



Industry 4.0 (i4.0) investment — don't leave government incentives on the table

Across the globe, traditional manufacturing economies — as well as some *not-so-traditional* ones — are embracing the Fourth Industrial Revolution. They recognize that i4.0 is the future of manufacturing and are working quickly to provide tax and business incentives to lure investment dollars and secure their countries' future in a digitally connected world.

National, state and local municipalities are beginning to understand the importance of attracting 21st century businesses. "Take, for example, the feeding frenzy that a tech giant touched off when they announced their search for a second US headquarters — 238 cities vying for the prize¹," says Michele Hendricks, Executive Director for KPMG International's Global i4.0 initiative, KPMG in the US. "Thousands of high-tech jobs and billions in construction — sounds pretty similar to the future of manufacturing." With so much at stake, the official incentives can play an important role in the site selection.² A global car manufacturer, for example, is investing US\$1.1 billion in a 'smart' factory, or "Full Flex Plant," in Hungary, where the government offered US\$46 million in incentives. National governments aren't the only players, of course. In 2017, New York succeeded in attracting a global aerospace and defence company to set up a US\$300 million digital R&D center there with the offer of up to US\$10 million in employment tax credits.³

Most manufacturers won't be building greenfield, smart facilities, but almost all will require some upgrades and investments to compete in the new i4.0 landscape — and governments recognize this shift.



We see a trend in governments around the world seeking to bolster their tax revenues and elevate the innovative capacity of their economies by offering new and reformed tax incentives that, in many cases, are designed specifically to attract and support foreign-based companies that are investing in transforming their operations. Multinationals across industries, particularly in the manufacturing sector, can benefit by looking at the ways that these tax opportunities can, when considered in conjunction with workforce needs and market presence goals, help drive digitalization and innovation.



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¹ <https://www.nytimes.com/2018/01/18/technology/amazon-finalists-headquarters.html>

² <https://www.reuters.com/article/us-daimler-hungary/daimler-to-invest-1-1-billion-in-hungarian-plant-idUSKCN10915U>

³ <http://www.courant.com/business/hc-utc-new-york-20170323-story.html>

<http://www.utc.com/news/news-center/pages/meet-united-technologies-digital.aspx>

Singapore i4.0 incentives

In recent years, Singapore has sought to promote investments in i4.0 technologies, including the Internet of Things (IoT), advanced analytics, artificial intelligence, robotics, 3D printing, and other smart manufacturing technologies intended to build new technical capabilities, develop new technologies and products, and increase productivity and manufacturing competitiveness. To this end, the Singapore government has launched a number of platforms and initiatives. These include the release of:

— Smart Industry Readiness Index

identifies areas of process, technology, and organization that manufacturing firms can identify as areas for improvement.⁴

— Industry Transformation Maps

for five manufacturing sectors (precision engineering, energy and chemicals, marine and offshore, aerospace, and electronics) outlines the government's strategies to develop skills, innovation and productivity within the target sectors.⁵

— Smart Nation initiative

outlines the government's intent to drive pervasive adoption of digital and smart technologies throughout Singapore.⁶

Projects and investments that are aligned with these goals may also qualify for incentive support.

KPMG Industrial Manufacturing professionals were curious to know exactly how the government incentives compare in this race to attract i4.0 investment, so we examined the 10 largest manufacturing countries⁷ plus seven others that are trying to position themselves as promoters of advanced-manufacturing facilities.

Given the many incentives to encourage corporate investment and job creation, KPMG Industrial Manufacturing professionals reviewed the countries, based on some quantifiable direct and indirect tax incentives. Eighteen tax attributes were analyzed that would influence the selection of new, or improved, manufacturing operations. Among the most attractive countries is Singapore. With their Smart Nation Initiative, the Smart Industry Readiness Index, and Industry Transformation Maps (see inset), Singapore has a strategic vision for its economy, backed by tax and financial-grant incentives to support companies that will undertake substantial business activities in their city-state.

A few examples of Singapore's incentives include:

- R&D tax deductions at 2.5 times the expenditure⁹
- 200 percent tax allowances on qualifying IP registration and in-licensing costs¹⁰
- accelerated tax depreciation on computers and machinery that meet automation and clean-manufacturing standards¹¹
- concessionary tax rate incentives ranging from 0 percent to 10 percent on qualifying income for i4.0 and advanced manufacturing investment in Singapore.¹²

Region	Seventeen countries were reviewed
North America	Canada, Mexico, the US
ASPAC	Australia, China, India, Japan, Korea, New Zealand, Singapore
EMA	France, Germany, Israel, Italy, Netherlands, Spain, the UK



Global site selection needs to be performed holistically, taking many factors into account. Manufacturers often miss key incentives when considering investments in new or existing facilities. Incentives come in the form of tax and non-tax incentives, such as cash, exemptions, abatements, etc., and need to be analyzed on a country and local level. ”

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⁴ <https://www.edb.gov.sg/en/news-and-resources/insights/manufacturing/singapore-smart-industry-readiness-Index.html>

⁵ <https://www.mti.gov.sg/MTIInsights/Pages/ITM.aspx>

⁶ <https://www.smartnation.sg/>

⁷ <https://data.worldbank.org/indicator/NV.IND.MANFCD?locations=US>

⁸ KPMG International research, 2018.

⁹ Section 14D, *Singapore Income Tax Act of 1948, Revised Edition 2014*, Inland Revenue Authority of Singapore.

¹⁰ Section 19B, *Singapore Income Tax Act of 1948, Revised Edition 2014*, Inland Revenue Authority of Singapore.

¹¹ Section 19, *Singapore Income Tax Act of 1948, Revised Edition 2014*, Inland Revenue Authority of Singapore.

¹² Section 19A, *Singapore Income Tax Act of 1948, Revised Edition 2014*, Inland Revenue Authority of Singapore.

Government incentives are plentiful across the sample reviewed.



Italy boasts Super Depreciation and Hyper Depreciation capital allowances programs, which allow companies to add 40 percent and 150 percent respectively to the acquisition cost of qualifying i4.0 intangible and tangible assets.¹³



The Dutch Innovation Box regime aims to stimulate technical innovation in the Netherlands. Qualifying profits from self-developed intangible assets, for which the tax payer has obtained the Dutch payroll tax credit (WBSO) and — in case of a large taxpayer — another entry ticket such as a patent, are effectively taxed against 7 percent for years beginning 1/1/2018 instead of the regular 25 percent corporate income tax.¹⁴



The US has R&D credits that apply to ‘innovative’ software; even if the entire project doesn’t qualify, partial credit may be awarded.¹⁵

Talent is a top priority, but don’t forget the state and local incentives — Rick Hill, Partner, State and Local Tax, KPMG in the US

Business leaders need to do their homework, first, to find the location of the best talent for a digital expansion and, second, to secure incentives to offset expansion costs.

To be successful, a digital expansion must be located in a city where data scientists and software developers want to live and work. In my client dealings I find access to top talent tends to be the number one criteria. Most of these places are close to world-class universities that incubate start-ups and have a vibrant tech culture. These locations tend to be in cities that are expensive in terms of rent, salaries, utilities and other business costs.

The amount of state and local incentives offered by these locations varies widely. Some offer little or no incentives because they don’t think it is necessary. In other locations, the total package of state and local incentives ranges from US\$25,000 per job to more than US\$75,000. Choose wisely by balancing the need for skills against the cost.

It is also important to note that no US R&D credits are allowed for foreign research, which brings us to another important consideration when planning i4.0 investments: the cross-border effect of such things as treaty networks, trade zones, free trade agreements and the quickly expanding global trade wars.

Across the globe, KPMG Industrial Manufacturing professionals are seeing an increase in the enforcement of trade rules, as customs authorities scrutinize imports more closely. “In Asia, there has been an uptick in valuation audits, while in the European Union, a duty savings program has been eliminated and royalty payments are more likely to be dutiable.” says Adam Palozzolo, Tax Partner, KPMG in the US. As such, managing and complying with trade is more complex than ever.

It is key to evaluate the impact of trade remedies on a company’s options to minimize spending from a global perspective. As part of this process, companies are undergoing a number of steps including, but not limited

to, collecting their trade data, assessing classification and country of origin of their products, mapping import and export activity, evaluating duty savings strategies, and performing comprehensive reviews of their supply chain and product pricing strategies to ensure their businesses are structured in ways to mitigate the impacts of trade uncertainty.

Decision-making around i4.0 can be complicated enough without considering the complexity of tax and business incentives, which are continuously changing.

The examples above show that getting it right can lead to millions in savings. Getting it wrong can mean leaving money on the table. KPMG member firms have i4.0 tax specialists in each of the countries ranked above, joined by a network of direct and indirect tax specialists in over 100 countries, to help companies navigate this quickly changing landscape. Be sure to enrich your approach to i4.0 with some of their perspective, as you prepare to make your investments.



At KPMG member firms, teams take a multidisciplinary approach to helping clients make these important investment decisions. They have developed tools that combine leading i4.0 expertise with skills in analyzing global tax, trade, incentives, and location to help ensure the true cost of investments can be measured on both a pre-and post-tax basis.

Jerry Thompson

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Potential tax credits include:	Potential business incentives include:
Work Opportunity Tax Credit (WOTC)	Industrial manufacturing specific tax regimes
Ports credits	Intellectual property incentives
Jobs tax credits	R&D tax credits
Sales tax credits	Capital allowances
Enterprise zone credits	Accelerated depreciation
Training credits	Location-based incentives
Investment tax credits	Payroll tax incentives
Pollution control credits	Green incentives (e.g., energy savings, recycling, pollution control)
Alternative energy tax credits	Free trade zones
R&D tax credits	

¹³ Italian Income Tax Law No. 205 of 27 December 2017

¹⁴ Netherlands Wet Inkomstenbelasting 2001 (Income Tax Law, 2001)

¹⁵ US Title 26 Internal Revenue Code, Section 165

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How KPMG can help

No matter where you are on your i4.0 digital journey, KPMG professionals are available to help you find and secure through helping your organization to:

- Create your unique digital transformation strategy and vision, aligned to your business objectives.
- Quantify the business case incorporating often-overlooked tax and trade implications, and quickly develop the roadmap to support investment.
- Help implement changes to your operating model, on the shop floor, through your supply chain and with your workforce.
- Conduct due diligence on potential business partners and all areas of third-party risk.
- Take a global, holistic approach to managing geopolitical risk and cyber security.

KPMG Insights

KPMG International's [Beyond the Hype report](#) in 2017 benchmarked the adoption and maturity of Industry 4.0 (i4.0) programs among a few dozen global manufacturers. In the interviews conducted and factory floor walks made, KPMG professionals saw a growing emphasis on i4.0 technologies, such as industrial IoT, artificial intelligence, additive manufacturing, and augmented reality. Efforts were frequently at the proof-of-concept or pilot level and were self-contained initiatives, isolated by technology, process or plant. A year later, KPMG International's [2018 Global Manufacturing Outlook](#) confirms that about half of CEOs surveyed classify their technology investment as tactical rather than strategic. But, more positively, a little more than half claim they are not waiting to be disrupted, but are actively disrupting their sector.

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