



Digital transformation dengan crowd economy: study & lesson learned

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JOINTS 2016

MARDHANI RIASETIAWAN

Scientist, founder & entrepreneur

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Experience

Founder & CEO, Intelligent Technology Initiatives, a big data management platform company | 2010 - current

Lecturer, Department of Computer Science and Electronics, Faculty of Mathematics and Natural Science, Universitas Gadjah Mada | 2012 - current

Secretary, Big Data Working Group UGM

Consultant, Integrated Data Management & Big Data, Upstream Technology Center, PT Pertamina | 2012 - current

Consultant, Nuclear Safety & Data Center Management, BAPETEN RI | 2015 - current

Researcher, International Monitoring Center, CTBTO-IAEA & Univ of Vienna, Austria | Nov 2015 - Feb 2016

Education

Master in Information Technology, Universitas Gadjah Mada | 2007

Bachelor in Accounting, Universitas Gadjah Mada | 2013



StartUp

Kiddoplex.id, technology makerspace, Yogyakarta | 2016

Gamabox.id, Enterprise Data Management Services, Yogyakarta | 2015

Gamabox.tv, Internet Creative TV, Yogyakarta, 2014

Interest

Cloud

Big Data

Entrepreneurships

Social-preneur

Open Source

Data Science

Agenda

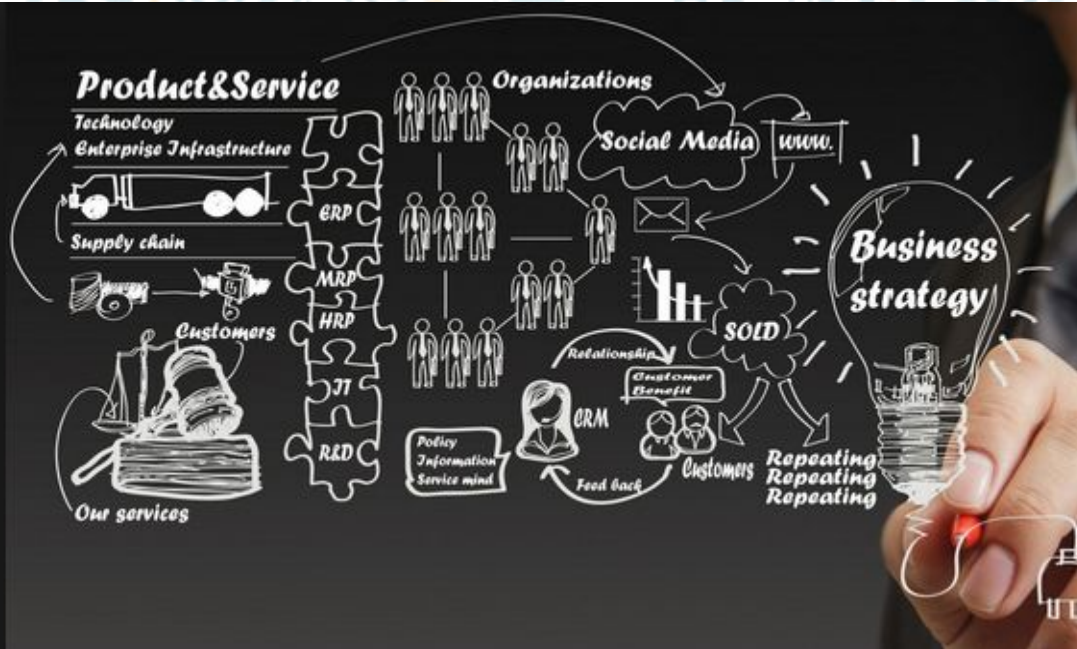
Industry Transformation

Crowd Economy Framework

Lesson Learned: SME, start up, lahan gambut, finance

Notes: Presentasi adalah bagian dari study pada Digital Economy Research Group UGM Januari sd Agustus 2016 (Big Data Working Group UGM + Intelligent Technology Initiatives)

Introduction





Continuous Industry Transformation

Future of Work *Abundance* *Efficiency*
Immediacy *New Buying Centers* *Personalization*



Modern Application Engineering

1. Mobile First
2. Lightweight
3. LOB Purpose Built
4. Disposable App
5. Rapid Deploy

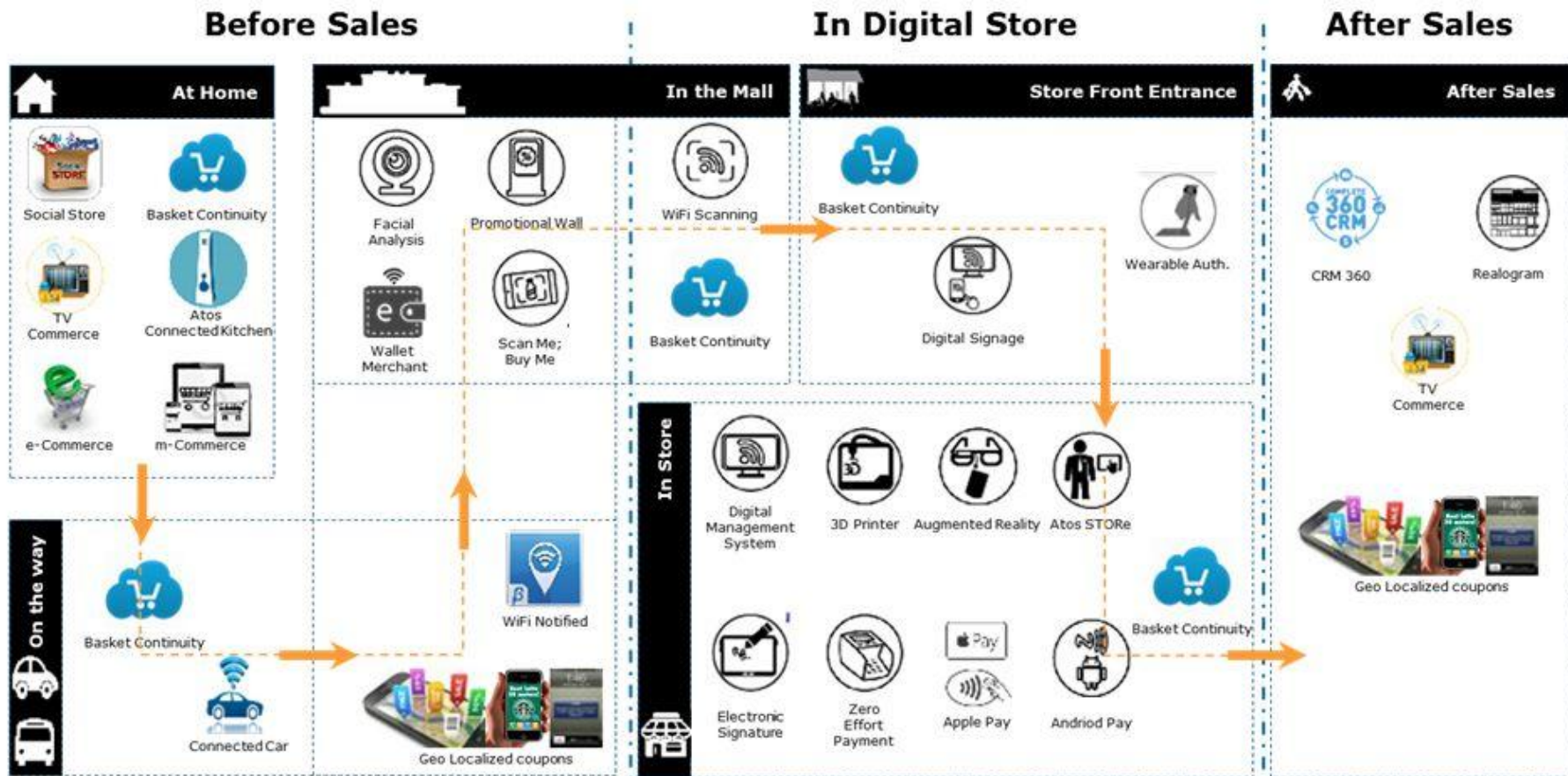
Software Driven Dynamic Infrastructures

1. XaaS Model
2. Secure Reliable
3. App Aware
4. LOB visibility
5. Elastic Scaling

Business Process Automation

1. Strategy Driven
2. Flexible, Extensible
3. Decision Enabler
4. Cross Functional
5. Adaptive Workflow

example



The 'digital compass' helps companies find tools to match their needs.

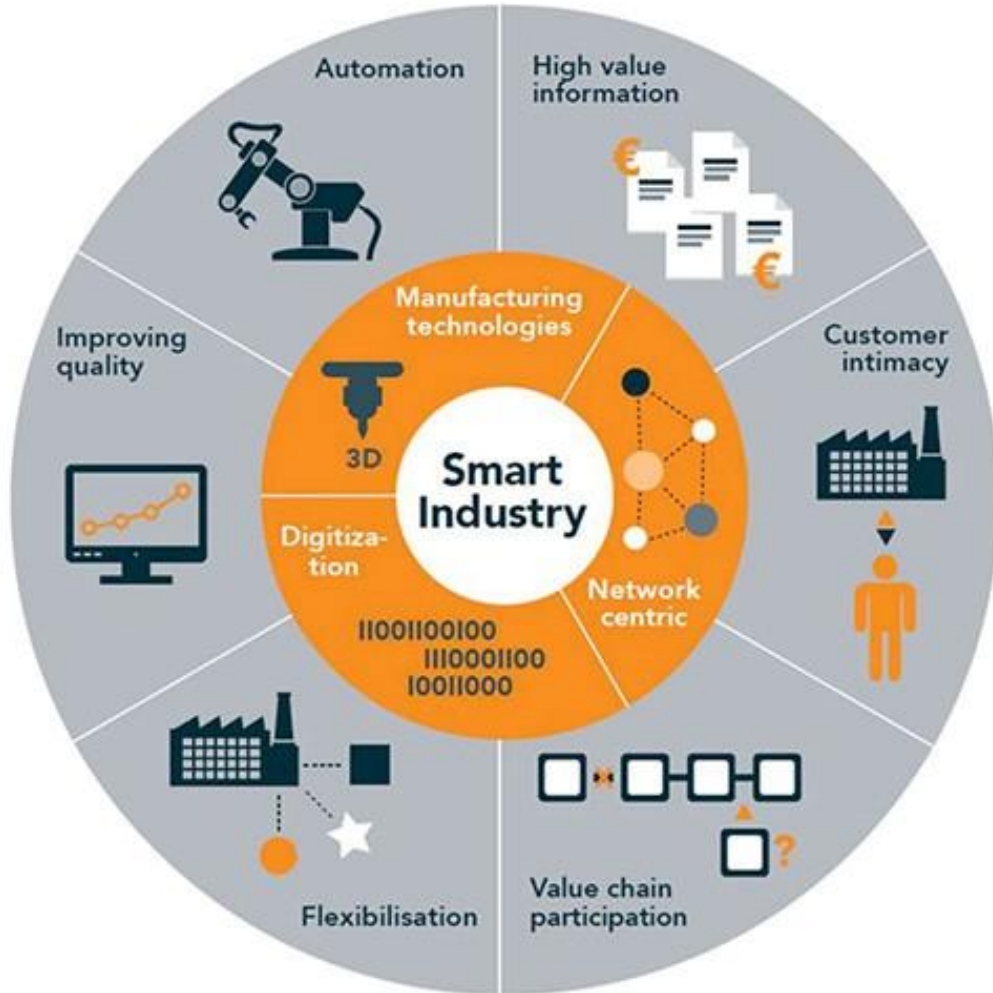


Investment focus on

- Resource Process
- Asset Utilization
- Labor
- Inventories
- Quality
- Supply/Demand match
- Time to market
- Service/after sales

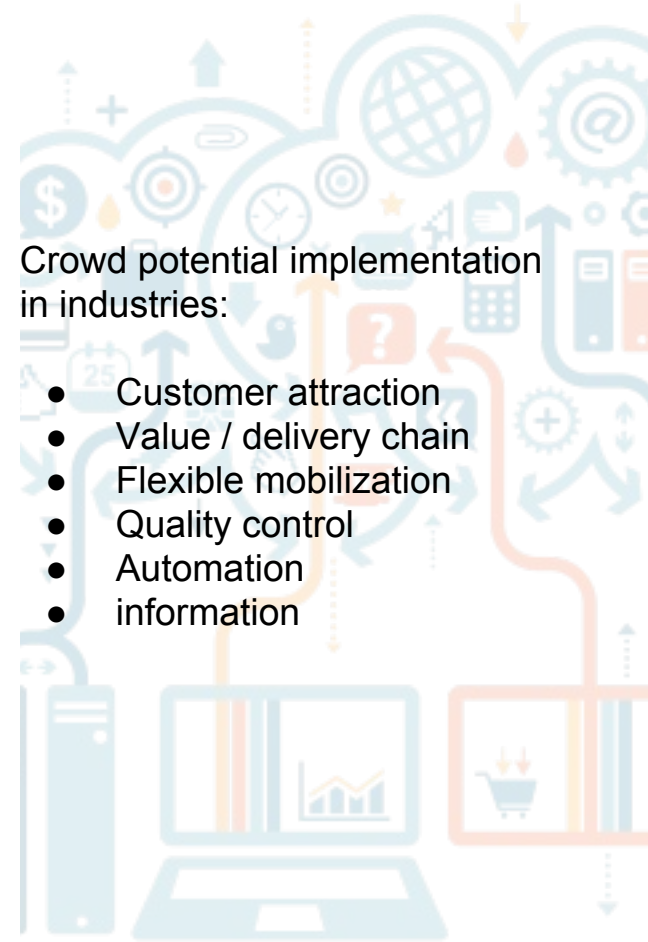


¹Maintenance, repair, and operations.



Crowd potential implementation in industries:

- Customer attraction
- Value / delivery chain
- Flexible mobilization
- Quality control
- Automation
- information



My organization views digital technologies as an opportunity.

82% see digital as an opportunity. Yet ...



■ Don't know ■ Strongly disagree ■ Disagree ■ Neither disagree nor disagree ■ Agree ■ Strongly agree

How has your organization's investment in digital initiatives changed this fiscal year compared to last fiscal year?



... only 44% have increased investment in digital in the last year.

■ Don't know ■ Significantly decreased ■ Decreased ■ Stayed the same ■ Increased significantly ■ Significantly increased

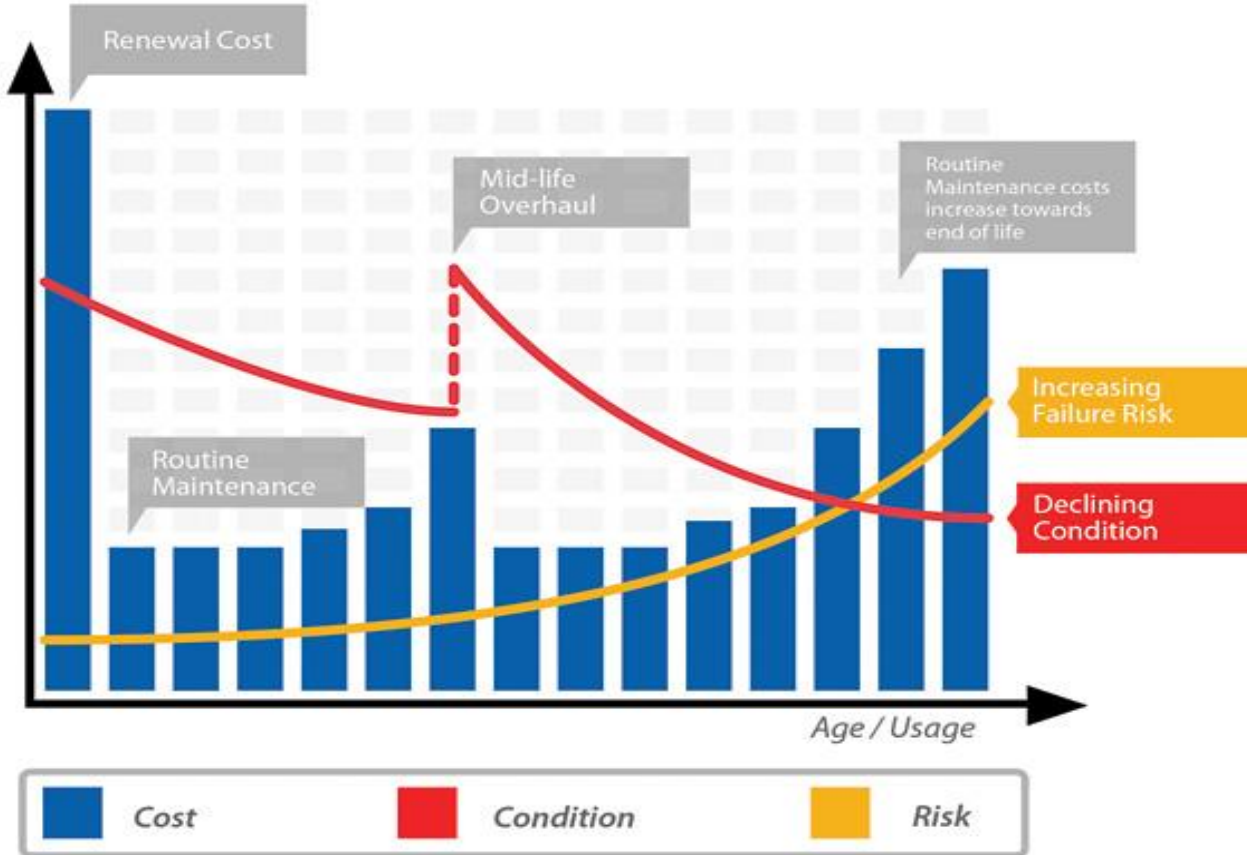
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Industry investment for digital technologies

46% + 36% Agree

34% + 10% increase the business

challenges



Maintaining stabilities

- Maximize current resources
- Minimize the risks

Economic
scale

Government

Innovation

Fund & Assets

People
Interaction



collaboration

channeling

resources

Crowd Economy Framework



PEOPLE

Empowering, disruptive, and human-centric



PURPOSE

Creates meaningful experiences



PARTICIPATION

Emphasis on co-creation and shared value



PLATFORM

Medium to interact and drive results



PRODUCTIVITY

Faster, cheaper, more efficient processes

FOUR PHASES OF DIGITAL ERAS



INTERNET ERA
(Mid 90s)



SOCIAL MEDIA AGE
(Mid 2000s)



COLLABORATIVE
ECONOMY AGE
(Now)



AUTONOMOUS WORLD AGE
(Emerging)

Internet → Social Media → Collaborative → Autonomous

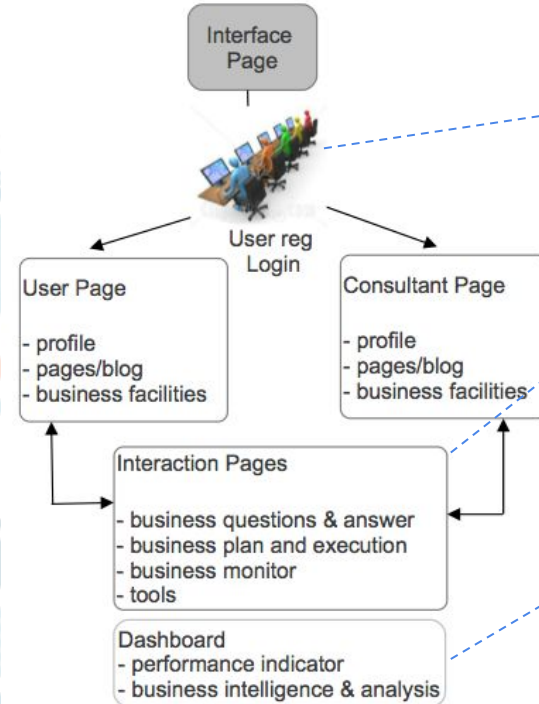
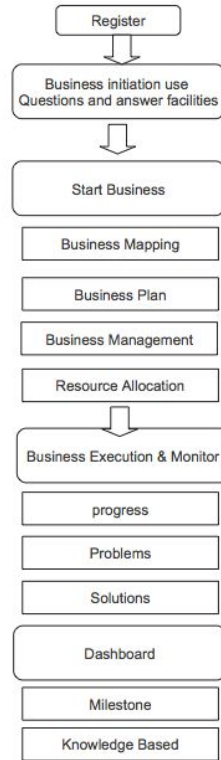
Crowd Companies, Jan 2016

Crowd Economy Ideas

Lesson learned from our research activities in

- ❑ SME / small medium enterprises , Kotagede Yogyakarta 2011
- ❑ StartUp crowd development, 2014-2016
- ❑ Lahan Gambut, preliminary study
- ❑ Financial: inflation, transaction & economic value

SME (dhanis project, 2011)



Crowd person

Crowd knowledge

Crowd performance

Crowd Framework for Start Up → Development (propose framework, 2016)

People involvement:
Survey,
Hackathon etc,

Makerspace:
Sharing, tools,
knowledge,
expertise,
channel

Fabricspace:
Production
process

Co-location
Share office
space &
business

Marketspace:
Delivery,
channeling,
market

Company:
Investment
, fund
raising,
IPO, etc

Idea &
Innovation
stage

Work for
Prototypes

Production

Establishment
& Business

Business
Development

Long Term
Business &
Run

Lahan Gambut

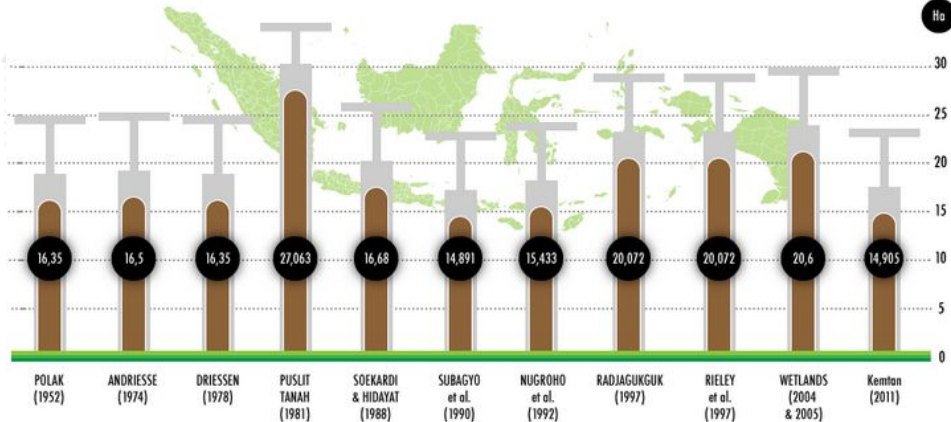


Questions:

Digital economy bisa berkontribusi untuk memecahkan masalah ini?

Ideas

Potensi



Dimensional approach

Lahan dibagi dalam dimensi

Setiap dimensi memiliki ukuran bervariasi

Dimensi memiliki nilai/value

Value \Rightarrow Rupiah

Petani bisa memiliki satu atau lebih dimensi



Expected Result

Result

Petani memiliki kepemilikan aset

Kepemilikan dapat bersifat bersama

Orientasi pada pengolahan

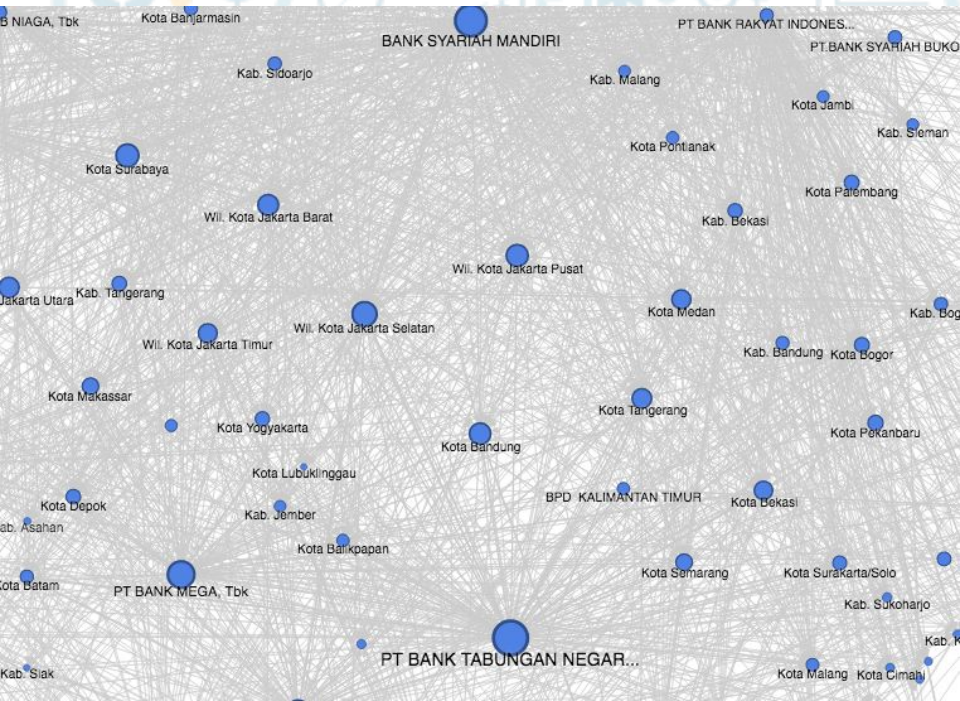
Impact

Nilai kepemilikan naik setiap waktu

Nilai ekonomis bertambah

Memunculkan value added

Finance



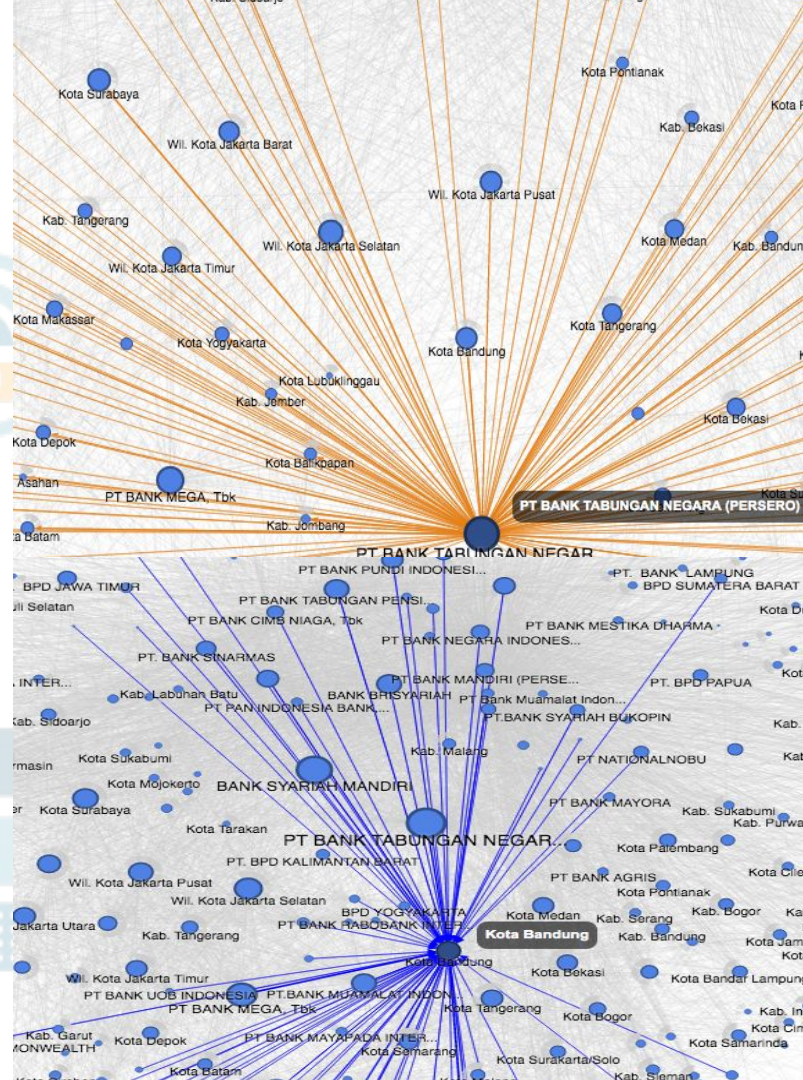
Financial challenges:

- Inflation
- Economic indicator
- Bank contribution
- City economic capacity

What for

Informasi yang dihasilkan

1. Kota dengan dukungan institusi keuangan yang dominan
 - a. Inflasi
 - b. Rate
 - c. fraud
2. Kontribusi Kota terhadap economic capacity



Kesimpulan

- Transformasi industri dengan digitalisasi memerlukan approach yang spesifik dan detail pada setiap tahapan business process
- Adopsi digitalisasi melalui teknologi perlu “cara baru” yang “distruktif” pola yang sudah berjalan
- Crowd economy menjadi salah satu opsi untuk melakukan transformasi dengan kata kunci *fast, reliable, adaptive & scalable*.



Terimakasih

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