THE HAGUE IN THE 21ST CENTURY

Responsible innovation for sustainable peace, international rule of law and global justice

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Jeroen van den Hoven, Delft University of Technology
Summary

How does The Hague remain one of the most important cities in the world in the area of Peace, Law, Justice and Security in the 21st century? The Hague owes its international reputation to recognizing problems and solving them pragmatically in times of high political tension, arms races and rapid technological change in the beginning of the 20th century. The metropolitan region of The Hague is also internationally associated with the cradle of thinking about World Peace and the International Rule of Law, in the persons of Erasmus and Grotius, and with the roots of the early Enlightenment as represented by Spinoza and Bayle.

In order to be able to play a similar role in the world in the 21st century, The Hague is now also facing with the challenge of understanding the nature of the problems of humanity and of offering solutions.

The intellectual climate in The Hague around 1900 pointed towards a 'World Capital'. Competition with other cities was in full swing in this area. Perhaps the most important explanation for the success of The Hague is that it succeeded in placing an important issue on the global agenda of mankind at the end of the second millennium, instead of striving for excellence on agendas proposed by others. The ideas of World Peace, International Rule of Law and institutionalization of Arbitration were invented here.

More than a century after the second peace conference in 1907, the world looks radically different in the 21st century. Complex humanitarian, sustainability and security issues on the world stage are immediately tangible at local levels. This world is complex, hyper-connected, dynamic and unstable. Social media and mobile internet bring great benefits, but also come with many new vulnerabilities.

The international community has drawn up a consolidated list of 17 Sustainable Development Goals (SDGs), similar to the international consensus regarding the so-called Grand Challenges and the Millennium Goals. This list of problems will strongly determine the global debate on a safer and more just world in the remainder of the 21st century.

New in this context is the importance accorded by the UN to the role of innovation, technology and applied scientific research with a strong multidisciplinary character. It is clear that no progress can be made on solutions to these problems if it is not recognized that technology is both part of the problem and can also be part of the solution. For this reason, the UN has set up a Technology Facilitation Mechanism (TFM) to promote innovative solutions on the SDG agenda. This is an important development within the UN, which for the first time explicitly focuses on perhaps the most important driver of the history of the 21st century: technology.

An important aspect of the SDG agenda is that the problems cannot be treated in isolation, but must be viewed in conjunction. Meanwhile there are decision-making tools that help to understand, model and visualize the interrelationships between the SDGs. Because it is not a list of separate problems, the situation is complex and so are interventions and policy measures.
Another aspect associated with these mutual relationships is the fact that the complexity with which we are confronted requires a new multidisciplinary science that allows us to understand connections and to deal with these problems on a global scale.

To gain a better understanding of complex adaptive systems, multidisciplinary centres for complexity science have been set up in numerous places. In these centres, scientists from different disciplines work together on models and simulations to improve our understanding complex systems in order to better predict their behaviour. On the basis of these models, policy makers arrive at more adequate and responsible interventions that result in improved policies. The outcomes of this type of research are often counterintuitive for policy makers and politicians. Our interventions in social, economic and ecological systems often have unexpected negative consequences. We can, however, not afford such mistakes in combating climate change, humanitarian and economic crises, cyber war and terrorism. Such missteps can be prevented by using new approaches to science that leads to more insight into complex phenomena as a basis for policy.

The new sciences, innovation and technology are necessary to create conditions for achieving the moral objectives that have been specified in the SDGs. The new science, knowledge and expertise are morally blind without normative frameworks, but normative principles without the ability to intervene are impotent. The SDGs absolutely require responsible innovations: innovations that adequately realize the moral ideals of peace, justice and justice and other shared moral values.

The traditional subjects of The Hague will therefore have to take a central place in the work on the SDG agenda: without International Law, peace building, diplomacy, humanitarian aid and development cooperation, protection of human rights, promotion of security, fighting corruption, fraud, organized crime and terrorism, applied science and innovation will miss their desired effects.

Better insight into human psychology has contributed significantly to the manipulation of consumers and voters in recent decades, and only to a limited extent to solving our Millennium Problems.

The traditional disciplines in The Hague will therefore have to play a role in this new world and must connect with other new scientific knowledge and technology. Moreover, in the coming decades, the disciplines of The Hague will also have to make use of new, mainly digital, technology for the development of their own instruments, methods and techniques. Professionals in the fields of law, diplomacy, policy, international relations will have to go digital or nowhere. The Hague could provide expertise that prepares for this new role of international law and innovations within it.

The Netherlands has received international recognition for its approach to innovation. A "Dutch Approach" has become visible. This approach can be extended in different ways through good cooperation in The Hague through a range of triple helix mechanisms. Such an approach is desperately needed in the areas of cyber security, transport and logistics, robotics, energy transition, self-driving cars, industry 4.0, Internet of Things, blockchain, waste processing, circular economy, urban planning, smart city development, fintech and finance, data science and humanitarian aid and
development cooperation. In addition to its practical and efficient approach, The Hague has the most official offices of Dutch universities within its city limits and, according to a ranking of the Times, it is one of the top academic cities in the world. The universities within the proposed partnership can jointly perform applied and fundamental research that supports the plans for The Hague’s International Agenda, the SDG agenda and the Digital International Legal Order that we will have to work on in the remainder of this century.

The city of The Hague and the Dutch government want The Hague to maintain its position as UN city and international city of Peace and Justice in the 21st century. They also want the Netherlands to continue to play a meaningful role on an increasingly dynamic and chaotic world stage. In order to perpetuate the special position in the world, it is now no longer sufficient to build on the achievements of the past along paved roads. In short, in the coming years in and around The Hague we need to give a 21st century meaning to the theme of Peace and Justice, partly through technological innovations and digitization.
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THE HAGUE IN THE 21\textsuperscript{ST} CENTURY

How can The Hague continue to play an equally prominent role in the world over the next 100 years as it has done in the past 100 years? How does The Hague remain one of the most important cities in the world in the area of Peace, Justice, Justice and Security in the 21\textsuperscript{st} century?

The Hague owes its international reputation to the fact that at the beginning of the 20th century the city recognized the nature and extent of the problems of the world and moreover offered pragmatic solutions in a confusing time of high political tension, weapon deployment and rapid technological development. There is now an equal need for that insight. However, achievements in the past do not guarantee future success.

In this essay we focus our view on new perspectives and new impulses that (i) are not yet a standard part of thinking about the future of The Hague and that (ii) relate to what distinguishes The Hague from other world cities. Of course, The Hague will have to put its smart infrastructure in order, to deal with energy, waste, traffic and transport, and to offer living space, care and culture to its residents. To do so, it will have to become a smart and resilient city, but that applies to every city in the world. Only a handful of cities will be seen as centres of World Peace, Justice and Rule of Law in the eyes of the world.

1. **What Happened Previously**

The intellectual climate in The Hague around 1900 ambitiously pointed towards a 'World Capital'. Competition with other cities was in full swing in this respect. Brussels also had its eye on the governance seat of a possible new world order, it was also awarded a Nobel Peace Prize (1913, Henri La Fontaine) and there were far-reaching plans for information centres, large libraries (the so-called Mundaneum, a paper forerunner of the Internet) and intellectual societies to support its ambitions. Geneva was of course already a prominent contender as Peace Capital, with Nobel Laureate for Peace Henri Dunant and the establishment of the Red Cross (1863). In Bern, the International Peace Office was established in 1891, which also received a number of Nobel Peace Prizes. Vienna was also a cosmopolitan focus of science, art and internationalism around the turn of the century. In Paris, Albert Kahn portrayed the entire world with photographic innovations (autochromes) as a basis for understanding between cultures.
Fortunate Culture-Historical Circumstances

In The Hague a group of idealists, intellectuals, scientists, politicians and benefactors were active at the time. Important elements of The Hague’s plan were, for them, the design for the World Capital of architect De Bazel, a variety of academies and research institutes, the green zones in the city, and the location by the sea. The writer Van Eeden, the mathematician Brouwer, the composer Grieg, the poet Tagore and many others were involved and wholeheartedly supported the plan. They saw education as a vehicle of civilization, internationalism as an antidote to nationalism and protectionism, and the pursuit of synthesis (so-called ‘syntheticism’) as a means against fragmentation and discord. The idea of bringing together warring parties in a confidence-inspiring, neutral environment with scientific, intellectual, and spiritual resources to find a way out of international conflicts was just what the world needed. Ideas of reconciliation, mediation and conflict management, peaceful coexistence and humanity could easily take root in this environment. This is how the concept of international arbitration came about.

The establishment of the Permanent Court of Arbitration (1899), the construction of the Peace Palace (1913), the Peace Conferences (1899, 1907), and the influence of legal scholars such as Asser (Nobel Prize 1911) in the end laid a solid foundation for the Hague’s reputation as International City of Peace and Justice.

“Such a reputation is built on a widely supported recognition of the fact that a city offers a great scientific, intellectual and professional advantage as a place of business or residence over other places in the world.”

There were many fortunate culture-historical circumstances that made it possible for The Hague and surrounding areas to grow into the place that it is now. Examples include the concept of Dutch neutrality, the discovery of the idea of peace by Erasmus (Complaint of Peace 1517; Dulce Bellum Inexpertis) in the early 16th century and the ideas of Hugo de Groot in the early 17th century about ethics, international law and the rule of law. The Netherlands is also, rightly so, associated with the foundations of the Early Modern Enlightenment in the form of the philosophy of Spinoza (who spent a large part of his working life in The Hague, Voorburg and Rijnsburg) and the ideas about religious tolerance and secular ethics of Pierre Bayle (Rotterdam).

The Hague’s international reputation in the 20th century, and everything that it has brought the city, must be seen against this impressive and innovative cultural-historical background of the province of South Holland. This ‘legacy’ influences the Western world to this day. The extensive oeuvre of Jonathan Israel, the Princeton historian of the Modern Enlightenment, shows that the cradle of the Enlightenment can be found in our regions. And when asked about the reason for the influence of
the Netherlands on the roots of modernity, Israel commented: "It's the Philosophy, stupid".

**NOT ACCORDING TO A PRECONCEIVED PLAN**

Perhaps the most important explanation for the success of The Hague is that it succeeded in leaving its own mark on the global agenda of mankind at the end of the second millennium, instead of striving for excellence on agendas proposed by others. The ideas of World Peace, International Rule of Law and institutionalization of Arbitration were invented here.

It is important to note that this special status of cities are almost always ‘emergent phenomena’ which cannot be produced according to a preconceived plan. Just as with friendship and trust between people, they cannot be brought about through premeditation. In a way, a methodical plan (for example based on city marketing considerations) could even be counterproductive. People who purposely try to win the trust of others often reach the opposite. So the promotion of a city of Peace and Justice – which in important ways revolves around knowledge and trust – can best be achieved through a focus on the best ideas, groundbreaking scientific insights and the most relevant experiences of serving Peace and Justice in the world. Such a reputation is built on a widely supported recognition of the fact that a city offers a great scientific, intellectual and professional advantage as a place of business or residence over other places in the world.

2. **Problems of the World in the 21st Century**

More than a century after the second Peace Conference in 1907, the world is in a radically different shape. In order to be able to play a similar role on the world stage in the 21st century as a century ago, The Hague now again faces the challenge of understanding the nature of the problems of humanity.

**Looking for a balance**

The 21st century is highly technological, hyper-connected, and, partly because of that, extremely dynamic and unstable. The world has become very complex through our own efforts. The world is not only disenchanted, but we are all sorcerers’ apprentices. People, countries and organizations have become increasingly closely connected in the past centuries via energy, communication and transport infrastructures, logistics chains and institutions. They use the same 'common pool resources' and are therefore very dependent on the decisions and actions of others. Social media, mobile Internet and the Internet of Things bring advantages, but also many new vulnerabilities, fragility and volatility.

*We cannot get closer to a shared canon of challenges for a better world than this list of goals.*
The world is furthermore too small for its rapidly increasing number of residents and their incessant striving for more economic growth and greater prosperity. Climate and eco-systems deteriorate quickly and irreversibly through human action in the period of the so-called ‘anthropocene’. According to the WEF, in 2050 there will be more plastic in the oceans than fish. Large numbers of people are on the move in search of water, food, safety and a better life for themselves and their children. In the course of this century, more than half of the world’s population will live in megacities and urban conglomerations of 30 million inhabitants or more. The inequality of wealth, the concentration of power and mountains of debts are increasing in the world.

**Artefacts have politics**

The fall of the wall in 1986 turned out to be neither the end of history, nor the beginning of a universal Western liberal-democratic form of governance and government, as Francis Fukuyama announced at the end of the 1980s. Thirty years later, tensions are back in the world, with numerous hot spots in which the battle for the recognition of religious and ethnic identities plays a role. We are looking for a balance between recognition of universal human rights and human nature connecting citizens of the world, and on the other hand their identification with specific historical, ethnic and religious identities that offer security, but which also exclude other people and are often the source of tensions and conflicts.

A wide variety of political and ideological models are currently being scientifically developed and implemented by various superpowers, using advanced digital technology. The arms race has changed into a comprehensive technological race, in which especially China and the US are fighting for dominance and technological supremacy. This race is accompanied by new and large-scale socio-economic experiments with new governance concepts, control systems, social models and view on mankind. With the help of big data, citizen scores, AI and smart surveillance, China is introducing an autocratic political system in which human rights and democratic principles do not play a dominant role. In recent decades, the US have had a holy belief in Silicon Valley as a source of humanity’s salvation and the consequence is a minimum of regulation. The ideological and geopolitical blocks of the US, China and Russia are now developing technology that expresses and supports their respective values and norms. As the technology historian Langdon Winner already demonstrated in the 1980s: "Artifacts have politics".

"This is a significant development within the UN, which for the first time in its history is orienting itself institutionally and systematically on perhaps the most important driver of history in the 21st century: technology."

What the problems of the world are has by now become clear. The international community has drawn up a consolidated list of 17 Sustainable Development Goals (specified in 169 specific goals). The ‘high contracting parties’ agreed in New York at the end of 2015 that significant progress will have to be made by 2030 to manage
the largest global risks in the fields of water, food, energy, biodiversity, climate, conflict, peace and justice, hunger, poverty, education, child mortality and epidemics. The first and most important goal is to end extreme poverty, according to the UN ‘the biggest challenge of our time’. We cannot get closer to a shared canon of challenges for a better world than this list of goals. Earlier, a similar international consensus already existed with regard to the so-called Grand Challenges and the Millennium Goals. The SDGs will strongly define the global discourse on a safer and more just world in the remainder of the 21st century. But what knowledge is needed to gain insight into promising solutions and the conditions for generating and implementing solutions?

3. **The Role of Technology and Innovation**

New in this context is certainly the importance attributed by the UN to the role of innovation, technology and applied scientific research with a strong multidisciplinary character. It is evident that no progress can be made on the SDGs if it is not recognized that technology is both part of the problem and can be part of the solution. The UN has therefore set up a prominent *Technology Facilitation Mechanism* (TFM) to promote innovative solutions for the SDG agenda. TFM meets before every High Level UN meeting on SDGs to discuss technology, digital solutions and technological innovations that can help us achieve the global goals. This is a significant development within the UN, which for the first time in its history is orienting itself institutionally and systematically on perhaps the most important driver of history in the 21st century: technology.

**Not a list of separate problems**

The fact that problems and solutions can no longer be separated from technology and applied science does not mean that there is a high-tech solution for every conceivable problem. Solutions can also be low-tech, or predominantly conceptual, social or institutional in nature. However, major breakthroughs can be expected from combinations of technical and non-technical innovations. For example, blockchain enables new organizational models, incentive structures and forms of supervision and compliance. It can play a major role in fighting corruption, enforcing international agreements, accountability and transparency in connection with cash flows and logistics chains of food and relief goods. Fair remuneration can also demonstrably benefit local producers and it is easier to control sustainability and safety requirements. The use of large data streams which can be analysed in real time can significantly improve the work of the UN organization. Obviously, a lot of relevant innovations for the SDGs can be expected from artificial intelligence. UN organizations will be driven by data and will increasingly use machine learning and AI to interpret their data and formulate their policy.

*Our interventions in social, economic and ecological systems often have unexpected negative consequences. We*
cannot afford such mistakes in combating climate change, cyber war and terrorism.

An important aspect of the work on the SDG agenda is that the problems cannot be tackled in isolation, but must be analysed for their interdependencies. Child mortality, education for women, poverty, safety, sanitation, vaccination and affordable care and the availability of water and food are, for example, inextricably linked. The relationship between energy, water and food is referred to as the 'water-food-energy nexus'. The world’s food problem, “how can the world produce enough food for 9 billion residents?”, is closely related to the availability of artificial fertilizer. The standard method to produce ammonia through the Haber Bosch process costs 2% of global energy demand and produces 1% of global CO₂ emissions. There are countless other examples like these on the relationships and dependencies between problems and between solutions. There are now studies and decision-making tools that help to understand, model and visualize the interrelationships and dependencies between the different SDGs. Working on the SDGs is therefore extra complex because it is not a list of separate problems, but a collection of problems that are interconnected in a very complex way. This also applies to our interventions and policy measures.

4. The Need for a New Science: Complexity Science and Global System Science

In order to be able to cope with the problems on a global scale in the 21st century, new science is needed to understand the complexity involved. The problems always concern systems (social, financial, technical and ecological systems, and combinations thereof) and a system approach requires integrated knowledge from a large number of disciplines. The world problems just do not present themselves in neatly classified to disciplines. Slowly the insight is growing that a Global Systems Science is needed (Helbing et al.) to gain a better understanding of the cross-linked, complex systems we are working on. After the establishment of the Santa Fe Institute multidisciplinary centres for complexity science have been set up in numerous places (Vienna, Zurich, Amsterdam, Boston). Here physicists, data scientists, mathematicians, economists, biologists, computer scientists, social scientists and humanity scholars work together on models to better understand complex systems and predict their behaviour, and on this basis to arrive at more adequate and more responsible policy interventions. Their work uses big data, advanced modelling and methods and techniques from applied natural sciences, mathematics and computer science, such as machine learning, evolutionary game theory, social choice theory, Bayesian statistics, agent-based models, computer simulations, and network science.

The uncertainties are very large

Results of this type of research are often counterintuitive for professionals and policy makers. A network analysis may for example show that it is not the leaders of terrorist or criminal organizations that are the key figures, but other people who are
less prominent in the network. Behavioural economics studies show, for example, that financial incentives in the form of subsidies to promote sustainable behavior can have the opposite effect. In Europe, forestation is increasing, but this is at the expense of forests in developing countries (an area as large as Portugal in the period 1990-2008) due to international trade in sugar, palm oil and rubber.

Our interventions in social, economic and ecological systems often have unexpected negative consequences. The uncertainties are very large and our attempts to limit negative effects can actually exacerbate them. We cannot afford such mistakes in combating climate change, cyber war and terrorism. These phenomena can be better understood on the basis of this new science. We gain insight into unsuspected feedback mechanisms, tipping points, information cascades, network structures and non-linear phenomena, all of which determine successful policy. Insight into complex systems is indispensable. Human behaviour, human drivers and motives, regulation and incentives, the effects of advanced technology, the dynamic properties of ecosystems and the interventions of mankind must be better understood in their mutual interdependencies.

5. **Global Ethics, Fairness and International Law**

The SDGs do not only imply gigantic scientific challenges, they also express formidable ethical challenges: combating hunger (SDG2) and poverty (SDG1) and promoting health and well-being (SDG3) and gender equality (SDG5). Combating inequality is also a general goal (SDG 10). Energy must be ‘affordable’ (SDG7) and there is a right to ‘decent work’ (SDG 8), production processes and consumption must be ‘responsible’ (SDG12). The terms ‘equality, affordability, responsibility, well-being, decency’ refer to moral categories on which much discussion is possible. The experiences with the Millennium Development Goals have also shown that the methodology for determining progress can be very controversial and that the UN can also adjust the measurement methods and the interpretation of the success criteria in the course of the process.

> The traditional The Hague scholarly disciplines will have to connect with other, new scientific knowledge and technology in order to play this role in a new world.

But applied science and ingenuity stand not self-evidently in the service of a shared moral vision and shared moral values: universal human rights, human dignity and respect for the freedom and autonomy of the individual. New knowledge is a necessary, but not sufficient condition for morally desired solutions. Science and technology can – as we know from history – also be used for less noble purposes. The traditional subjects from The Hague will therefore have to take a central place...
in the work on the SDG agenda in order to give direction to our ingenuity: international law, peace missions, diplomacy, emergency aid and development cooperation, human rights promotion, security, fighting corruption, fraud, organized crime and terrorism. Without these perspectives, innovations will miss their desired effects.

**A new role for international law**

We gradually understand more and more about the importance of high-quality institutions, the rule of law, trust and ethics for achieving socially optimal solutions. Research by Amartya Sen, Nobel Laureate in economics from Cambridge, for example, shows that the quality of democratic institutions is closely linked to economic success. Sustainable peace and broad prosperity are not compatible with dictatorships or countries with weak institutions. The state of law and equal opportunities, diversity, open science and solidarity with the weaker, on the other hand, combines well with sustainable innovation and welfare in a broad sense.

The traditional The Hague scholarly disciplines (law, international relations, history, political science, governance and public administration) will have to connect with other, new scientific knowledge and technology in order to play this role in a new world. They will have to incorporate a wide range of other disciplines and take a broader view on the choice and definition of their object of study. Moreover in the coming decades they will have to learn how to use new – predominantly digital – technology, also in the development of their own tools, methods, techniques and modus operandi. Professionals in the domain of law, diplomacy, politics and governance will have to go digital or go nowhere. The Hague could provide expertise that prepares for a new role of international law, and innovations in international law.

**Meaningful human control**

Clear examples of technologization can be found in the field of International Humanitarian Law and the Geneva Conventions. The situation has changed completely in the field of warfare and with regard to the nature of armed conflicts. The developments in the 'changing character of war' (the title of a research program at Oxford University) are also not linear. In Crimea it was still about innovations such as the steam train and the telegraph. In the First World War it was still about machine guns, small propeller planes and battle gases. Nowadays, it concerns asymmetrical and network-centric warfare, cyber warfare and the use of artificial intelligence, robot weapons and swarming autonomous drones. One of the requirements for autonomous weapons that is being demanded at the moment is that there is 'meaningful human control' of these systems. What does that mean exactly? How can defence systems be designed for meaningful human control, how can supervision and inspection be exercised?

In the second half of the 19th century, armed conflicts were predominantly disputes between nation states about geopolitical hegemony, disputed territory and territorial claims. Now we have terrorism and massive migration and refugee flows, triggered by the effects of climate change caused by the West and conflicts originating in inequality, religious and ethnic identities instability in economic and financial systems and shortages of sustainable and renewable energy sources.
6. **Responsible Innovations**

Not every innovation is acceptable or desirable – however noble the goal is that could be served with it. The SDGs need responsible innovations: Innovations that realize the moral ideals of peace, rule of law, justice and shared moral values. Responsible innovations are inclusive and try to prevent that the interests of a part of the world population prevail over those of others on the basis of age, gender, nationality or race. Responsible innovations see partial problems in their mutual coherence and prevent new and more serious problems from arising when solving problems, or even increasing existing problems. Smart and responsible innovations also create win-win situations and succeed in reconciling different conflicting values, breaking moral stalemates and solving dilemmas, without undermining fundamental ethical values and legal principles.

> Smart digital technology must be the expression of European ideals and values, must focus on solving the major problems of humanity, must benefit all equally, and move within existing and shared normative frameworks.

It has, for example, recently become clear that the focus in the EU on so-called privacy promoting and enhancing technology is now also appreciated in the rest of the world. After decades of critique on the quite severe European data protection, Europe, by hanging on to moral and legal points of departure based on the European Convention on Human Rights (ECHR), has finally received commercial and politically approval. Even Mark Zuckerberg has now admitted that citizens and consumers are probably better off with the European data protection regime. The international business community is now adhering to EU standards in the area of data protection. Europe has succeeded in developing technology that allows us to use data and at the same time protect privacy. Something similar has occurred with the German lead in the field of clean tech and renewable energy. This idea of responsible innovation – the intention to consciously shape technology and innovation to solve social problems and to let values play an important role - is now anchored in the innovation policy of the European Commission (Horizon2020). Brussels has made around 500 million euro available for Responsible Research and Innovation (RRI) in the period 2012-2020. Also in the 9th Framework Program for the years after 2020, in which an estimated 100 billion will be available for research, a substantial budget is again being reserved for Responsible Research and Innovation.
The basic idea in European thinking about responsible innovation originates from a research program of the Netherlands Organization for Scientific Research (NWO), entitled Socially Responsible Innovation (RI). In this program, knowledge institutions, industry, government and social parties work together on responsible innovations. In The Hague (OCW & NWO) about 30 million euro was spent on research in this area in the period 2007-2017. Socially Responsible Innovation is now a cross-cutting theme in the Dutch Top Sector policy. The Ministry of Economic Affairs has an RI-in-Energy program and employers organization VNO-NCW has recently decided to start a so-called 'business ambassador table' in this area. The partnership of the universities of Leiden, Delft and Rotterdam provides a successful, joint minor "Responsible Innovation" in The Hague, in which around 100 students from Leiden, Delft and Rotterdam work in urgent social issues in The Hague.

5.0 WORLD

This approach is now also being used by Emmanuel Macron to position his large AI initiative in relation to the US and China. Artificial Intelligence should, according to Macron, be designed, developed and used in accordance with fundamental European values, as laid down in various conventions and conventions, in particular the European Convention on Human Rights. Smart digital technology must be the expression of European ideals and values, must focus on solving the major problems of humanity, must benefit all equally, and move within existing and shared normative frameworks. These frameworks, we should note, still have to be formulated for a lot of new technology. Macron: "If you do not want to block innovation, it is better to frame it by design within ethical and philosophical boundaries".

In Germany far-reaching automation and robotisation of production processes is being referred to as "Industry 4.0". The financial sector that is trying to get a grip on cyber currencies, big data, AI and block chain is also referred to as "Finance 4.0". Japan is already a step ahead. The Japanese government does not speak about the 2.0 or 3.0 versions of a technology, sector or social phenomenon, but about the ideal of "Society 5.0". With that the official Japanese government documents refer to the ideal of seamlessly connecting the latest technology and the responsible use of it to solve the social problems. The harmonious coexistence of man and machine, the sustainable symbiosis of people and smart things in a smart society. The Hague faces the task of claiming an important role in thinking about an international legal order, humanitarian aid, human rights, development cooperation and global justice and international humanitarian law in 5.0 World.

7. Economic Perspective

There is enormous economic potential in the combination of a new digital knowledge infrastructure and socially and morally driven responsible innovation. According to Jeremy Rifkin, who stood at the cradle of German industry 4.0 and Chinese infrastructure investments, only the replacement of communication, transport and energy infrastructures through decentralized digital 'internet' systems enable new explosive growth. Where the replacement of the communication
infrastructure has already been completed thanks to the internet, it is now important to replace our energy and transport infrastructure with a digital decentralized system, based on the communication infrastructure. New sources of sustainable energy and autonomous ‘self-driving’ transport will only really get our economy growing again when they base themselves on the structure of the open internet. According to Rifkin, this internet is characterized by economic possibilities with a moral meaning, such as equal access, and the possibility to produce and consume additional products and services at very low costs.

The Netherlands has received international recognition for this approach to innovation. A ‘Dutch Approach’ is becoming visible.

Also according to Kate Raworth’s *Donut Economics*, economic science and economic policy can only regain itself when moral goals, namely a socio-economic lower limit and a climatic upper limit, determine the direction of economic growth driven by technological innovations. According to Maria Mazzucato, the role of the government and other public institutions is decisive in this, not only as a regulatory power, but also and primarily as a driver and fundamental source of technological innovation. Mazzucato shows that the role of the government in the creation of fundamental technology through academic and military research stood at the cradle of the digital technologies that now determine our communication infrastructure, such as the GPS, the touch screen and the internet. So-called innovative private giants only play an essential role in bundling the innovations made possible by fundamental research and infrastructural investments. Leading research by Harvard innovation expert Michael Porter shows that social and moral values can also play a decisive role in innovation processes for the private sector.

The Netherlands has received international recognition for this approach to innovation. A "Dutch Approach" is becoming visible. Dutch water management and engineering could serve as a seminal example. In areas such as coastal and port management, flood control, water treatment, irrigation techniques, water accounting, water diplomacy and water education the Netherlands continues to set the tone internationally, with business and entrepreneurship, science and innovation. This is being promoted internationally with great success by the Netherlands (for example in the person of the water envoy Henk Ovink). The Dutch business community in the water sector and the maritime sector can capitalize on this and at the same time contribute to the mitigation of major flooding problems that threaten large parts of the world’s population.

Favourable conditions
There is no reason why such a ‘Dutch Approach’ could not be realized in many other areas through good cooperation in The Hague by means of a range of triple helix mechanisms. Such an approach is, for example, urgently needed in the areas of
cyber security, transport and logistics, robotics, the energy transition, self-driving cars and industry 4.0, Internet of Things, Blockchain, waste processing, the circular economy, urban planning, the development of smart cities, fintech and finance, data science and emergency aid and development cooperation.

"This cooperation could draw national and international attention and lay a solid foundation under The Hague’s position as City of Peace and Justice in the 21st century."

Again there are a number of favourable conditions for this approach in the Netherlands. A number of important basic conditions are the education level of the population, health, high-quality infrastructure, social stability, high-quality science and high-quality education. In addition in the Netherlands we have, in comparison to other countries in the world, a large capacity for radical interdisciplinary cooperation, a high-quality institutional environment that inspires confidence and nurtures trust and which enables parties to keep information and transaction costs low. Furthermore, the small Dutch scale is ideally suited to serve as a living lab and to deliver proof of concept of innovative ideas in many areas. Leading people in industry and business, public administration and civil society and NGOs generally embody a healthy balance of education and training, integrity and reflection, pragmatism and commercial spirit. A well-functioning democracy and a Rhineland model also ensure diversity and representation in important decision-making processes on the basis of a wide variety of visions, voices and interests. Collaboration from shared goals that transcend disciplines, an integrated approach, a system approach and thinking in terms of cycles and chains are the rule rather than the exception.

Finally, a characteristic that has long been perceived as problematic is perhaps an advantage in the 21st century: the willingness, inclination and ability to engage in moral deliberations. When it comes to Socially Responsible Innovation, this is an important resource: to want to and be able to reflect on the world and one’s own actions in terms of values and principles. Developments in the field of science and technology are moving so fast and are so far-reaching for society and human relations in the 21st century, that any innovation that is not responsible can bring humanity - or large parts of it - to the brink of an existential crisis.

8. **A New Foundation: Collaboration between Dutch Universities for the SDGs**

Of all Dutch cities The Hague has the most official offices of Dutch universities within its city boundaries. There is an existing partnership between the collaborating universities of Leiden, Delft and Rotterdam (LDE). There are also
branches of the University of Amsterdam (Asser Institute), Wageningen (Wageningen Economic Research) and Groningen (Dutch Demographic Institute). These six universities are among the top 100 universities in the world and can jointly carry out applied and fundamental research that supports the plans for a new The Hague International Agenda, the SDG agenda and the Digital International Rule of Law that we will have to work on in the remainder of this century. This cooperation could draw national and international attention and lay a solid foundation under The Hague’s position as City of Peace and Justice in the 21st century. These six universities are very complementary when it comes to responsible innovation for the SDG agenda. The Hague University of Applied Sciences also provides master-level education in The Hague. Education and research at this level could be very useful and could help to bridge the gap between practical applications, SMEs, start-ups, and the prototype development of services and products.

“Applied science, new technology, innovation and high-tech entrepreneurship can bring many new opportunities for a The Hague global justice agenda.”

In order to play a significant role, the cooperating universities could be encouraged to develop a joint SDG research agenda. Discussions are taking place with NWO and the Dutch ministries to start a Research Program "Responsible Innovation for the SDGs" (3 million euro), which can help to further shape the research agenda. In addition The Hague can join a new VSNU initiative for the thirteen cooperating Dutch Universities: "Digital Society". The legal faculties in particular should stimulate their International Law and E-Law departments to shape the innovation research agenda of international law in the context of this VSNU cooperation. UVA, Tilburg, Groningen and Leiden have proven international track records in this field. Existing The Hague initiatives such as Legal Delta and Security Delta, in which private parties are also represented, can support this.

9. Future

The city of The Hague and the Dutch government want The Hague to maintain its position as a UN city and international city of Peace and Justice in the 21st century and that the Netherlands will continue to play a meaningful role on an increasingly chaotic world stage. The Peace Conferences of more than a century ago, the Peace Palace and the establishment of international courts have given The Hague and The Netherlands the reputation of honest broker and trusted party. In order to consolidate this special position in the world, it is now no longer sufficient to build on the achievements of the past along the beaten track.
Applied science, new technology, innovation and high-tech entrepreneurship can bring many new opportunities for a The Hague global justice agenda. Technological innovation – in particular in the field of digital technology (Internet, Internet of Things, Artificial Intelligence, Big Data, Robotics, mobile telephony, block chain, social media) - also plays a crucial role in realizing the goals and ambitions of the UN Sustainable Development Goals (SDGs) program. The UN has recognized this and has created a new instrument to exploit the new technological possibilities for humanitarian goals, the so-called Technology Facilitation Mechanism. This gives rise to new possibilities for science diplomacy and technology diplomacy.

To support the new plans, a number of knowledge infrastructural facilities are needed. Consideration can be given to the following elements:

1. Innovations for the humanitarian world
2. Data Science Centre for Peace and Justice
5. UN SDG Institute: Policy analysis for Real World problems.
7. The Hague Institute Coalition: Collaborating non-academic Institutes Clingendael, HCSS, E&P, HIIL.
8. Interdepartmental Strategic Knowledge Innovation Agenda Meeting, with a focus on Innovation and Digitalisation.
9. Research Program Innovation in International Law & platform for an International Digital Legal Order program, with collaboration from NWO, VSNU, KNAW.
10. Digital Innovation District (Hub for IT and law start-ups)

10. To Conclude

The work on the SDG agenda requires responsible innovations. The Netherlands is internationally leading the way. The NWO program Socially Responsible Innovation has been copied in many places in the world. The Hague can be a Dutch focal point of smart and responsible innovations for the world issues of today and tomorrow. Innovations for the SDGs will also need to be innovations for Peace, Rule of Law and Justice in order to lead to sustainable and peaceful solutions and to realize the moral goals of equality, freedom, human dignity, welfare, security and sustainability.
This new focus directs technical, social and institutional innovation towards issues that are central in The Hague and in connection to which new business and entrepreneurship can grow. On the other hand, it orients traditional disciplines in this domain (Law, International Relations) towards the innovative potential of technology.

CONTINUE THE IDEALS

One thing seems clear: If the City of Peace and Justice does not take a leading role in the digital age and a world of high technology, and fails to deliver high-quality and completely unique knowledge of the world’s problems, then it will impossible to maintain the current leading position in the long run. The city will slowly become irrelevant as a unique source of knowledge and locus of expertise. The Hague will in that scenario get a lot of competition in the field of international law, arbitration, and knowledge and expertise in the field of global governance, and become an international congress city flavoured with ‘Peace and Justice’, as there are many in the world. What can distinguish the city permanently is its academic knowledge base, unique locus of expertise, and its breeding ground for the professionals of tomorrow.

The ‘Dutch Approach’ is characterized by designing for values and principles, innovating for peace and justice, a broad system approach to problems, an ability to look beyond the boundaries of disciplines and specializations, working with many stakeholders, with a pragmatic and solution-oriented approach, design-oriented and anticipatory thinking and the willingness to adopt a normative point of view.

This allows The Hague to continue the ideals of the founders Erasmus, Grotius, Spinoza and Asser, for the benefit of its inhabitants, the Netherlands and the rest of the World.