ANALISA MODEL TINGKAT KEMATANGAN DIGITAL DI BISNIS PERUSAHAAN KELUARGA (STUDI KASUS: CV. MUTIARA PERKASA ABADI)

ANALYSIS OF DIGITAL MATURITY MODEL IN FAMILY BUSINESS COMPANY (CASE STUDY: CV. MUTIARA PERKASA ABADI)

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Abstrak

Industri manufaktur skala menengah di Indonesia menghadapi beberapa tantangan seperti; biaya produksi yang tinggi, perubahan teknologi informasi yang cepat, serta perubahan permintaan dan pasar yang sangat dinamis. Tantangan-tantangan ini secara langsung atau tidak langsung mempengaruhi keberlanjutan operasi perusahaan. Berkenaan dengan kondisi di atas, sebagai kontribusi akademis, tujuan dari penelitian ini adalah menentukan posisi kematangan digital untuk industri manufaktur skala menengah dan bagaimana meningkatkan posisi kematangan digital yang telah diterapkan di perusahaan. Agar implementasi digital berfungsi dengan baik, perusahaan harus mengetahui posisi kematangan digital mereka. Metode untuk mengukur posisi kematangan digital adalah dengan model kematangan digital. Ada dua indikator yang mengukur kematangan digital; kemampuan digital dan dampak digital. Penelitian ini adalah penelitian kuantitatif, dimana pengumpulan datanya dilakukan dengan menggunakan kuesioner. Data dari wawancara dianalisis menggunakan perangkat lunak SPSS dan Microsoft Excel yang menghasilkan digital *maturity scorecard* yang kemudian diterjemahkan ke posisi tingkat kematangan digital. Studi kasus untuk penelitian ini adalah di perusahaan pengolahan makanan skala menengah di Bandung bernama CV. MUTIARA PERKASA ABADI. Hasil akhir menunjukkan bahwa CV. Mutiara Perkasa Abadi telah mencapai kuadran keempat yang berarti dalam tahap transformatif dengan skor kemampuan digital 112,95 dan skor dampak digital 128,83 yang berarti perusahaan memiliki kemampuan pengembangan digital internal yang kuat, fokus masalah, dan budaya inovasi.

Kata kunci: Model Kematangan Digital, Transformasi Digital, Tingkat kematangan Digital

Abstract

The medium-scale manufacturing industry in Indonesia is facing several challenges such as; high production costs, rapid changes in information technology, as well as changes in demand and a very dynamic market. These challenges directly or indirectly affect the sustainability of the company's operations. Regarding to the condition above, as an academic contribution, the purpose of this study is defining the digital maturity position for medium-scale manufacturing industry and how to improve the digital maturity position that has been implemented in the company. In order to make digital implementation works well, the company must know their maturity position. The methods for measuring digital maturity position is by digital maturity model. There are two indicators that digital maturity measures; digital capabilities and digital impact. This research is a quantitative research, which data collection was conducted using questionnaires. The data from interviews was analyzed using SPSS and Microsoft Excel Software generating digital maturity scorecard that later translated to maturity position. The case study for this research is in a medium-scale food processing company in Bandung named CV. MUTIARA PERKASA ABADI. The final result shows that CV. Mutiara Perkasa Abadi has reach the forth quadrant which mean in the transformative stage with digital capability score of 112.95 and digital impact score of 128.83 which mean the company has strong internal digital development capability, problem focused, and culture of innovation.

Kata kunci: ***Digital Maturity Model, Digital Transformation, Digital Maturity Level***

1. Introduction

The application of digital-based technology in medium and large scale companies has been proven to be able increases company efficiency, especially in the production, management information, and product development. In the past, the thing about the industrial revolution and the digital revolution is only technology that changed, but not with human resources. The same dynamics that brought about the industrial revolution have brought about the digital revolution. What most people know about the industrial revolution was that it created productions faster, and more efficient. Digital is about immediacy and satisfying what people always want "faster, better, and cheaper." Even in the 1700s people wanted things faster, cheaper, and better.

Industrial revolution always connected with digital transformation that it is a journey involving a complex ecosystem of capabilities. As the technological landscape is rapidly changing, organizations must also transform or become victims of 'digital Darwinism' (Rosemann & Bruin, 2005). According to Van Peteghem (2014), digital transformation allows people to solve their traditional problems and make this digital as solution covering the old solution.

Digital transformation is defined as the process whereby a business becomes increasingly digital over time by leveraging digital technologies to provide new revenue and value-producing opportunities and satisfy what people always want (cheaper, faster, better). This involves a complete integration of technology into all aspects of a business to improve performance (Wendler, 2012). This has led to the emergence of the concept of a 'digital maturity model' that seeks to guide organizations in digital transformation. A 'digital maturity model' can therefore be defined as the extent to which a digital transformation process is explicitly defined, managed, measured and continuously improved. The maturity level can be assessed in terms of measurable target values that can be achieved in incremental steps (Hansen & Sia, 2015).

Digital maturity models or DMMs can be used in each phase of the transformation to help identify gaps, establish key areas for focus, and where to begin. There are three journey or phase that DDM applied, firstly is imagine, what are the company's ambitions? How can it drive strategic advantage? Use the DDM to deeper explore opportunities and set a vision for the future. Second is to deliver what was the imagined takes shape and is tested for validity.

The concept is refined and a plan is set for future operating models to drive to scale. Also, it's important to prioritize capabilities to enhance based on business objectives and assess impact to digital maturity of the initiatives on roadmap. Third is to run your organization, implement moves forward. Benefits begin to be realized at scale and the organization is prepared for continuous learning (Deloitte, 2017).

This study tries to identify the digital implementation currently running in the company and look for the development of the digital implementation towards the companies that can later improve the digital maturity level of the company.

2. Literature Review

2.1 Digital Businesss Transformation

According to Schumpeter, 2012. A digital enterprise is "a company, irrespective of history or industry whose IT plays a dominant role in the corporate strategy, i.e. where IT is used in internal and external operations to create a competitive advantage." Wernerfelt (2010), defines that a digital firm is the one "where nearly all of the organization's significant business relationships with customers, suppliers and employees are digitally enabled and mediated. Core business processes are accomplished through digital networks spanning the entire organization or linking multiple organizations".

"Organizational change through the use of digital technologies and business models to improve performance" (Busenitz, 1997). Digital business transformation is one of effort to respond environment change and uses digital technology appropriately according to company business problem, in order to become more effective in order to achieve competitive advantage, it is called digital transformation (Rowles, 2017).

2.2 Digital Maturity Model

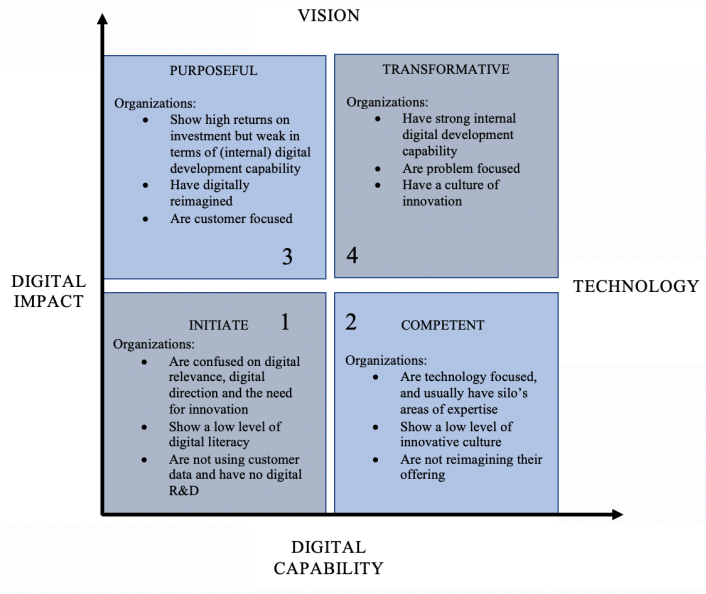
A 'digital maturity model' can therefore be defined as the extent to which a digital transformation process is explicitly defined, managed, measured and continuously improved. The maturity level can be assessed in terms of measurable target values that can be achieved in incremental steps (Hansen & Sia, 2015). Chanias and Hess (2016) define digital maturity as a status of a digital transformation of the company and a description of the company in the context of transforming the digital transformation effort. These efforts include completing changes from an operational perspective, changes to the product or process, etc. A Maturity Model is a widely-used technique that is proved to be valuable to assess business processes or certain aspects of organizations, as it represents a path towards an increasingly organized and systematic way of doing business. A maturity assessment can be used to measure the current maturity level of a certain aspect of an organization in a meaningful way, enabling stakeholders to clearly identify strengths and improvement points, and accordingly prioritize what to do in order to reach higher maturity levels (Diogo Proenca, 2016). This paper collects and analyzes the current practice on maturity models, by analyzing a collection of maturity models from literature.

This digital maturity model helps companies assess their overall digital readiness. Some companies might want to measure the advances of their specific digital functions. The questions assessment evaluates the core capabilities, attitudes, and competencies that define a mature digital operation regardless of employee's specific focus on digital. The model accommodates overall digital transformation scenarios, the model assesses foundational aspects that matter to a company's overall digital transformation, such as executive support for digital strategy, digital staff resourcing, how success is measured, and business functions/IT relationship effectiveness.

2.3 Digital Maturity Position

The digital maturity model proposed in this research illustrated by graphs x and y which consist of four stages. They are: initiate, competent, purposeful and transformative. the x-axis represents the level of digital capability and the y-axis represents digital impact. To use this model, businesses will need to complete a survey before measuring the organizational performance for each of the capability and impact indicators. The survey requires businesses to consider a series of statements and rate their own performance on a scale 1 to 5 from strongly disagree to strongly agree (digital maturity scorecard). After summing the result from the survey, the result can be determined where the company digital maturity stages/level.

Figure 1 Digital Maturity Position



2.4 Digital Maturity Model Indicator

There are two indicators that digital maturity measures; digital capabilities and digital impact.

- The Digital Capability Indicators measure the 'strength of the company's digital foundation.
- The Digital Impact Indicators measure how digital technologies are leveraged to respond to consumer demand and changes in the environment through improved product and service offerings. In other words, the demand side of digital maturity is how well the organization understands the consumer and positions itself to the consumer through brand, experience and technology.

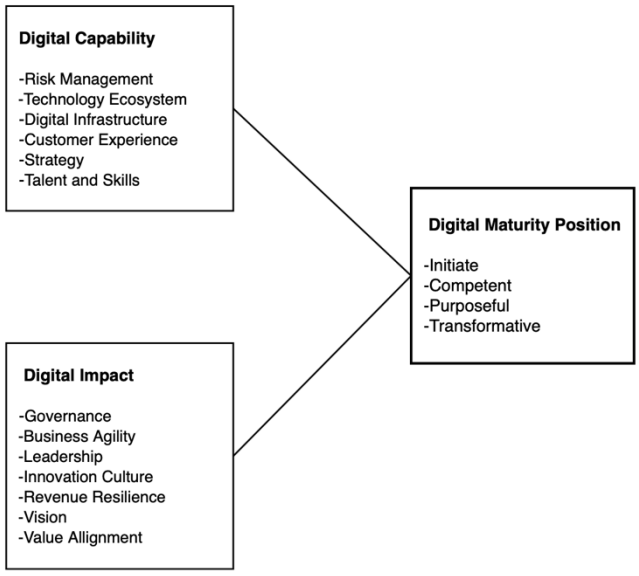
2.5 Research Framework

From all of the theories explained above, it leads to research framework is used in this research. This framework aims to measure digital maturity position, as part of the final measurement of digital maturity models. The digital maturity position proposed in this research consist of four levels which project to digital impact and digital capability of the company, the four levels are:

1. Initiate
2. Competent
3. Purposeful
4. Transformative

The Digital maturity model measures digital maturity level across two axes; 'Digital Capabilities' and 'Digital Impact. It allows identification of digital maturity level across different dimensions, helps to facilitate informed decisions about prioritizing areas for future development, can be applied over time and allows benchmarking of company compared to competitors.

Figure 2 Research Framework



3. Research Methodhology

The method used in this research is a quantitative study with a descriptive approach. Quantitative research is based on measurement of quantity or amount that can be counted and calculated. This type of research can be applicable to the phenomena that can be expressed in the terms of quantity. Based on philosophy, research methods are used to examine certain populations or samples to collect data using research instrument to analyze quantitative data, with the aim of testing the hypotheses that have been set (Sugiyono, 2017). The analysis technique used in this research is descriptive analysis techniques to measure capability indicator and impact indicator at CV. Mutiara Perkasa Abadi.

Descriptive analysis was obtained by using a questionnaire that was distributed and filled in by all predetermined samples (respondent). Each respondent has to answer the questions using a scale 1 to 5, the number represent as a score for each question, the scale 1 to 5 means:

1. Strongly agree (5)
2. Agree (4)
3. Neutral (3)
4. Disagree (2)
5. Strongly disagree (1)

The results of the questionnaire will be processed to find out digital capability and digital impact of CV. Mutiara Perkasa Abadi.

4. Research Result and Discussion

4.1 Calculating Overall Maturity Position

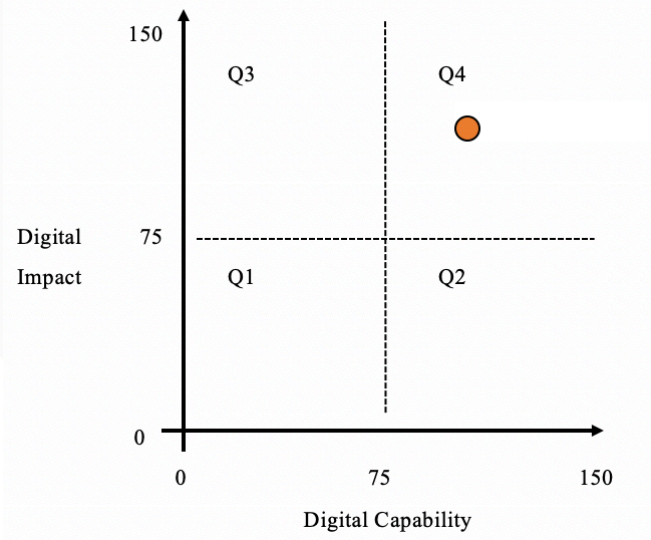
From the data that has been calculated, the final step is to add all of the Digital Capability and Digital Impact average result individually to mapping the overall maturity position, table below shows the final result of digital maturity position of CV. Mutiara Perkasa Abadi,

Table 1 Digital Maturity Result

Digital Capability Result	Digital Impact Result
112.95	128.83

The result then transformed into graph that consist of four quadrants. The first quadrant is Initiate, second is Competent, third is Purposeful, fourth is Transformative. The final result shows that Digital Capability has the score of 112.95 and Digital Impact has score of 128.83 which mean CV. Mutiara Perkasa Abadi is in the fourth quadrant (transformative). The graph below helps to mapping the overall digital maturity position of CV. Mutiara Perkasa Abadi.

Figure 3 CV. MPA Digital Maturity Position



4.2 Research Discuss Result

From the research conducted, CV. Mutiara Perkasa Abadi has reached the transformative stage which mean the company has strong internal digital development capability, problem focused, and culture of innovation. This stages is the higher stages of all in digital maturity position. All of the variables are influencing the result but, these are the five individual variables from digital capability and digital impact that most influence to the result:

Digital Capability:

1. Company has technology foundation in place that enables company to benefit from business networks and optimize collaboration with suppliers.
2. Company uses technology to deliver more efficient business outcomes, for example by using process automation and hardware virtualization, cutting out the intermediaries or using data to become more accurate and predictive.
3. User Experience research is conducted by company to better understand customer pain points as part of designing better products and services.
4. Company has the ability to design and deliver a tailored product to fulfil customers' needs.
5. Customers can effectively communicate with the company to address complaints and help resolve issues.

Digital Impact:

1. Company has a long-term (e.g. 5 years and beyond) goal that reflects ultimate point of success.
2. Company has a mandate to everyone to think creatively and innovate.
3. Employees regularly work in interdisciplinary teams and are supported in cross-skilling and knowledge sharing.
4. Supplier can effectively communicate with company to co-create value.
5. Efficient and agile processes and systems are used to react to rapid business change.

In addition to the factors that most influence, there are also factors that have the smallest score to be taken into consideration by the company for future growth and development. The five individual variables from digital capability and digital impact that less influence to the result are:

Digital Capability:

1. Company has a clear, coherent and actionable strategy that shows the path and steps of digital transformation.
2. Digital strategy in the company focuses on transforming the whole business (end-to-end) rather than transforming one or more operations or silos.
3. Employees have skills and competencies to facilitate digitization or are able to access these skills from partners or suppliers as needed.
4. It easy to attract high quality technical staff to the company because of the reputation as a leader in digital technologies and ways of working.
5. Company has embedded a proactive risk management approach within the culture and processes of the company.

Digital Impact:

1. Digital strategy in the company is no different from overall business strategy.
2. Company conducts innovation activities as a regular task.
3. Everyone in the company knows of, understands and is able to act on company's digital strategy.
4. There are very few technical issues in the delivery of company's digital services.
5. Company's digital initiatives are currently generating value (e.g. new lines of revenue) and/or efficiencies (e.g. cost reductions), and the impacts are increasing over time.

5. Conclusion and Suggestion

5.1 Conclussion

Based on the results and analysis, the conclusions drawn to answer the research questions on chapter I are: The result of digital maturity position in the company based on study conducted is in the transformative stage. The company has reach the highest stages of all digital maturity position with digital capability score of 112.95 and digital impact score of 128.83. These are the 3 characteristics of transformative company the first is company has strong internal capability in terms of digital development refer to the underlying technological assets of a corporation and how these are integrated into business processes, in digitally mature company, technology infrastructure has been well integrated across all aspects of the business. Better integration and scope for improvement allows the company to quickly react and adapt to changes (improves business agility). Second is the company is more focused on the problem (problem focused) which makes the problem as focal point of the company's strategy, and the third is already implement culture of innovation that supports stakeholder to creative thinking and has shared set of knowledge and mutually strengthened the idea about the importance of innovation

To improve the current digital maturity position that has been implemented, CV. MPA needs to be being digitalize in every aspect of the company such as in production division which is mostly still run by humans. Also CV. MPA has low score of employee culture, this mean CV. MPA should more often conduct such as training, outing for its employees to create quality employees and generate a better working atmosphere which will have an impact on employee productivity that will be a good investment for the company in the future.

5.2 Suggestion

In order to improve company's digital maturity position, also purpose and result of this research is aims to beneficial advice to company that can be used for future improvement and development, there are 5 factors which must be considered by the company based on the digital maturity model conducted. They are discussed as follow:

1. Strategy
   Company must have a clear, coherent and actionable strategy that shows the path and steps of digital transformation. Digital strategy in the company must be focuses on transforming the whole business (end-to-end) not only focused at one or more operations. Also, digital strategy in the company has to be different from overall business strategy to make the company more competitive in the market.
2. Employee
   Employees must have skills and competencies to facilitate digitization or are able to access these skills from partners or suppliers to make a good reputation as a leader in digital technologies company. Meaning if the reputation of the company is as a leader in digital technologies, it is easy to attract high quality technical staff to the company. Beside of that, everyone in the company has to know, understands and able to act on company's digital strategy.
3. Risk Management
   CV. Mutiara Perkasa Abadi has to focus more in a proactive risk management approach within the culture and processes of the company. While digitally mature, company should have a proactive culture that tolerates risk taking behavior.
4. Innovation
   Company should conduct innovation activities as a regular task. Researcher find that CV. MPA's digital initiatives are currently still not yet generating value and/or efficiencies maximally, and the impacts are increasing over time.
5. Operation
   There are still founded a few technical issues in the delivery of company's digital services. the company must find out the cause and immediately resolve it.

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