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Evolution of Industrial Revolution 4.0 in seaport system: an interpretation from a bibliometric analysis (TITLE 14 PT, Arial MT)

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# Introduction (Arial, 10pt)

ABSTRACT

(Arial, 8pt)

Seaport inefficiencies have triggered obstacles on its operations especially on maritime disruption which eventually contributes to high-cost expenses, unnecessary waste and environmental pollution, and capital losses (Salleh, Abd Rasidi, and Jeevan [2020](#_bookmark166)). It is believed that the emergence of new technology has become a decisive determinant to overcome these issues. Digital transformation is a key component in the industrial trans- formation which has led to IR 4.0. The physical world has been connected to the digital world through the technological transformations since 2011 and become a global catch- phrase especially among the industrialists (Mudin et al. [2018](#_bookmark141)). Germany was the ﬁrst nation to propose IR 4.0 as a new agenda in the Economic Policy which aims to inﬂuence and nourish the national and global industry (Mosconi [2015](#_bookmark140); Roblek, Meško, and Krapež [2016](#_bookmark161)). The fourth industrial revolution enables key components, such as

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# 1.1 Subheading (Arial, 10pt)

This is the sample of your paper. The major headings should be centered in column. Use capital letters with font size 10pt. Subheadings should be aligned to the left-hand margin of the column on a separate line. Use single spacing, 10pt Arial throughout the paper.

1. Literature Review (Arial, 10pt)
2. Methodology (Arial, 10pt)
3. Results and discussion (Arial, 10pt)

 5. Conclusion and implication (Arial, 10pt)

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E.g.:

Table 1. Search string strategies.

No Keyword search in Scopus Articles

|  |  |  |
| --- | --- | --- |
| 1. | ‘Industrial Revolution 4.0’ AND ‘seaport’ | 4 |
| 2. | ‘Industrie 4.0’ AND ‘seaport’ | 7 |
| 3. | ‘fourth industrial revolution’ AND ‘seaport’ | 7 |
| 4. | ‘fourth revolution’ AND ‘seaport’ | 3 |
| 5. | ‘industry 4.0’ AND ‘seaport’ | 50 |
| 6. | ‘new Industrial Revolution’ AND ‘seaport’ | 2 |
| 7. | ‘fourth industrial’ AND ‘seaport’ | 6 |
|  | *Total* | 79 |
|  | *After remove duplicate* ﬁ*les* | 59 |
| No | Keyword search in WoS | Articles |
| 1. | ‘Industrial Revolution 4.0’ AND ‘seaport’ | 0 |
| 2. | ‘Industrie 4.0’ AND ‘seaport’ | 0 |
| 3. | ‘fourth industrial revolution’ AND ‘seaport’ | 2 |
| 4. | ‘fourth revolution’ AND ‘seaport’ | 2 |
| 5. | ‘industry 4.0’ AND ‘seaport’ | 6 |
| 6. | ‘new Industrial Revolution’ AND ‘seaport’ | 1 |
| 7. | ‘fourth industrial’ AND ‘seaport’ | 2 |
|  | *Total* | 13 |
|  | *After remove duplicate* ﬁ*les* | 8 |
| Source: Authors. |  |  |



Figure 1. Frequency distribution of top 10 cited articles from Scopus. Source: Authors.

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