Policy for Industrial Development in Era 4.0 In Some Pioneering Countries and Proposing to Vietnam

Phan Thi Thuy Hoa, Nguyen Thi Hoa, Pham Thi Minh Chau

Abstract—Vietnam is considered to be a country with the advantage of a young and abundant labor force, which will not be a strength because robots will replace all manual jobs. In the future, people will lose their jobs, because robot technology can affect all industries such as textiles, services, entertainment to health, transportation, education. The paper analyzes policies that pave the way for 4.0 industry development in the eight most representative countries of the European Union. The author points out the most basic content and clarifies the key points of the policy that the so-called countries have followed, including identifying policy space, pursuing goals, and supply, funding, efficiency brought about, the focus and impacts of policies, governance and implementation, specific barriers and obstacles in each country. From there, draw lessons learned in planning, as well as implementing policies at the national level on industry 4.0 in Vietnam today. The author also made some suggestive suggestions about the policy direction to create a solid condition for Industry 4.0 to develop.

Index Terms—Era 4.0, Industry 4.0, Vietnam, Policy, Industrial Development.

I. INTRODUCTION

Up to now, we have passed three major scientific and technological revolutions. First, the Industrial Revolution 1.0 (1784) was the arrival of the steam engine. Steam engines directly impact industries such as textiles, mechanical engineering, and transportation. Steam engines were introduced into cars, trains and ships, opening a new era in human history [1]. Second, the Industrial Revolution 2.0 (1870) was when the electric motor was born, bringing civilization life, productivity increased many times compared to steam engines. Third, the industrial revolution 3.0 (1969) is when transistors, electronics, connecting the world are in contact with each other [2]. Satellites, airplanes, computers, phones, Internet ... are the technologies that we currently enjoy [3].

Today is the era of the 4.0 industrial revolution, which is a high-level combination of physical and digital hyperlink systems with the focus on the internet, everything connected (IoT) and artificial intelligence. Technology 4.0 will free people from intellectual work [4]. The demonstration of Technology 4.0 is Robot Sophia, who has been granted Saudi Arabian citizenship. Sophia was created by Hong Kong-based Dr. David Hanson, founder of the Hanson Robotics company in Hong Kong, where he and his family moved to develop his career, because of its low cost and quality engineer team [5]. Currently, we are witnessing the Internet of Things, big data, cloud computing integrated with all smart technologies to optimize production processes and methods [6]. These fields of technology are promoting the so-called "Fourth Industrial Revolution”. By being sensitive to the digital vision, the countries pioneering in Industry 4.0 are well aware of the potential for “digital transformation” in the structure of manufacturing industries, on the other hand, they also recognize the investment for Industry 4.0 will create a driving force for the economy with outstanding growth [7]. Instead of creating new industries, "digital" opportunities are driving a full transformation of today's industries [8]. In other words, Industry 4.0 renews the way it operates in business and production. However, the rate of using digital technology in businesses worldwide is still very low, specifically, over 41% of companies of the European Union (hereinafter referred to as the EU) have not yet applied. any advanced digital technology [9].

This is just a fact that businesses are facing challenges in the transition to digital businesses. However, reference to a recent survey of EU businesses shows that, 75% of businesses think that digital technology is an opportunity and 64% of businesses invest in digital technology that produces positive results [10].

To cope with the challenges of changing from "enterprise” to "digital enterprise", most of the governments of countries have put industry 4.0 as "priority", applying policies to create favorable conditions for the public. Industry 4.0 develops on a large scale to increase productivity, increase competitivenes and improve skills to use smart technology for their workforce [11].

Industrial Revolution 4.0 (Industry 4.0), which is a high-level combination of physical and digital hyperlink systems with the focus on the internet, everything connected (IoT) and artificial intelligence. Industry 4.0 with digitalization system, aiming to liberate people from intellectual work. In this article, the author introduces: Industry 4.0 and its impact; world industrial development trend 4.0, mainly in Asia; Vietnam and the degree of digitalization [12], along with some opinions about the role of the state in promoting digitalization of manufacturing enterprises [13].

This article will point out the focus of industrial policy 4.0 in leading EU countries such as France, Germany, Netherlands, Sweden, Italy, Spain, UK and Czech Republic [14]. The author also clarifies the differences throughout the content of industrial policy 4.0 in the policy design of countries, mobilizing and using capital, implementing it has brought certain efficiency. Moreover, the authorities in these EU countries are aware of the actors involved in industrial policy 4.0, but there is a lack of systematic cooperation and exchange through regulations from government. In addition to conducting comparative analysis, this paper aims to find out lessons learned from policies for industry 4.0 to help

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facilitate objective and scientific perceptions in policy formulation and implementation in Vietnam in the short and long term [15].

II. ANALYSIS OF NATIONAL POLICIES ON INDUSTRY 4.0

A. Covers policy frameworks

The key points of Industry 4.0 policy are part of the overall strategic framework, reflecting Industry 4.0 priority in the EU as shown in Table I below.

In particular, France's "Industry for the Future" Scheme is linked to the "Normandie Industry" Program.

<table>
<thead>
<tr>
<th>Country</th>
<th>Policy year</th>
<th>Goals</th>
<th>Investment (Euro)</th>
<th>Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>2015</td>
<td>Industry and production, SME</td>
<td>10 billion</td>
<td>State and private</td>
</tr>
<tr>
<td>Germany</td>
<td>2011</td>
<td>Producers, SMEs and policy makers</td>
<td>200 million</td>
<td>State and private</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2012</td>
<td>Large enterprises, SMEs, universities, research centers</td>
<td>45 million</td>
<td>State</td>
</tr>
<tr>
<td>Switzerland</td>
<td>2014</td>
<td>Business connection industry, SME and microenterprise</td>
<td>25 million</td>
<td>State and private</td>
</tr>
<tr>
<td>Italy</td>
<td>2016</td>
<td>Research, science and industry, SME services</td>
<td>97.5 million</td>
<td>State</td>
</tr>
<tr>
<td>Spain</td>
<td>2013</td>
<td>Business, industry and research organizations</td>
<td>50 millions</td>
<td>State and private</td>
</tr>
<tr>
<td>England</td>
<td>2016</td>
<td></td>
<td>164 million</td>
<td>State and private</td>
</tr>
</tbody>
</table>

Italy's "Smart factory cluster" project is built on the Italian "Roadmap for Innovation", a broader strategy on the three challenging socio-economic areas that Italy is facing, including: climate change, scarcity of resources, mechanical population growth, ...[16]

France and the Netherlands have clearly defined the reasons to launch policy initiatives. In France, the lack of investment and digital industry development issues are the driving force behind policy creation. In the Netherlands, by contrast, the relatively low percentage of people working in the manufacturing sector has led to a smart industry.

In some countries, policy initiatives are a direct result of a national strategic framework and / or agenda. Germany's "Industrial Platform 4.0" project began as one of ten projects in the High Technology Strategy Action Plan until 2020 [17].

In the case of Spain, the Scheme is a digital part of the Industry Strengthening Program and is gradually transformed into the "Connection Industry 4.0" Scheme.

Meanwhile, the Project "Launching of high value-added production" in the UK shows how the UK Government has acted in proposing policy strategies to set up a series of technology centers in industry.

B. The goal of the policy

In industrial policy 4.0 of EU countries, there is a big overlap in the goals and objectives they pursue. Looking at specific goals in the national strategy, most of their policies are intended to enhance the competitiveness and modernize the national industry. The most obvious is the goal to ensure the sustainable growth of the mechanical engineering industry [18]. If fundamentally in a national policy, economic goals are often combined with social and environmental goals [19]. Although achieving economic goals requires a difference in policies and overall goal adjustments.

In the case of Spain, the cost covered by a loan depends on the scope of operation and the type of business, between the cost of 25% and 70%.

France's "Industry for the Future" scheme combines a variety of funding tools, for example, loans and tax incentives with private investment in scientific research and technology development (R&D) [20].

Sweden's "2030 Production" scheme is heavily controlled and financed by industry to ensure industrial impact and long-term sustainability [21].

Meanwhile, the most unique element in the UK involves providing industrial scale technology and expertise to businesses to reduce the risk of technological innovation through the establishment of seven technology centers. In this way, the centers provide a favorable environment for cooperation between industry, research and government agencies and / or between regional and national parties.

In France, the foundation of the "Industry for the Future" Scheme facilitates cooperation between industrial and civil stakeholders.

Meanwhile, Germany's "Industry 4.0" Scheme allows policymakers to promote leadership in industry 4.0 issues at all levels of management.

On the other hand, the Italian Smart Cluster Scheme incorporates regional and national Industry 4.0 policies in line with EU guidelines [11].

C. Centralized focus and impact of policies

Although, all policies considered regarding Industry 4.0 are prioritized to accelerate the deployment and application of Industry 4.0 technologies. Only the Italian Smart Cluster Scheme focuses more on research, especially on developing new technologies to meet the challenges of creating innovation. Moreover, there is no clear technology or industry focus of national policies. While the internet of things / virtual-reality systems is the most common technology sector, it is only considered as a goal in German and French policy. At the sector and manufacturing level, specific models do not exist. This shows that the policy initiatives of the leading countries in Industry 4.0 tend to be relatively open to the application of specific 4.0 technologies or industry-specific technologies [22].

Increasing the sustainability of production is a common area of impact targeted by Swedish and Italian initiatives.

Meanwhile, Spain seeks to provide information and implementation support to companies to better exploit the opportunities provided by industry 4.0.

In the Netherlands, greater flexibility in production, efficiency, cost and customer needs are the main expected impacts.

<table>
<thead>
<tr>
<th>Country</th>
<th>Project</th>
<th>Strategic focus</th>
<th>Technology / key</th>
</tr>
</thead>
</table>

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D. Funding

Although national industrial policies 4.0 are based primarily on public (state) financing, additional private investments are also important with significant leverage efficiency. However, the volume of leverage increase in investment between the policies under consideration is largely different [23]. Similarly, measures adopted by policy initiatives to ensure private investment vary by type of activity. Moreover, information on private leverage is not expected to be available to all policy initiatives, hindering comparisons between policies.

The UK's "High value-added production launch pad" project underwent a comprehensive review of the leverage effect of public investment. With a leverage of 17/1, "High-value manufacturing launchers" exceed the leverage of any other policy initiative, even more than many times. To a large extent, this success can be attributed to the considerable amount of income from commercial activity that the "High value-added production launch pad" is achieved through competitive R&D contracts. Despite the difficulties in assessing the success of policy initiatives in promoting private sector investment, it is clear that the range of measures taken varies [24].

The two projects "Industry for the Future" and "Launching of high value-added production" have provided the most comprehensive measures. "Industry for the Future" provides tax incentives for private R&D investment. Moreover, "High value-added production launchers" provide strategic participation with important industry partners and support programs for the participation of small and medium-sized businesses. Although, real mechanisms are in place to better ensure private investment - that is, encourage or require private investment - national policy initiatives will benefit from consideration. tighter private investment in policy design [25].

<table>
<thead>
<tr>
<th>Name</th>
<th>Industry for the future</th>
<th>Implementation (application)</th>
<th>Transport, IoT, artificial intelligence, big data, digital technology, healthcare, smart cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>Industry 4.0 platform</td>
<td>Implementation (application)</td>
<td>Scientific research and technological development</td>
</tr>
<tr>
<td>Germany</td>
<td>Smart industry</td>
<td>Implementation (application)</td>
<td>Virtual-reality system, IoT</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Production 2030</td>
<td>Implementation (application)</td>
<td>Smart industry (general)</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Smart factory cluster</td>
<td>Implementation (application)</td>
<td>Digital platform, big data, collaboration application</td>
</tr>
<tr>
<td>Italy</td>
<td>Industry 4.0 connectivity</td>
<td>Implementation (application)</td>
<td>Smart industry (general)</td>
</tr>
<tr>
<td>Spain</td>
<td>Launch pad to produce high added value</td>
<td>Implementation (application)</td>
<td>Aerospace, automobiles, chemicals, nuclear, pharmaceuticals, electronics</td>
</tr>
<tr>
<td>England</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE III: INVESTMENTS AND RESULTS OBTAINED IN TYPICAL COUNTRIES

(Euro)

<table>
<thead>
<tr>
<th>Country</th>
<th>Investment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>10 billion</td>
<td>800 loans to companies; 3,400 companies modernize production, 300 experts are identified; Participation of 18 regions and territories</td>
</tr>
<tr>
<td>Germany</td>
<td>200 million</td>
<td>Reduction of industry divisions; convert research program into practice, develop affiliate network, create foundation with 150 members</td>
</tr>
<tr>
<td>Netherlands</td>
<td>45 million</td>
<td>Set up 14 field laboratories by the end of 2016; each field laboratory has sales of 250,000 to 4 million euros per year, Funding 30 projects, involving more than 150 businesses, establishing a doctoral training school and gaining 50% additional financial support for all activities and tool purchases</td>
</tr>
<tr>
<td>Switzerland</td>
<td>25 million</td>
<td>250,000 to 4 million euros per year, Funding 30 projects, involving more than 150 businesses, establishing a doctoral training school and gaining 50% additional financial support for all activities and tool purchases</td>
</tr>
<tr>
<td>Italy</td>
<td>97.5 million</td>
<td>Create a platform to connect production and carry out four key research projects</td>
</tr>
<tr>
<td>Spain</td>
<td>50 millions</td>
<td>Establish innovation programs and research and pilot business support programs</td>
</tr>
<tr>
<td>England</td>
<td>164 million</td>
<td>The value of renovation work accounts for 123% of the plan; Every 1 Euro of public budget is generated 17 Euro</td>
</tr>
</tbody>
</table>

E. Results and efficiency brought

National policies for Industry 4.0 in the EU have produced qualitative and quantitative results. The qualitative and quantitative results are incomplete for France, the Netherlands, Sweden and the UK. In the "Industry for the Future" in France more than 800 corporate loans and 3,400 cases were supported, while Sweden, "Production 2030" financed 30 projects with the participation of more than 150 businesses. karma. Meanwhile, for Germany's Industry 4.0 policy initiative, outstanding qualitative results such as reducing industry divisions, transforming practical applied research and creating networks with a 150-member platform. Regardless of the important results achieved, the lack of clear short-term, medium-term or long-term goals, often means that it is unclear whether the policy goal has been achieved. The UK's "high value-added production launch pad" is once again an exception, as the initiative has set a clear goal for cyclical monitoring and evaluation. The results from the comprehensive evaluation study show that the value of innovation is 123% compared to the original goal in the period 2013-2015. This indicates that the demand for services and supports exceeds initial expectations.

F. Implementation and administration

In addition to the overall strategy or roadmap to identify key goals and action steps, the use of proposals, working groups, in-depth consultations and steering committees with broad participation is needed. set. In a number of policy initiatives, additional initiatives have been implemented to coordinate implementation. To finalize the policy design and start implementing, consultations, stakeholder consultations and call for proposals are conducted.

In Spain, consultations with stakeholders are quite comprehensive. In the course of nearly 5 months, "Industry 4.0" has organized a series of seminars and meetings related to all participants. In addition, three major industry partners (Santander, Indra and Telefonica) helped set up strategic and governance models. In Sweden, the use of expert groups has contributed to the development of new content and suggestive comments, as well as the creation of new policy visions and proposals.
III. EXPERIENCES AND LESSONS LEARNED FROM NATIONAL POLICIES ON INDUSTRY 4.0

A. Policy space

Firstly, in terms of investment, industry 4.0 funding comes primarily from the public and private sectors. Secondly, in terms of orientation and policy for Industry 4.0, there is a tendency to focus on technology and infrastructure, followed by development of production skills. The notable exception is the Swedish “Production 2030” scheme, which involves the participation of a national university relevant to the manufacturing sector. The scheme “Production 4.0” in the Czech Republic also shows a great orientation for production skills, especially digital skills.

Thirdly, in terms of management and implementation, most national policies on industry 4.0 have a top-down approach to design, initiate and implement policy initiatives. This means that, although other stakeholders have been consulted and contributed to the implementation of policies, governments are still in control and control. One notable exception is Sweden’s “2030 production” program, where industry, academia and research groups are responsible for the design and operation of policy initiatives. The Dutch smart industry is also an exception. Smart industry is based on principles and bottom-up approach based on three pillars, with the participation of industry, universities and other research partners. The public sector plays the role of establishing and implementing core activities.

Industrial policy control factors 4.0

In terms of coordination capacity between the parties and between different management levels, the project “Launching of high value-added production” has established an effective mechanism to facilitate cooperation between mind, throughout the Scheme. In these forums, representatives of all collaborative centers identify technological challenges and opportunities to address by taking advantage of the centers’ combined capabilities. In addition, there is a dedicated budget to support transcenter technology projects. In general, the participation of diverse parties is a strength to define national policies on industry 4.0. Collaboration with industry stakeholders / stakeholders is most often mentioned by implementing agencies as a driving force.

In some cases, the industry proactively encourages the creation of initiatives - for example in the Netherlands and France - to create incentives. Involvement of regional authorities in the application of industry 4.0 strategies at the regional level - often within the framework of smart expertise strategies - is often allowed for strong policy alignment. Closer between national and regional levels. Last but not least, public authorities’ initiative to promote industrial policy 4.0 is also one of the main drivers. Public dynamics can be particularly useful when industries are too isolated or fragmented to reach consensus among industry participants. For example, Germany’s “Industry 4.0 Platform” shows that a large 4.0 industry platform can reduce industry segregation and improve production networks.

B. Barriers faced in industrial policy 4.0

No specific barrier stands out as a common denominator for national industrial policies 4.0. Instead, a variety of different aspects arise. The lack of resources and ineffective participation of small and medium enterprises have challenged the implementation of policy initiatives. Like any other large-scale policy project, the state's initial budget is critical for industrial policies 4.0 to accelerate and build the capacity needed for effective functioning.

Experience shows that, although large companies are often familiar with the process of seeking financing for production, small and medium enterprises need more support to apply for funding.

C. Industry Policy 4.0 from a SWOT perspective

The SWOT analysis result of industrial development policy 4.0 shows a low level of convergence. Among the main strengths, support is given to businesses, along with agreement between policy administration levels, as well as industry co-financing. In contrast, the main weaknesses identified are closely related to barriers such as funding constraints, lack of capacity, poor planning, monitoring, and ways to engage SMEs into programs, ... These are also considered to be the main weaknesses in 4.0 industry policies. In France, there are doubts about the ability to effectively measure policy achievements. Spain, at present, has no clear definition of goals. Meanwhile, Industry 4.0 mainly reflects potentials, expandability and transferability, new markets and international cooperation opportunities. In Sweden, the potential for expanding the scale of school production at the Nordic level provides new opportunities. Meanwhile, in Italy, the publication of a talented instrument. The new key of "Industry 4.0" will open up new opportunities for businesses. In terms of threats, the imbalance between the way of administration between levels in administrative management, along with the conflict of interests of sectors and within each industry is quite clear. Unusually, the "High value-added production launch pad" is attempting to maintain a balanced funding model, as profits have exceeded expectations. The balanced funding model is important to ensure a balance between encouraging growth and stimulating innovation in areas that are beneficial to manufacturing [26].

D. Main policy lessons

Firstly, policy lessons learned in industrial policy design 4.0. This involves structures, stakeholders like industry, technology and research as well as associations - which are seen as important to the success of the policy. In addition, the shortage of digital solutions has been resolved by involving the digital field in project implementation.

However, the Swedish authorities have developed a bottom-up model, which relies heavily on policy makers and research stakeholders. In Germany, lessons learned from this policy include experience to expand the network and common standards and norms of network members in order to reduce competition.

Secondly, the policy lesson learned includes the need to provide clearly targeted funding tools, in order to attract SMEs to participate more effectively. Targeted approaches for small and medium-sized businesses also include specialized assistance in mainstreaming small and medium-sized businesses into industry 4.0, and global value chains because small businesses are less likely to prepare for technology adjustment due to lack of specialized staff or
unfamiliarity with new technologies.

The approach from an experimental laboratory offers interesting perspectives in the Netherlands. The proximity of companies and field laboratories and the operation of field laboratories in different regions has emphasized access to knowledge.

Thirdly, the lesson learned from Italy's "Smart Factory Cluster" relates to the strategic role of clusters in determining industrial policy. Because industrial policy is fragmented in Europe in general - compared to the United States and China - a specialized industrial cluster is formulated by policymakers for the purpose of unifying science, technology and technology. between members of the cluster and more convenient in providing support services [20].

Fourthly, the main lesson learned from the UK underscores the value of "late stage" innovation for economic growth. This is where industrial scale technology can act as a success factor.

Finally, the balanced funding model reduces the risk of volatility making it easier to realize long-term commitments to improve innovation.

Cross-cutting issues for effective industrial policies 4.0

Firstly, industrial policies 4.0 benefit from setting clear goals with measurement goals / milestones supported by qualitative and quantitative indicators, as well as rigorous monitoring and evaluation mechanisms.

Secondly, while public funding is necessary, private financing for industrial policies 4.0 is also important. Therefore, policymakers should envisage measures to secure private finance - either voluntarily or mandated. Similarly, the leverage of society with investments that can enhance the impact of policies needs to be considered to overcome challenges, to reap the profits from the results of operations. R&D, in feasible commercial applications of the EU. A high level of financing from industry stakeholders is needed to increase the sustainability of the initiative [27].

Thirdly, the sector-based (or bottom-up) approach to the top-down governance approach ensures more active participation of in-depth professional fields. In this way, members in each industry have the opportunity to actively participate, promote the development of specific production areas.

Fourthly, innovative and closer to the market financing tools, for example, business loans and tax incentives should also be considered.

Fifthly, the effective participation of small and medium-sized businesses often requires a more flexible approach, that is, providing specific funding tools.

Sixthly, the slow pace of implementation of projects may reduce the chance of achieving important results.

Seventhly, the trend is to create large platforms, many investors, but most of the policies are geared towards increasing technology deployment or adoption, the closest assistance program to the digital transformation needs of businesses.

The above analysis does not cover all activities related to industrial policy 4.0 in European Union countries. However, the analysis also gives us an overview of the ways of the countries that are considered to be the most dynamic, rich with potential as well as the most promising in the current trend of industrial development 4.0.

IV. PROPOSING DEVELOPMENT DIRECTION OF INDUSTRY 4.0 IN VIETNAM

In the current context, Vietnam has certain barriers in actively participating in Industry 4.0, as well as the process of absorbing technology 4.0 due to specific circumstances and conditions as outlined in Resolution No. 23-NQ / TW of the Central Executive Committee on March 22, 2018. In the Resolution, there are notable points such as "lack of overall and synchronous industrial development"; "Not determined the right role of the business"; "... mobilizing, allocating and using resources for industrial development ineffectively, not making any breakthrough"; "S&T has not yet become the most important driving force for the rapid and sustainable development of the industry" [28].

To help resolve these issues, here are some ideas:

Firstly, strengthening the capacity to conduct digitalization of production activities in enterprises.

Secondly, develop the capacity of participation of manufacturing enterprises in the value chain within the production sector, field at the local, national or international level.

Thirdly, promote the capacity to connect the network of products and services of businesses in ensuring competitiveness in the domestic and international markets.

Fourthly, enhance the ability of annual concentrated investment and capital mobilization of enterprises (real investment in production).

Fifthly, enhance cooperation capacity in the value chain to meet the needs of customers (consumers).

In addition, our country still has a lot of work to do to get to Industry 4.0, however, it may start with “Developing domestic private industrial enterprises, which really becomes an important driving force for development. develop the country's industry based on the drastic implementation of Resolution No. 10-NQ / TW of June 3, 2017 of the Central Executive Committee of the XII term "(extract Resolution No. 23-NQ / TW of 22 / 3/2018 of the Central Executive Committee).

V. CONCLUSION

The objective fact is that Industry 4.0 is gradually coming to our country. So it's time to take action. Policymakers should encourage technological innovation in association with social innovation, considering all possibilities on the supply side, as well as on the demand side. A systematic understanding of the innovation policy is needed, including strategy and implementation coordination so that production innovation can become social innovation and conversely social innovation can become innovation, manufacturing. Specifically, promoting learning and scientific research associated with enterprises so that new technologies and new knowledge can spread faster. The social innovation policy should promote interdisciplinary projects to create momentum for production innovation. Support the transfer of basic research results to application development through laboratories, smart factories with future technologies. This will encourage cooperation and prepare the basis for social

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innovation. The social innovation policy can support direct procurement of high-tech equipment, infrastructure development, vocational training and new career opportunities. Moreover, each Vietnamese must be understood as an opportunity for industry 4.0. Or determined to reach out to be the market leader, for example: Vietnam's cloud infrastructure, digital content market.

To enter Vietnam faster, like it or not, Industry 4.0 must still demonstrate its benefits to society. Only when developments in and around industry 4.0 lead to added value to the society; When new technologies, services and organizations are established, operate effectively in society and when social practices are "better for the people", we will realize and set the potential for industry. 4.0 has developed land. On the road to this goal, effective coordination and policies are needed.

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