

# 研究チームの文献レビュー報告

駒井 忍

Shinobu Komai

Ph.D (UTM/MJIIT MOT) and PMP  
Researcher of VCPC.org

TEL: (60)-16-664-7724 (Malaysia)  
(81)-70-4571-7827 (Japan)

永谷 裕子

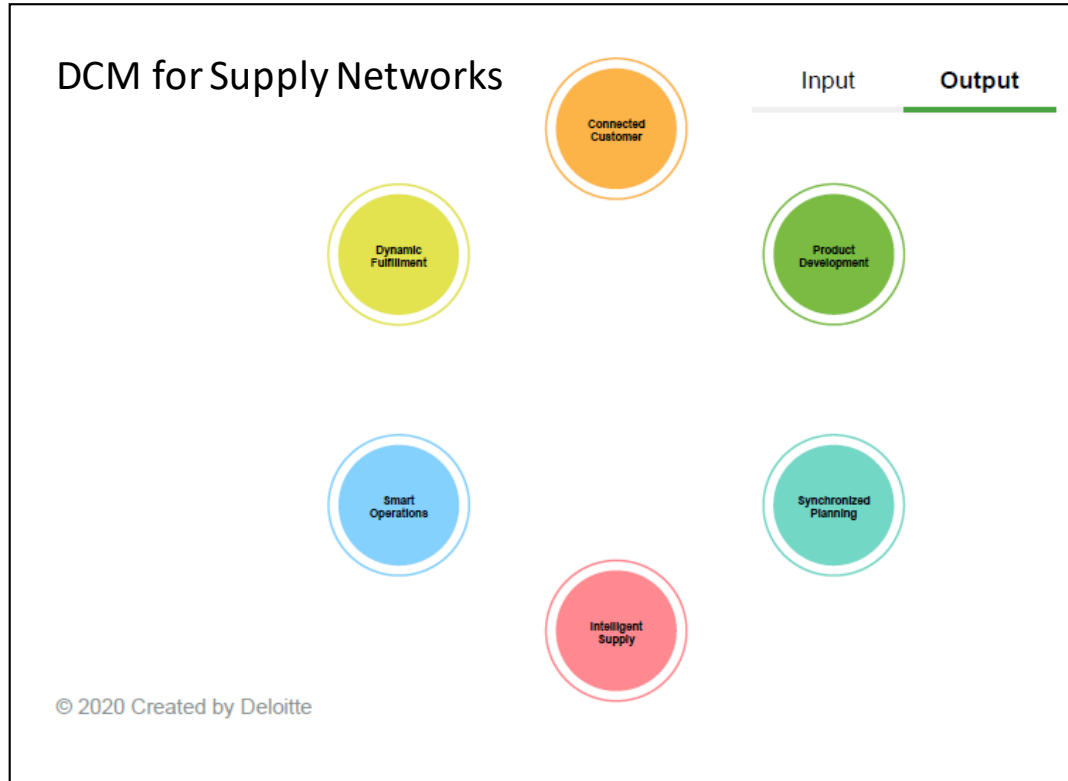
Hiroko Nagaya

PMP, MBA, and Ph.D  
(株)アスカプランニング  
代表取締役



***Hassan Keshavarz (Ph.D)***  
***Mobile: +49-1782082715***

# Research Fields



## Level-1 Capabilities

1. Synchronized Planning
2. Connected Customer
3. Smart Operations
4. Intelligent Supply
5. Product Development
6. Dynamic Fulfillment

Level 0: Digital Capabilities Model for Supply Networks

URL: <https://dcm.ascm.org/>

# 研究手法 (Research Methodology)

Google Scholarやその他の情報源の文献検索キーワードについてはレベル2を参照しながら、6つのレベル1の分野の合計150の主要な文献を調査し、文献を要約します。

A total of 150 major literatures in the 6 level 1 of fields will be surveyed and the literatures will be summarized, Referring to level 2 for literature search keywords on Google Scholar and other sources.

# 例「Level-1 Capability: 3. Smart Operations」

## Level-2 Capabilities (**was changed in May 2021 as follows**)

- 3-1. Operation Strategy
- 3-2. Augmented Workforce
- 3-3. Total Operations Synchronization
- 3-4. Agile Operation Execution
- 3-5. Efficient Operations Support
- 3-6. Operations Command Center

The Smart Operations Capability is a highly responsive, adaptive, digitized and connected function integrated into the digital supply network that synchronizes all aspects of production and operations. Smart Operations drives significant performance and safety improvements in production and similar functions, such as quality and maintenance, repair and overhaul.

# 研究成果「Research Results as of 26<sup>th</sup> May 2021」

Google Scholarやその他のソースの文献検索キーワードのレベル2を参照して、次ページに続いて、6つのレベル1の分野で合計**167**の(実際の)主要な文献が調査され、文献が要約されています。

**76**(実際)の推奨文献(**Good**)がコメントでマークされました。

A total of **167** (actual) major literatures in the 6 level 1 of fields have been surveyed following next pages and the literatures have been summarized, referring to level 2 for literature search keywords on Google Scholar and other sources.

The recommended literature (**Good**) of **76** (actual) were marked in comments.

# Total Number of Papers in Level-0 & 1 Capability

Level-0 Capabilities	Number of Literature (Good)	Comments
0. Digital Capabilities for Supply Networks	10 (9)	
1. Synchronized Planning	20 (6)	
2. Connected Customer	24 (5)	
3. Smart Operations	20 (8)	
4. Intelligent Supply	26 (8)	
5. Product Development	42 (30)	
6. Dynamic Fulfillment	25 (10)	
<b>Total</b>	<b>167 (76)</b>	

# Level-1 Capability: 1. Synchronized Planning

Level-1 & 2 Capabilities	Number of Literature (Good)	Comments
1. Synchronized Planning	3	
1-1. Enterprise Plan Reconciliation	3	
1-2. Supply Network Design	3 (1)	1-2. 1) Refer for the DCM for SN literature review & Fuzzy
1-3. Portfolio Life Cycle Planning	3 (1)	1-3. 2) Refer for product portfolio management (PPM)
1-4. Intelligent Demand Management	3 (2)	1-4. 2) &3) Out of scope for our research
1-5. Responsive Demand-Supply Matching (RDSM)	3 (2)	1-5. 1) Out of scope for our research 1-5. 2) Refer for the DCM for SN literature review (Nakano)
1-6. Dynamic Flow Optimization	2	
Total	20 (6)	

# Level-1 Capability: 2. Connected Customer

Level-1 & 2 Capabilities	Number of Literature (Good)	Comments
2. Connected Customer	3	
2-1. Self Service	3	
2-2. Customized Experience	3 (1)	2-2. 3) The Digital Maturity Model 4 . 0, Forrester.
2-3. Customer Issue Management	3	
2-4. Intelligent Product Tracking	3	
2-5. Monitoring and Insights	3 (2)	2-5. 1) Write about Touchpoint
2-6. Product as a Service (PaaS)	3 (1)	
2-7. Connected Field Services	3 (1)	2-7. 1) Refer for the DCM for SN literature review (Porter)
Total	24 (5)	



# Level-1 Capability: 3. Smart Operations

Level-1 & 2 Capabilities	Number of Literature (Good)	Comments
3. Smart Operations	12	
3-1. Operation Strategy	2 (2)	
3-2. Augmented Workforce	5 (5)	
3-3. Total Operations Synchronization		
3-4. Agile Operation Execution		
3-5. Efficient Operations Support	1 (1)	
3-6. Operations Command Center		
Total	20 (8)	

# Level-1 Capability: 4. Intelligent Supply

Level-1 & 2 Capabilities	Number of Literature (Good)	Comments
4. Intelligent Supply	4 (3)	4-1. 1) & 1)-a Refer for the DCM for SN literature review & Fuzzy
4-1. Intelligent Supply Analytics	3	
4-2. Category Management	3 (1)	2-2. 3) ERP on SN Maturity Model
4-3. Source Execution	3	
4-4. Digital Contract Management	3	
4-5. Procurement and Compliance	3	
4-6. Invoice and Payments Processing	3	
4-7. Supplier Collaboration	4 (4)	2-7. 1)-4) Refer supplier collaboration for the DCM for SN literature review
Total	26 (8)	9

# Level-1 Capability: 5. Product Development

Level-1 & 2 Capabilities	Number of Literature (Good)	Comments
5. Product Development	12	
5-1. Configuration Management	1 (1)	
5-2. Digital Development	4 (4)	
5-3. Product & Portfolio Management	9 (9)	
5-4. Product Development Collaboration	8 (8)	
5-5. Product Platform Architecture & Systems Eng	8 (8)	
Total	42 (30)	

# Level-1 Capability: 6. Dynamic Fulfillment

Level-1 & 2 Capabilities	Number of Literature (Good)	Comments
6. Dynamic Fulfillment	3 (3)	
6-1. Automated Fulfillment Signals	3	
6-2. Chain of Custody and Integrity	3	
6-3. Omnichannel Order Fulfillment	4 (4)	
6-4. Efficient Warehouse Operations	3	
6-5. Optimal Path Selection	3	
6-6. Adaptive Network Response	3	
6-7. Efficient Transportation Operations	3 (3)	
Total	25 (10)	