“Shaping Indonesia’s digital transformation across the industry-F&B Industry Perspective”

Adhi Lukman
Chairman of Indonesian Food and Beverage Industry Association

Siemens - Digitalize Indonesia 2019
Jakarta, 31st October 2019
Mission Possible:
Indonesia towards the 4th Largest World Economic
## Indonesia

- Food 49.51%  

**Huge opportunity for Food Industry**
Mission Possible:
Seizing the Opportunities of Future Work to Drive Inclusive Growth

Source: Bappenas (Indonesia Vision 2045)
Infrastructure development continues! Connecting main infrastructure with people's production areas, small industries, Special Economic Zones, tourism, rice fields, plantations, and fishponds.

HR development is the key for Indonesia going forward. Ensuring the health of pregnant women, the health of infants, the health of toddlers, the health of school-age children.

The quality of education is improved. Vocational training, building an Indonesian Talent Management institution.

Invite as much investment as possible, open up employment opportunities and lifting the investment barriers.

Bureaucratic and structural reforms. No more comfort zones. Must change.

Indonesia to be more ADAPTIVE, PRODUCTIVE, INNOVATIVE, COMPETITIVE.

Ensuring the use of a budget (APBN) that is focused and on target. Make sure it has economic benefits, benefits for the people and improves people's welfare.
President’s Program for the next 5 years

1. HR Development
2. Continue Infrastructure Development
3. Removing Regulation Constraint
4. Simplify Bureaucracy
5. Economic Transform
   - Natural resources → Added Value
All About Food Industry (Source: BPS – MoI)

Non-Oil Industry Sector growth

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>5.61%</td>
<td>5.05%</td>
<td>4.43%</td>
<td>4.84%</td>
<td>4.77%</td>
</tr>
</tbody>
</table>

Food Industry growth

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>9.49%</td>
<td>7.54%</td>
<td>8.33%</td>
<td>9.23%</td>
<td>7.91%</td>
</tr>
</tbody>
</table>

Contribution Food Industry to Total GDP

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>5.32%</td>
<td>5.61%</td>
<td>5.97%</td>
<td>6.14%</td>
<td>6.25%</td>
</tr>
</tbody>
</table>

2018: 17.63% to GDP

35.45% to GDP Non-Oil Industry

Sm1-2019 4.38%

Sm1-2019 7.4%

Sm1-2019 6.38%

Sm1-2019 36.23%
### Number of Establishment

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Medium - Large</td>
<td>Small &amp; Micro</td>
<td>Medium - Large</td>
<td>Small &amp; Micro</td>
</tr>
<tr>
<td>Food</td>
<td>6,453</td>
<td>1,567,019</td>
<td>7,911</td>
<td>6,716</td>
</tr>
<tr>
<td>Beverages</td>
<td>422</td>
<td>47,130</td>
<td>628</td>
<td>580</td>
</tr>
<tr>
<td>Total</td>
<td>6,875</td>
<td>1,614,149</td>
<td>8,539</td>
<td>-</td>
</tr>
<tr>
<td>%</td>
<td>0.42</td>
<td>99.58</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Workers Engaged

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Medium - Large</td>
<td>Small &amp; Micro</td>
<td>Medium - Large</td>
</tr>
<tr>
<td>Food</td>
<td>858,170</td>
<td>3,664,208</td>
<td>1,105,898</td>
</tr>
<tr>
<td>Beverages</td>
<td>59,973</td>
<td>85,167</td>
<td>97,174</td>
</tr>
<tr>
<td>Total</td>
<td>918,143</td>
<td>3,749,375</td>
<td>1,203,072</td>
</tr>
<tr>
<td>%</td>
<td>19.67</td>
<td>80.33</td>
<td></td>
</tr>
</tbody>
</table>

### Value of Gross Output (billions rupiah)

<table>
<thead>
<tr>
<th>Category</th>
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<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Medium - Large</td>
<td>Small &amp; Micro</td>
<td>Medium - Large</td>
</tr>
<tr>
<td>Food</td>
<td>1,021,526</td>
<td>248,410</td>
<td>1,648,750</td>
</tr>
<tr>
<td>Beverages</td>
<td>40,693</td>
<td>3,589</td>
<td>64,153</td>
</tr>
<tr>
<td>Total</td>
<td>1,062,219</td>
<td>251,999</td>
<td>1,712,903</td>
</tr>
<tr>
<td>%</td>
<td>80.83</td>
<td>19.17</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Statistic BPS 2018
*Prognosa
<table>
<thead>
<tr>
<th>Raw Material:</th>
<th>Added Value Products:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Availability, continuity and sustainability</td>
<td>• Market more open &amp; difficult to stop Global Sourcing</td>
</tr>
<tr>
<td>• Quality, Time Delivery, Price competitiveness</td>
<td>• Competition is tougher</td>
</tr>
<tr>
<td>• Planning upstream – downstream</td>
<td>• Food Products must be innovative with new products to meet consumer’s needs and lifestyle</td>
</tr>
<tr>
<td>• Regulations and government policies must support sustainable raw materials and business friendly</td>
<td>• Anticipation of rapid changes in the global market</td>
</tr>
<tr>
<td>• Innovation is a must</td>
<td>• Disruptive economic</td>
</tr>
</tbody>
</table>

The food industry is still dependent on imported raw materials (semi processed) →
**Opportunity investment in intermediate industry**

**Added value production**→**Opportunity investment in downstream industry to fulfill Global Market**
Challenges Along the Food Supply Chain

- Tariff
- Quality Nutrition
- Healthier Choice
- HALAL
- Profitability
- Competitiveness
- Added Value
- Logistic Time delivery
- Ethnic & Habits.
- Resources
- Innovation
- Disruptive Economic Trade War
- Food loss Food waste
- SafeGuard SSG
- Anti Dumping
- GSP Review
- Discrimination
- Standard Label
- Regulation & Govt Policy
- Black Campaign
- Nationalist Protectionism
Digitalization in Enabling Industry Transformation
IMD World Digital Competitiveness Ranking 2019 (63 Countries):
  - Singapore – 2
  - Malaysia – 26
  - Thailand – 40
  - Philippines – 55
  - Indonesia - 56

Industry 4.0

- Digital supply chains
- Communication network infrastructure
- Internet of Things
- Big data platforms
- Digital twin
- Augmented reality
- Artificial intelligence & machine learning
- 3D printing
- Robotics
- Sensor technology
- Human-Machine Interface
Benefits

- Unprecedented speed to market
- Competitive product & price differentiation
- Intimate knowledge of their customers
- Expansion to new services or business models
- Improved global operations
Digitalization is leading to the fourth industrial revolution and it’s the key to Indonesia’s industrial transformation.

5 selected sectors to be prioritized in “Making Indonesia 4.0”

Source: A.T. Kearney, World Bank, BPS
Indonesia has set 10 National Priorities for “Making Indonesia 4.0”

1. **Reform Material Flow**
   - Enhance **domestic upstream material production**; e.g. 50% of petrochemical is imported

2. **Redesign Industrial Zones**
   - Build a single **nationwide industry zoning roadmap**; resolve zoning inconsistency challenges

3. **Embrace sustainability**
   - Grab **opportunities under global sustainability trend**; e.g. EV, biofuel, renewables

4. **Empower SMEs**
   - Empower 3.7 million SMEs¹ by technologies; e.g. build SME e-commerce, technology bank

5. **Build Nationwide Digital Infrastructure**
   - Advance **network and digital platform**; e.g. 4G to 5G, Fiber speed 1Gbps, Data center and Cloud

6. **Attract Foreign Investments**
   - Engage **top global manufacturers** with attractive offer and accelerate **technology transfer**

7. **Upgrade Human Capital**
   - Redesign **education curriculum** under 4IR era
   - Create professional **talent mobility program**

8. **Establish Innovation Ecosystem**
   - Enhance **R&D centers** by government, private sector and universities

9. **Incentivize Technology Investment**
   - Introduce **tax exemption/subsidies** for technology adoption and **support funding**

10. **Reoptimize Regulations & Policies**
    - Build more **coherent policies/regulations** by cross-ministry collaborations

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¹ Including micro enterprises
Source: Ministry of Industry, A.T. Kearney
Incentive for Industry:
Supertax Deduction
200% Vocational
300% Innovation

Training for Manager and Expert in Transforming Industry 4.0

Indonesia Industry 4.0 Readiness Index (INDI 4.0)

E-Smart SMEs Connecting to E-commerce

Lighthouse of Industry 4.0 Championing as a role model

Development Showcase and Innovation Centre of Industry 4.0

MoI: Implementation of Making Indonesia 4.0

Prime mover Economic Development

Making Indonesia 4.0
Indonesia Industry 4.0 Readiness Index (INDI 4.0)
Challenges in Implementing Industry 4.0

- Cyber Data security
- IT Infrastructure (network)
- Skill of Human Resources
- Processing Technology provider
- Innovation
- Regulation support
- Capital/Investment
Technology Replaces Workforce

- Predictive Maintenance
- Big-Data-Driven Quality Control
- Robot-Assisted Production
- Self-Driving Logistics Vehicles
- Machines as a Service
- Production Line Simulation
Factory Monitoring and Supervising

Augmented Reality (AR) – Smart Glasses Technology
What industry need? → Creating a Competitive Product to GVC

- Technology: Digital
- Disruptive economic
- Innovation
- Consumer’s preference
- Marketing purpose

Natural Resources

Gov. Policy & other supporting

INDUSTRY & TRADE

ADDED VALUE PRODUCT, SAFE, Halal
COMPETITIVE

CONSUMERS
What to do? Industry must be smart to anticipate the changes in Economic models and Consumer’s demand

Anticipating the changes in Consumer Demand & Disruptive technology

The Company Must Change or Die
-> Adaptation

Government to Review the Regulation

Innovation & Technology

Human Capital
-> Skill, Knowledge, Experience

Improve Competitiveness
Thank you