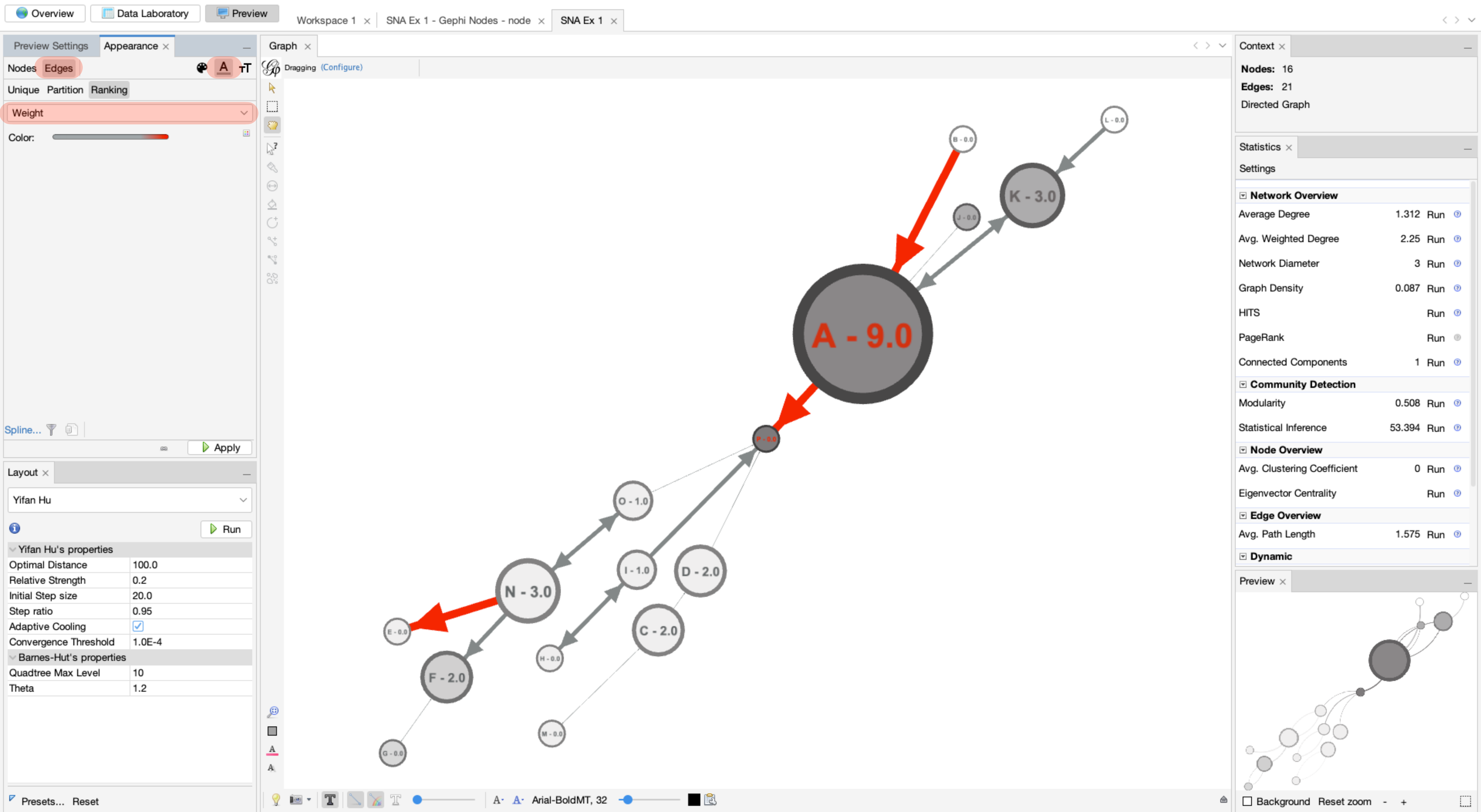


G Gephi



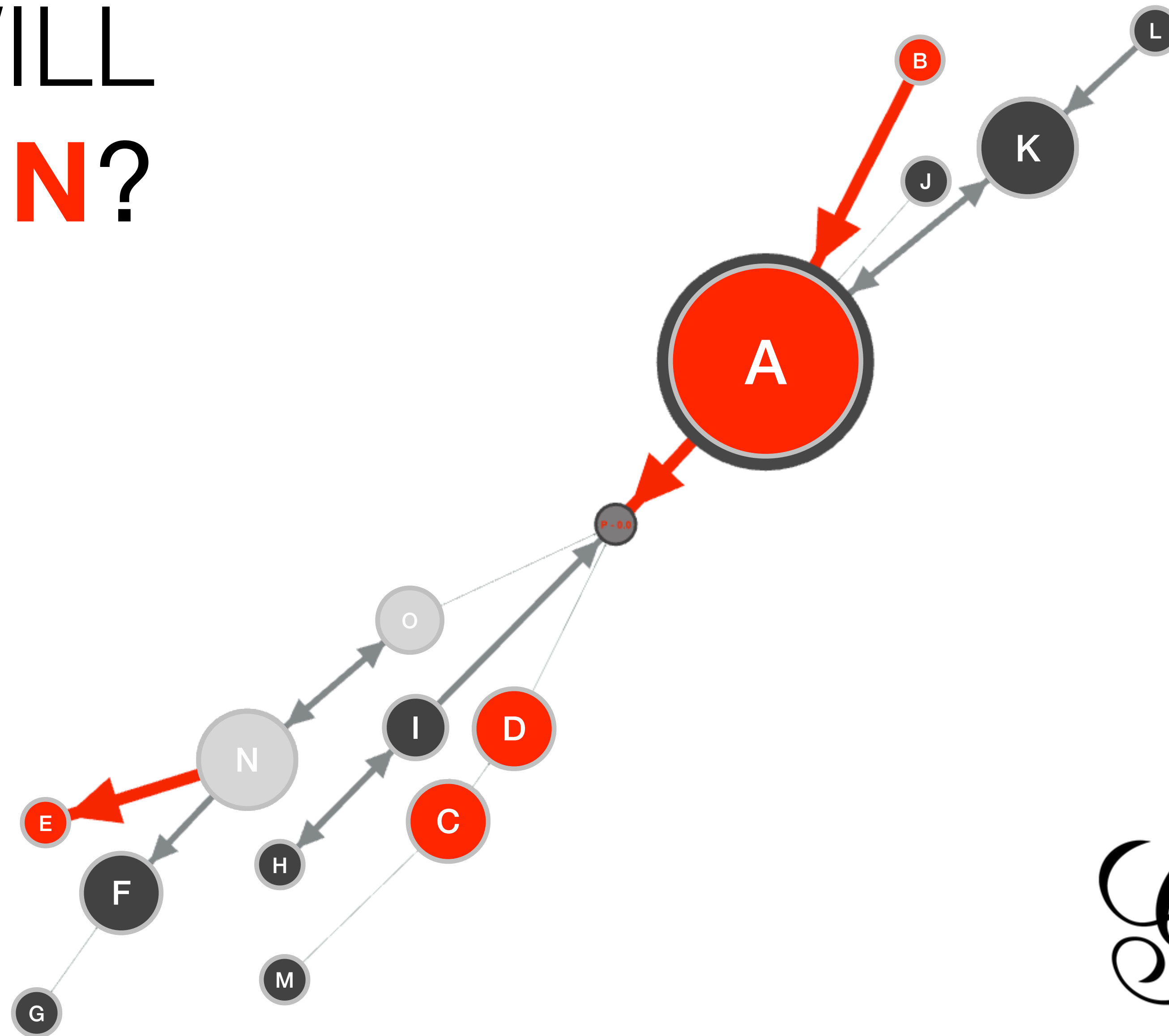






HOW WILL YOU **WIN**?

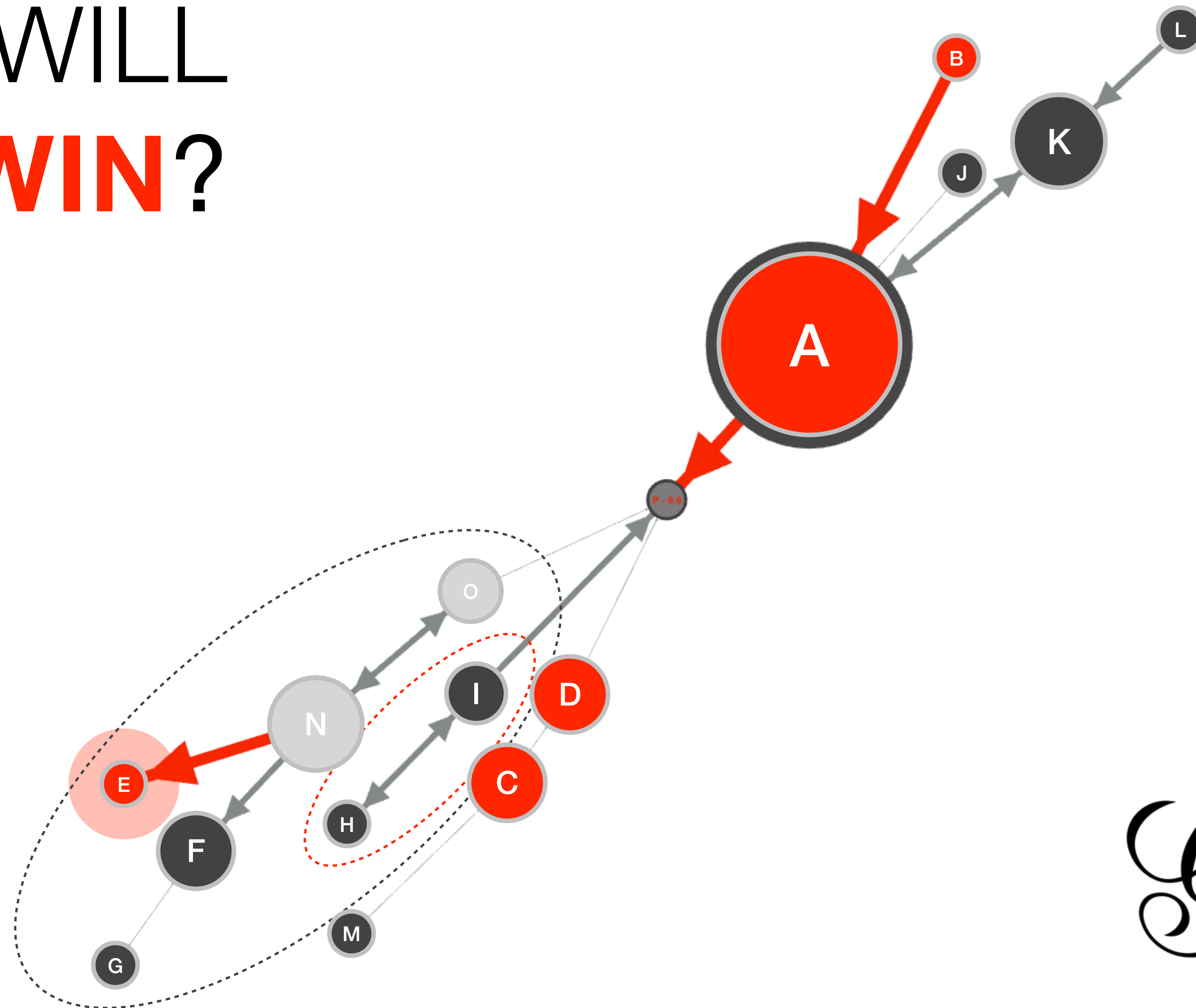
- Competitor
- Partner
- Promoter
- Impact



Gephi

HOW WILL YOU **WIN**?

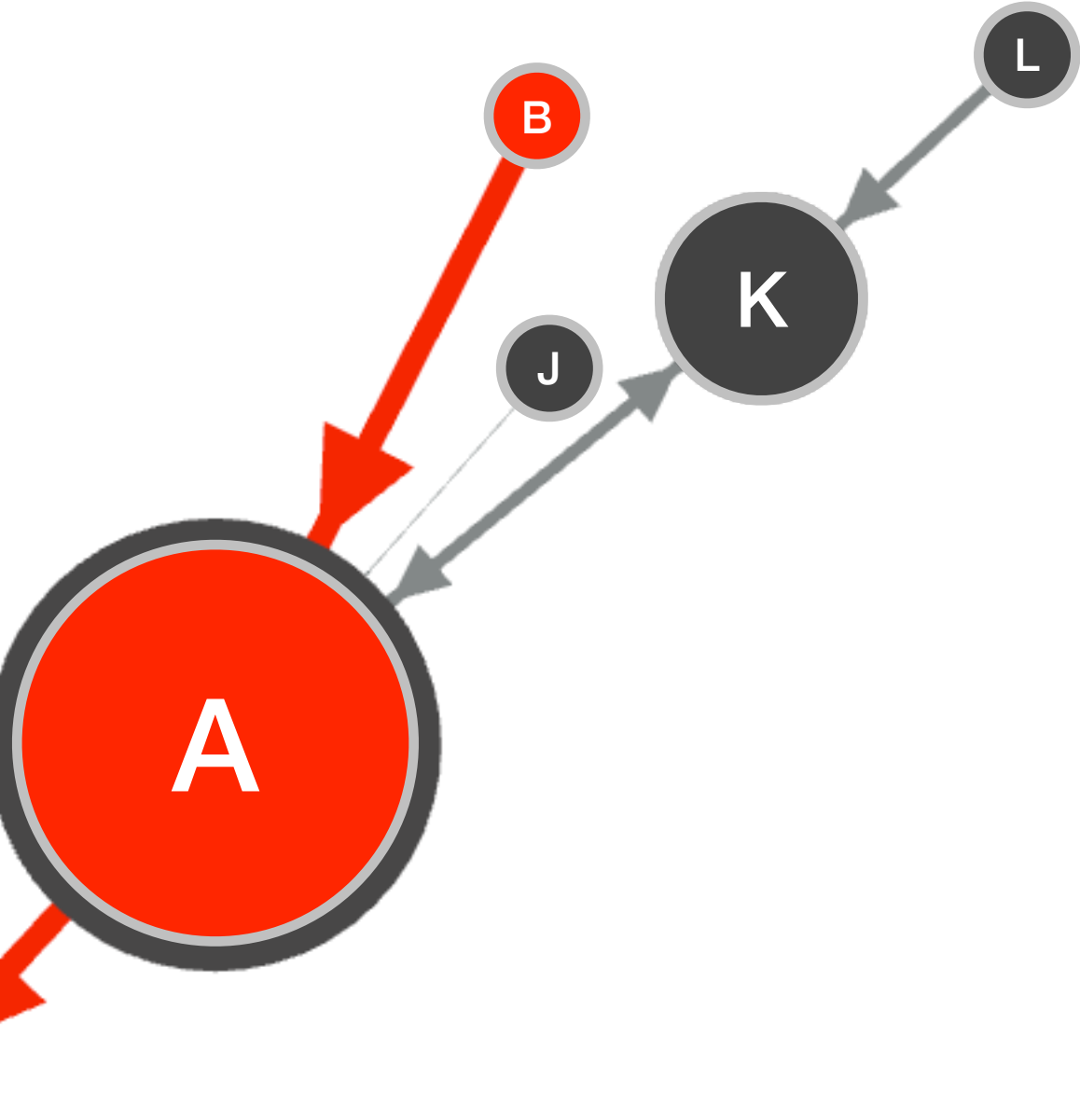
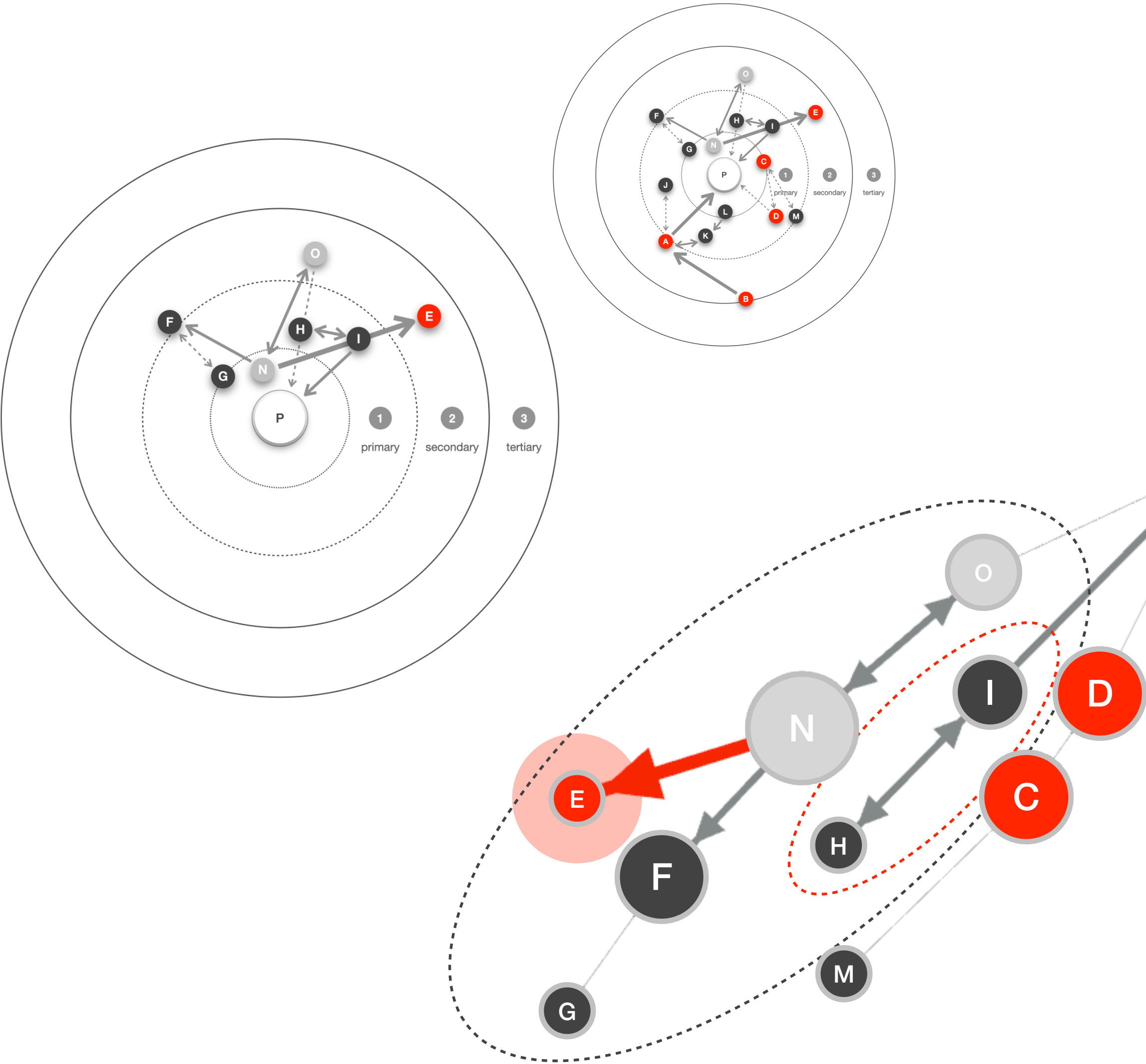
- Competitor
- Partner
- Promoter
- Impact



Gephi

Power Interest Matrix - PIM

Use Case: Community Detection



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A										1	2					3
B	3															
C				1									1			
D																1
E																
F																
G																
H																
I																
J	1															2
K	2															
L																
M																
N																
O																
P																

Cross Impact Analysis - CIA
Social Network Analysis - SNA

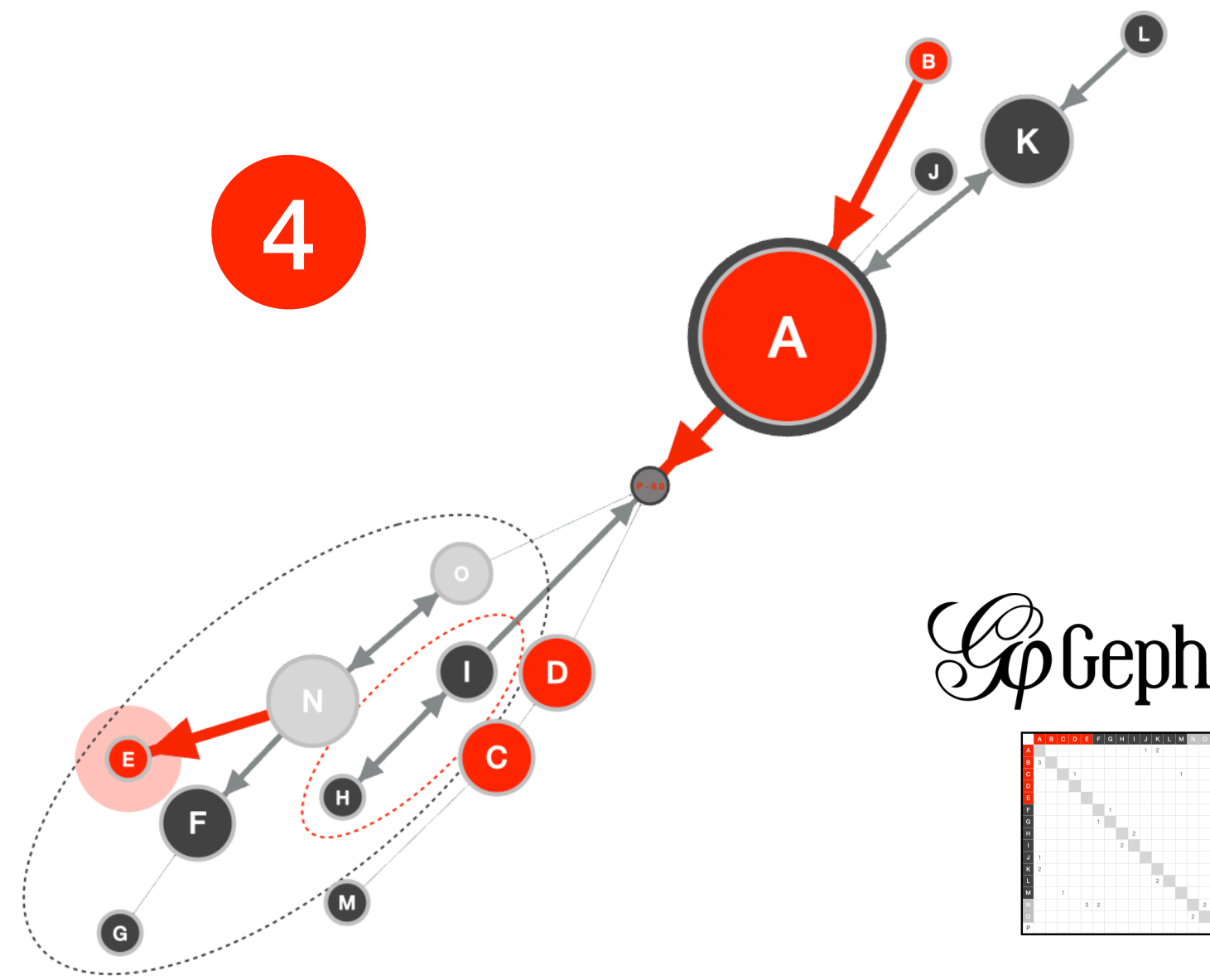
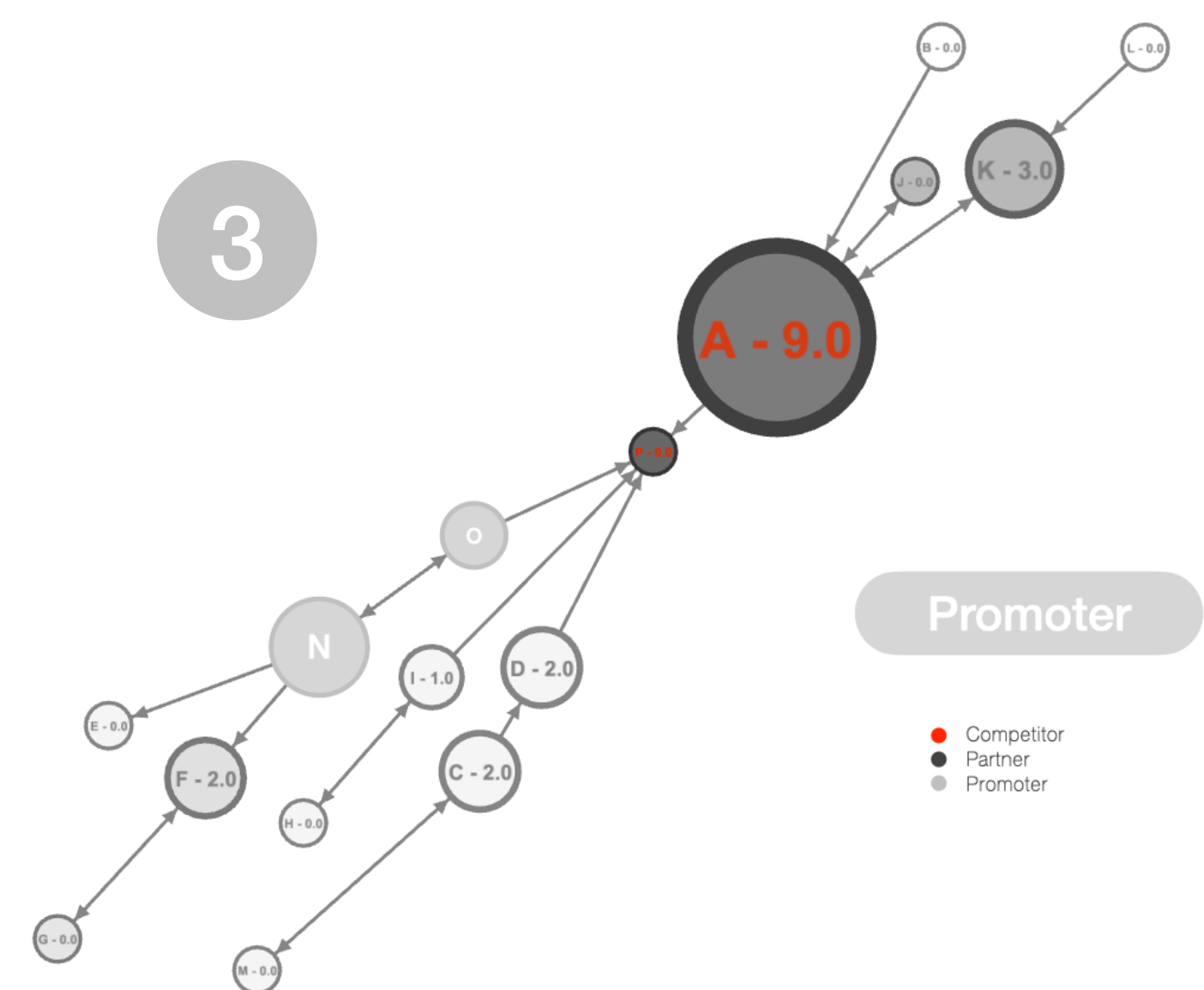
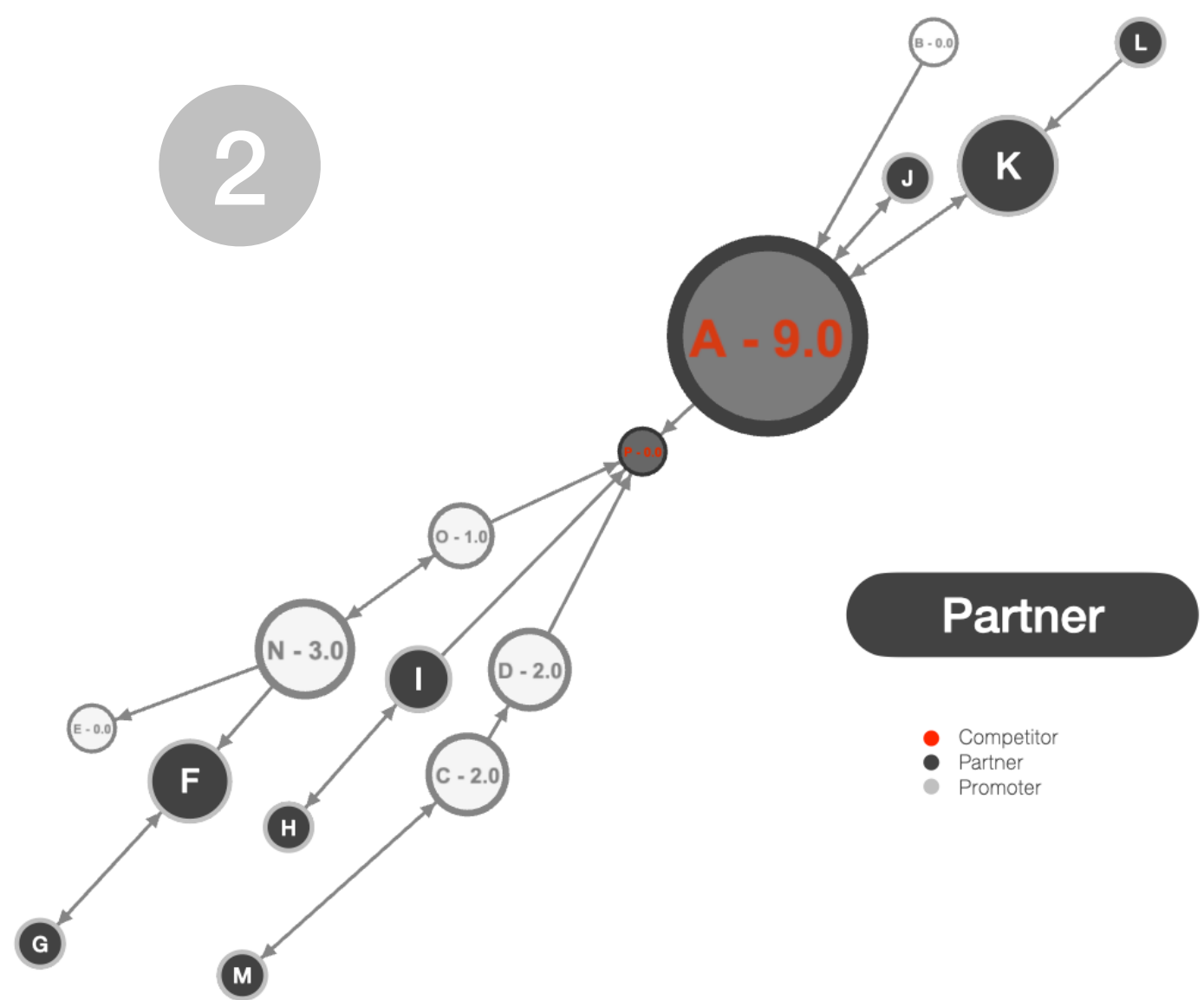
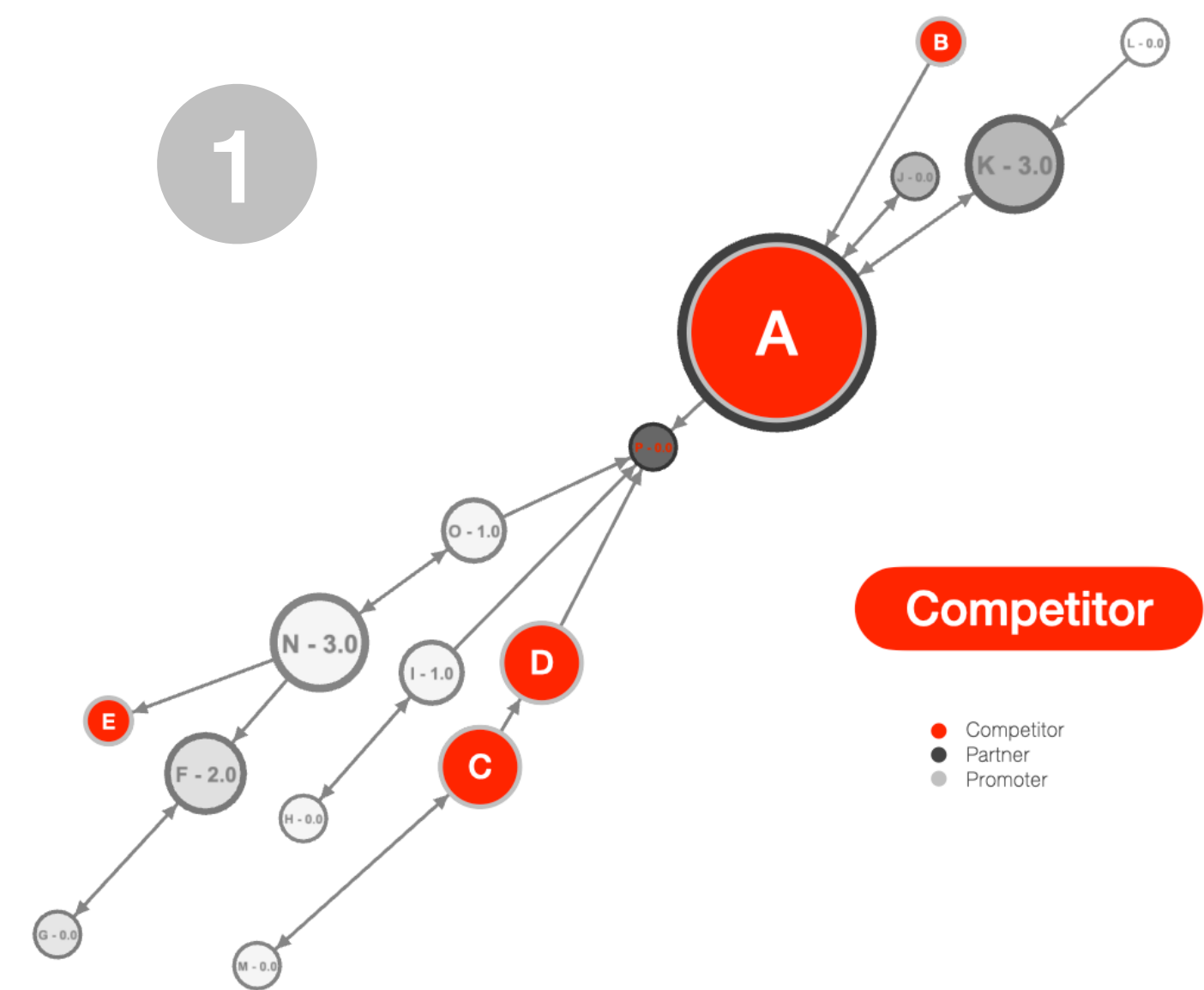
Use Case: Impact Direction



SOCIAL NETWORK GRAPH

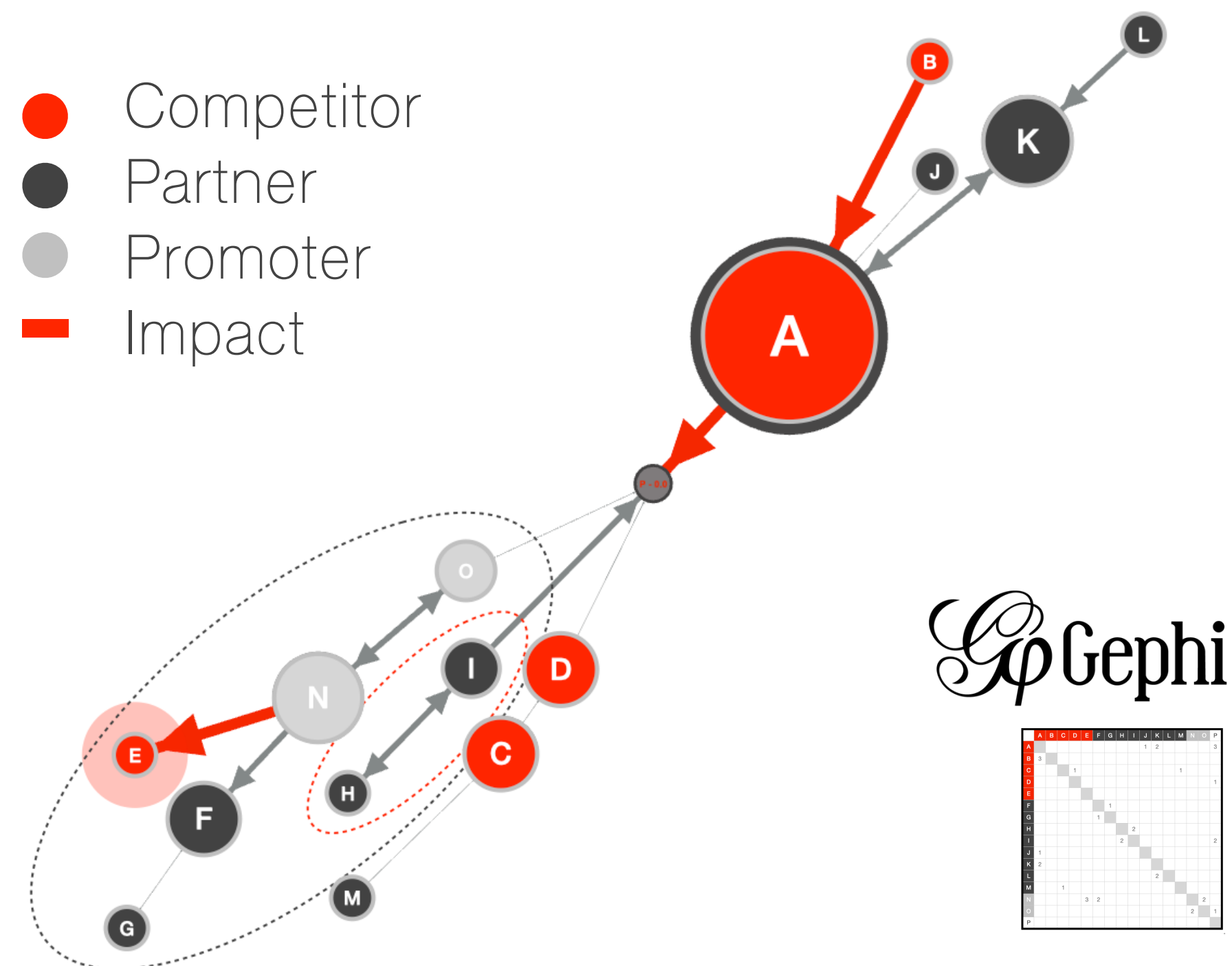
IMPACT

DIRECTION



VALUE NETWORK IMPACT PATHWAY

A Closer Look on Data Visualisation using
Social Network Analysis (SNA)



VALUE *for* SOMEONE
from SOMETHING

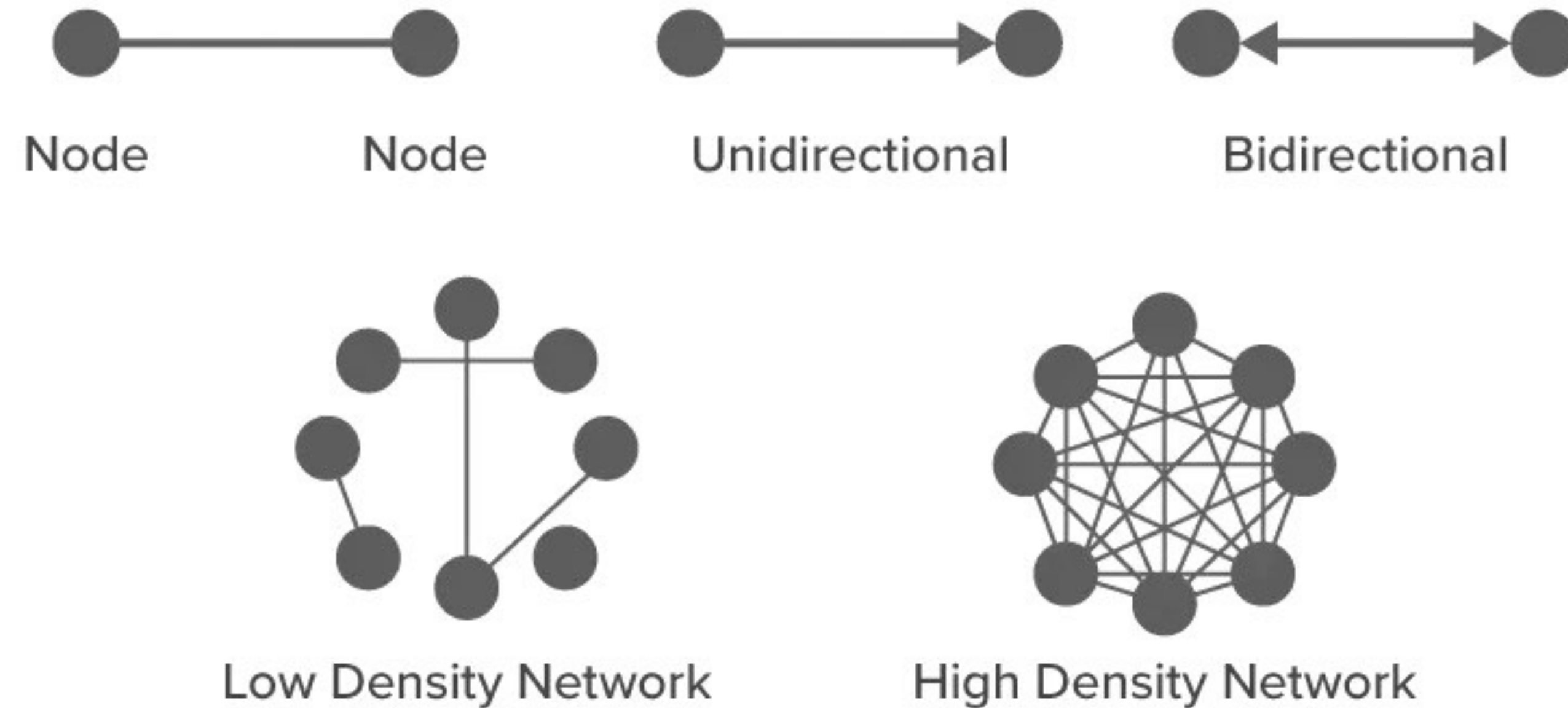
คุณค่าอยู่ที่คนมองหา ถึงจะมองเห็น ะนั้น
(ต้อง) คบกับคนที่ใช่ อยู่ใกล้คนที่ชอบ

เพราะ...เมื่ออยู่ผิดที่
หมื่นล้านความดีก็ไม่มีความหมาย

อนุวัต เชื้อเย็น

Networks Types

Density and Information Flow

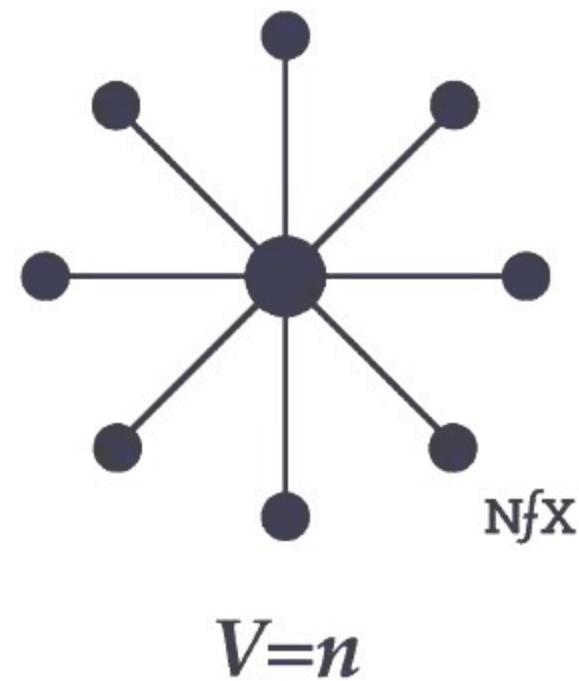


Source: James Currier (1994), NFX Bible

The Laws of Network Effects

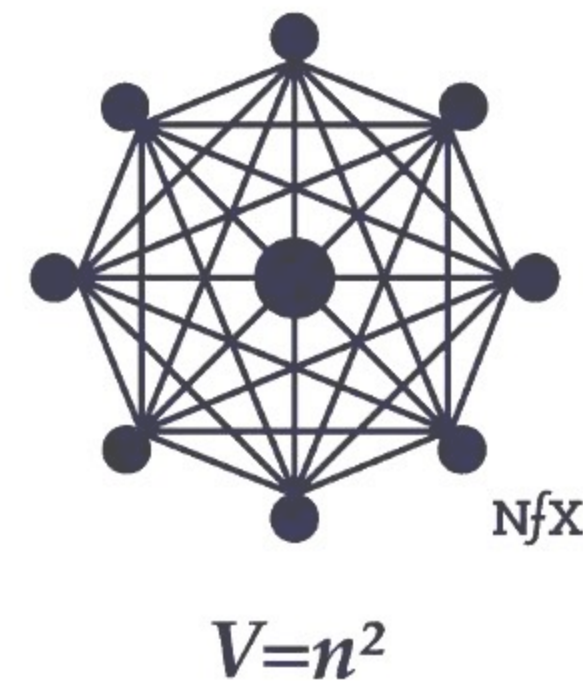
Density and Information Flow

Sarnoff's Law



The value of the network (V) increases in direct proportion to the size of the network (n).

Metcalfe's Law



The value of the network increases to the square of the number of users in the network.

Reed's Law



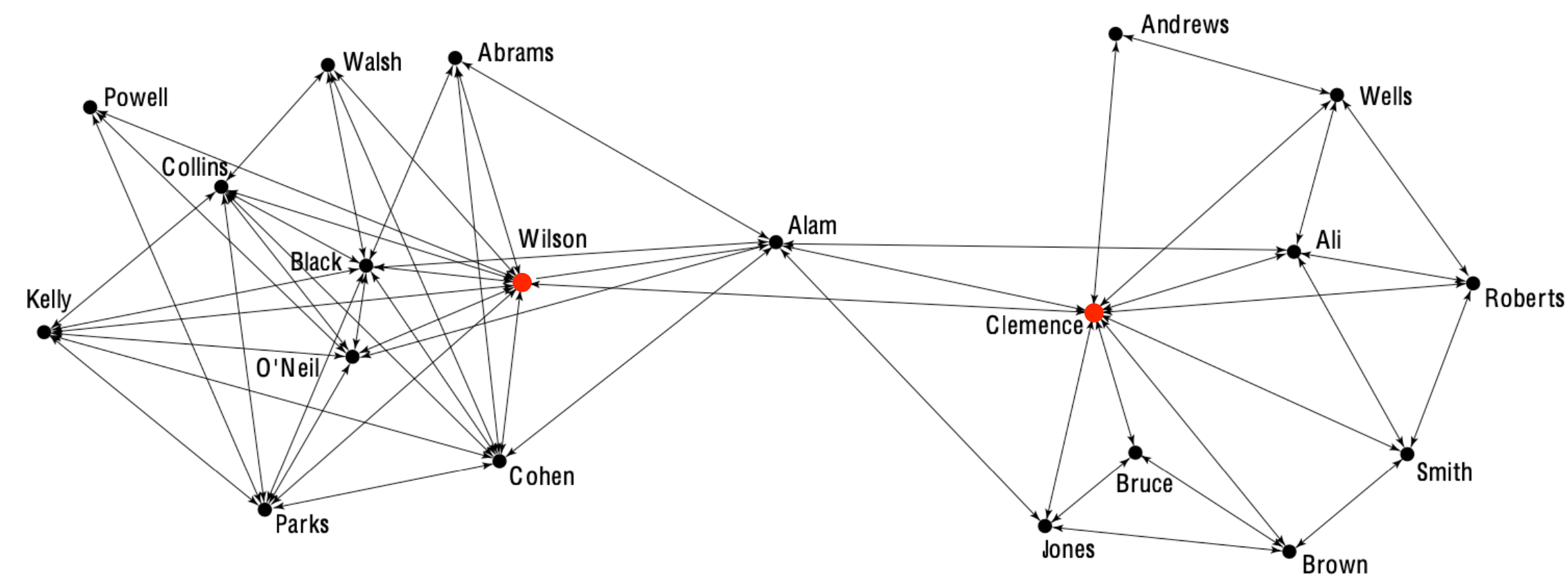
Source: NFX*Bible

Networks may grow proportionally to the network size but there are forming groups that scale faster in value than others (because of influence or interconnectedness).

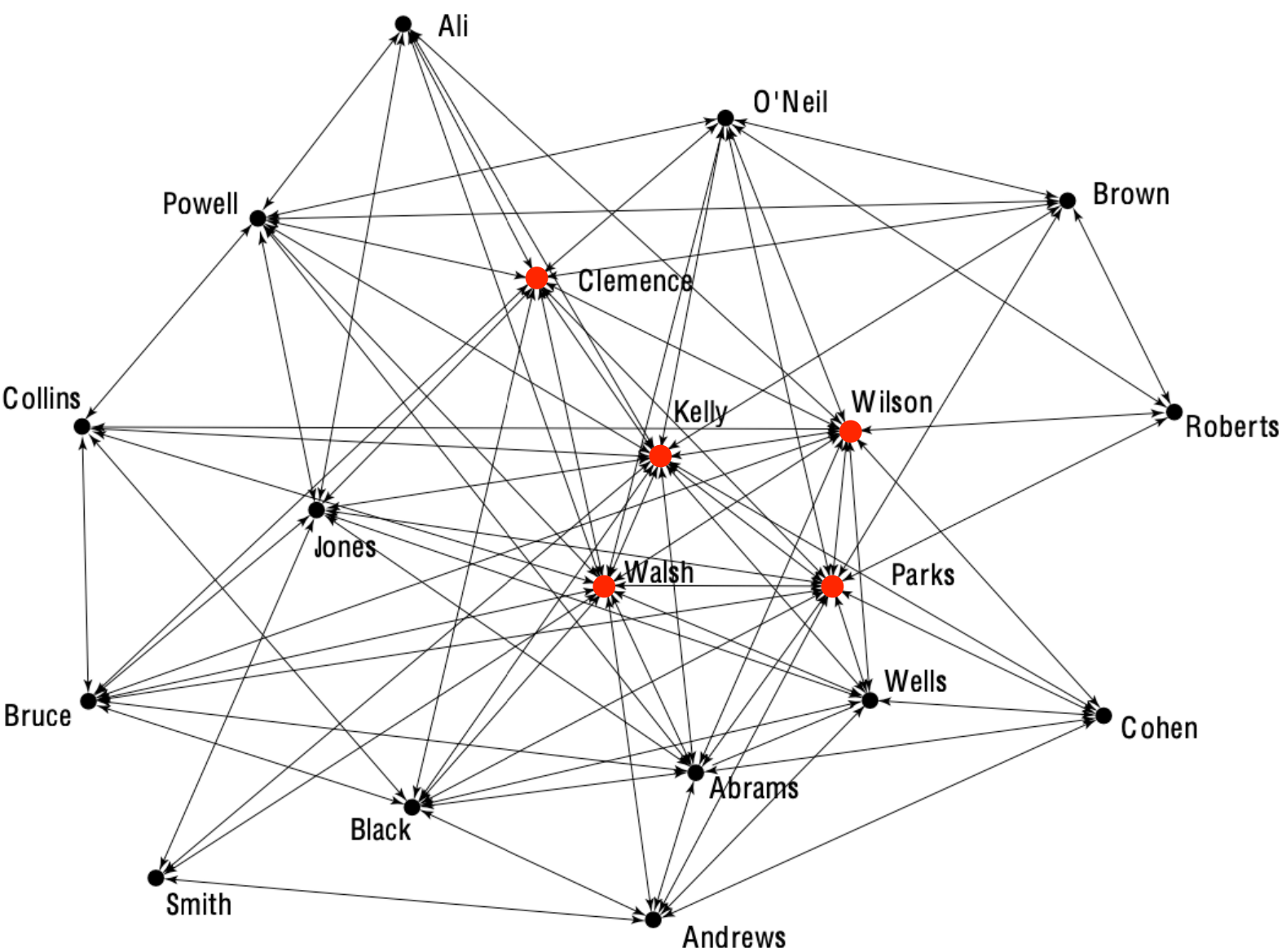
Source: James Currier (1994), NFX Bible

Network Effects Assessment

Density and Information Flow



Pre-Intervention



Post-Intervention

Source: Rob Cross, Stephen P. Borgatti and Andrew Parker (2002), Work Visible: Using Social Network Analysis to Support Strategic Collaboration



Airways. @PythonMaps

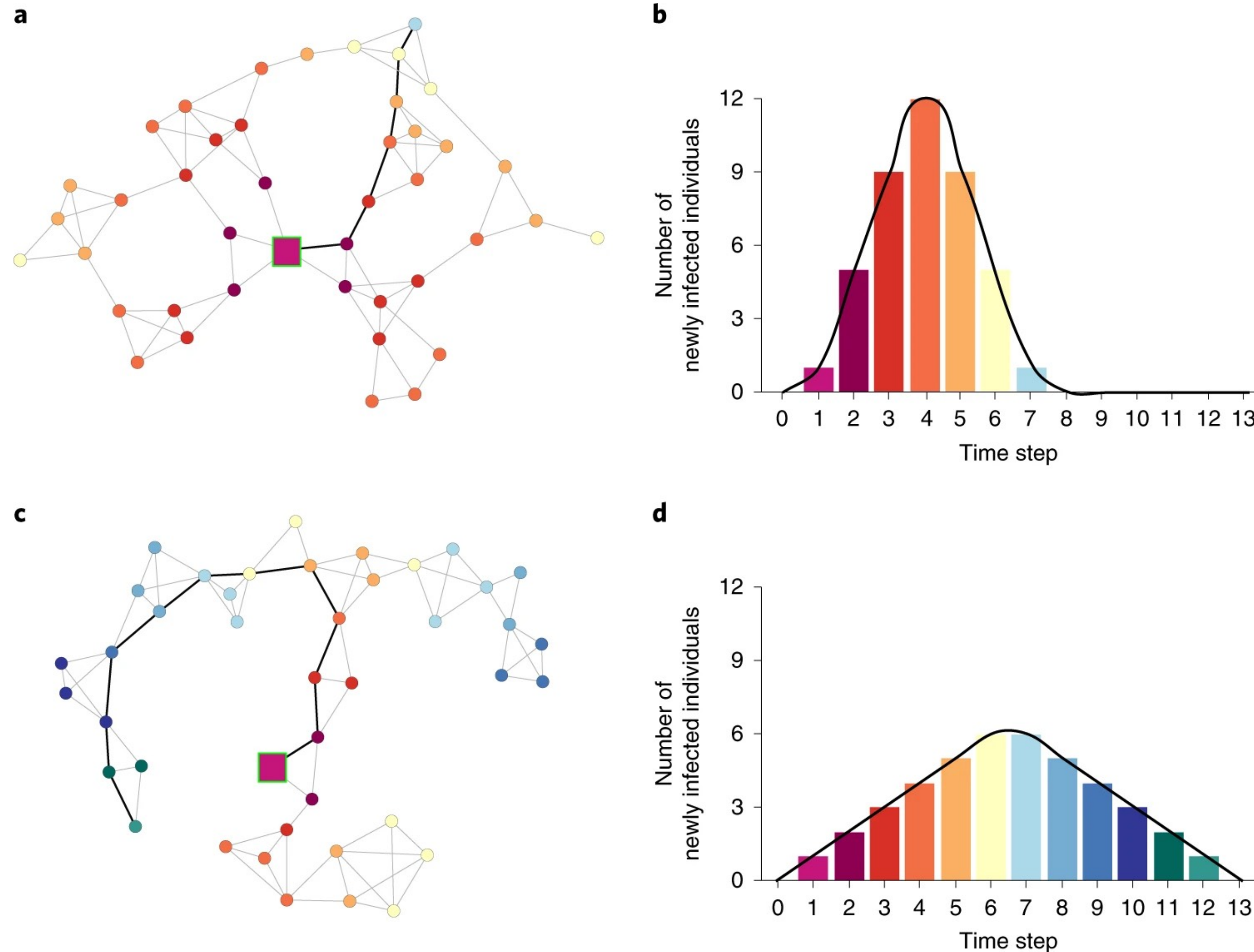
This map shows the world's flight paths and airports. It maps 10,000 airports and 67,663 routes linking those airports.

Data source - <https://openflights.org/data.html>

Source: Adam Symington (2022), Visual Capitalist



Short Path Networks



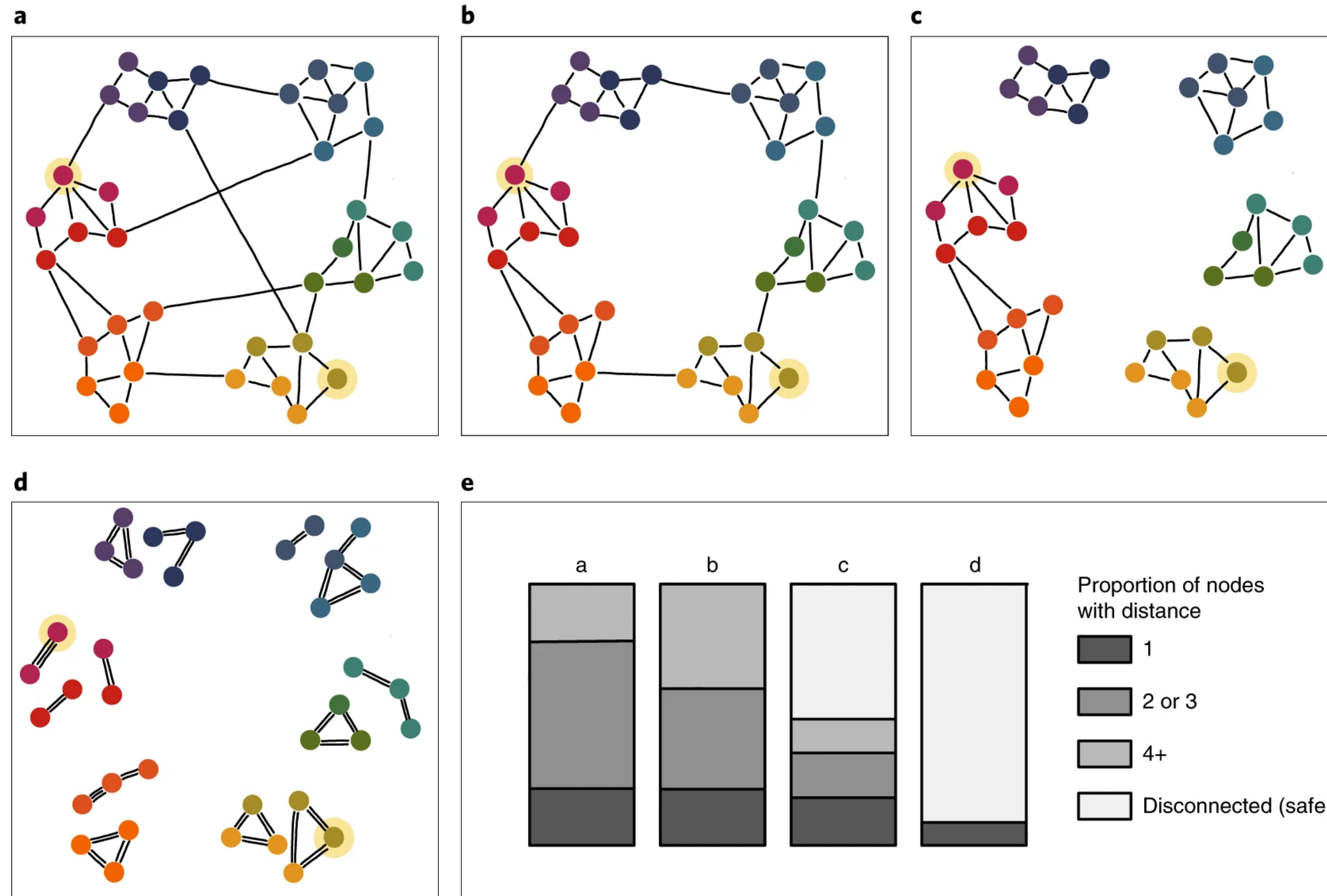
a–d, Two example networks

(**a** and **c**) have the same number of nodes (individuals) and ties (social interactions) but different structures (shorter path lengths in **a** and longer path lengths in **c**), which imply different infection curves

(**b** and **d**, respectively). Bold ties highlight the shortest infection path from the infection source to the last infected individual in the respective networks. Network node colour indicates at which step a node is infected and maps onto the colours of the histogram bars.

Block, P., Hoffman, M., Raabe, I.J. et al. Social network-based distancing strategies to flatten the COVID-19 curve in a post-lockdown world. Nat Hum Behav 4, 588–596 (2020).

Example Networks that result from the successive tie-reduction strategies



a–d, Based on an initial small-world network

(a), example networks are mapped based on removing ties to dissimilar others who live far away

(b), removing non-embedded ties that are not part of triads or four-cycles

(c) or repeating rather than extending contact

(d). Node colour represents an individual characteristic, where similarity in node colour represents similarity in this characteristic. Node placement represents geographic location of residence. Ties to dissimilar others who live far away are indicated by ties substantially longer than the average (that is, to nodes that are placed distantly and have very different colours).

e, Bar graph showing network distances from the infection sources (highlighted in yellow in **a–d**) for the different scenarios.

Block, P., Hoffman, M., Raabe, I.J. et al. Social network-based distancing strategies to flatten the COVID-19 curve in a post-lockdown world. Nat Hum Behav 4, 588–596 (2020).

NETWORK EFFECTS MAP

DIRECT

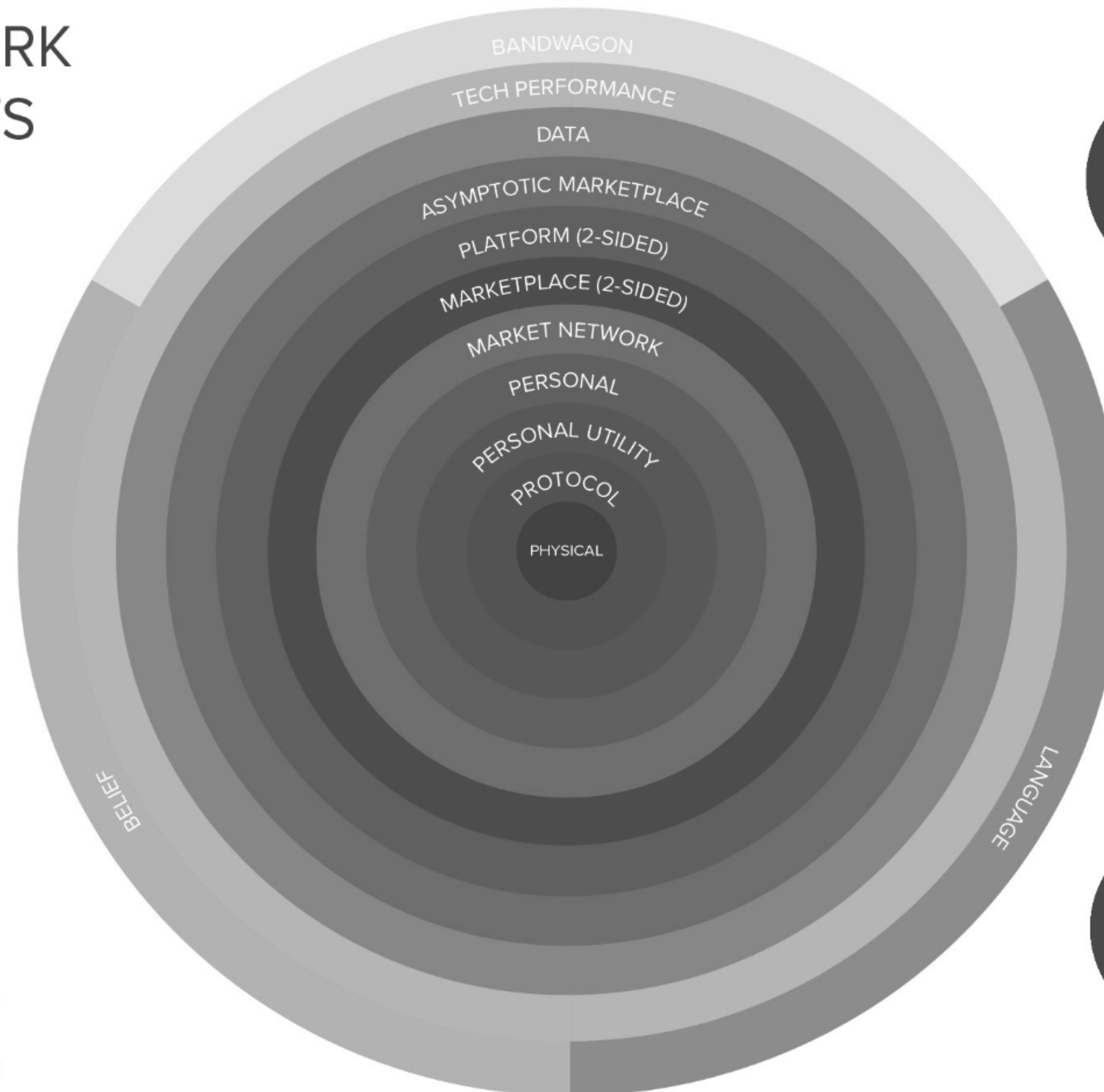
2-SIDED

DATA

TECH

SOCIAL

NfX

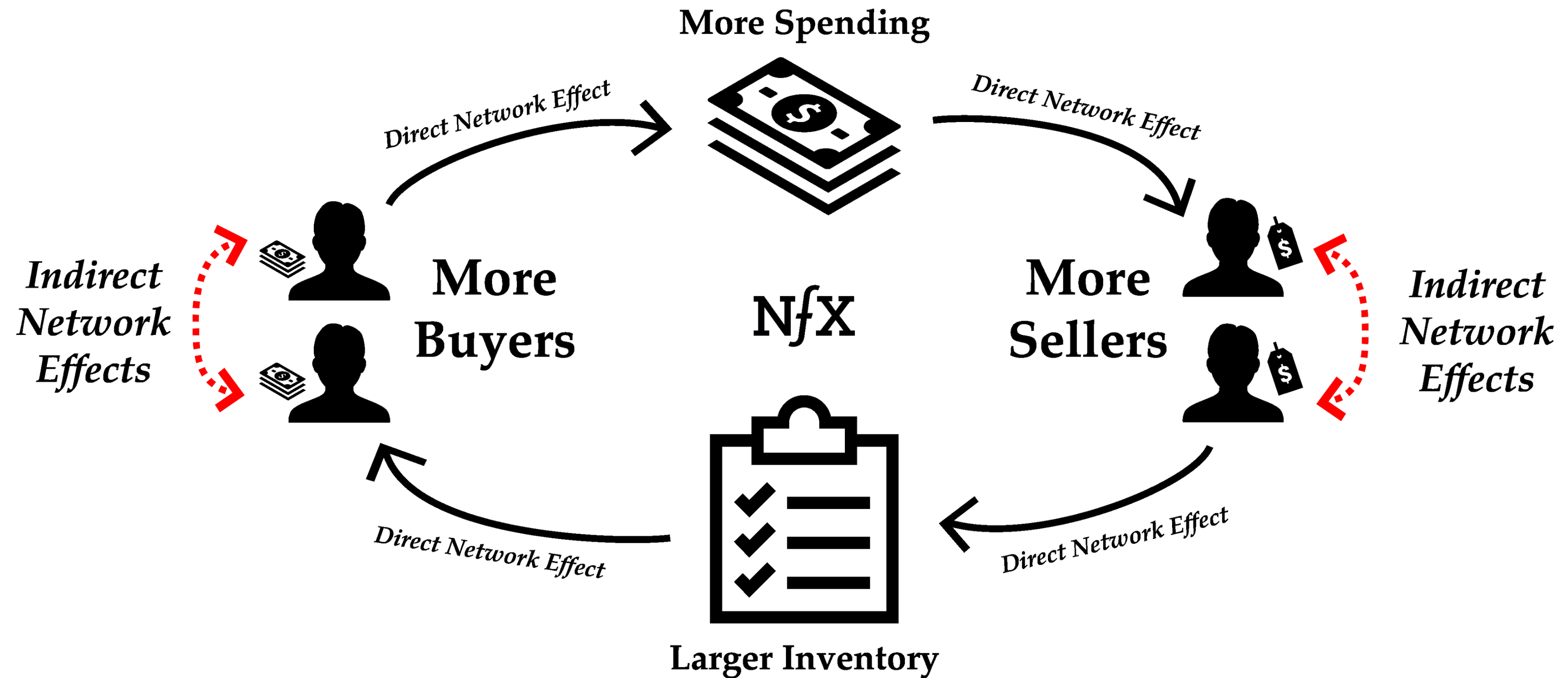


BRAND

EMBED

SCALE

Source: Network Effect Map by James Currier (2023)



Source: Indirect Network Effect by James Currier (2023), eg eBay, MS Windows, etc