

PROJECT LIST CONTRIBUTION - THE NETHERLANDS

INTRODUCTION

In line with the other replies of The Netherlands to elements of the Task Force questionnaire and its interventions in the Task Force meetings, The Netherlands underlines the importance it attaches to stimulating investment, notably in the private sector. Structural reforms are key for Europe's future economic growth and competitiveness and will allow Member States to establish a sustainably improved investment climate, resulting in a higher level of available market financing for viable investments. Furthermore, improved access to mezzanine finance and equity for SME's and Midcaps, flexibility and higher risk capacity of European financing facilities, as well as bundling of fragmented financing needs are among the solutions suggested by The Netherlands to further stimulate investment.

The list below aims to present **an illustrative sample** of potential and existing projects, programs and instruments (from now on all referred to as 'projects'), which The Netherlands considers to illustrate bottle necks and/or potentially viable possibilities for investment in the Dutch and EU context. This list illustrates some of the issues mentioned in the Task Force, it is however not limited to them. This list has been composed guided by the sectors and cross cutting issues mentioned in the Task Force Terms of Reference and the questionnaire template. Not all bottle necks for investment in these sectors could be reflected in this list, moreover bottle necks to investment and other negative factors outside these sectors exist and do not necessarily have less impact on growth and competitiveness. It is also important to note that the order in which the list has been drawn up does not imply any differentiation regarding the importance The Netherlands attaches to the projects themselves or the underlying issues they represent.

Although this list has been composed with the greatest level of care possible within the time constraints of the Task Force process, it remains important to stress its illustrative and non exhaustive character. As was agreed in the Task Force, this is a contribution to an indicative Task Force list. Given the short time frame, unfortunately only a limited group of stake holders could be consulted, mainly, though certainly not exclusively, national government ministries. Their input was largely based on the existing information and contacts at their disposal. This limited process was only deemed acceptable by all involved in view of the mentioned illustrative and non exhaustive character of the list. Moreover, to irrevocably establish the economic, financial and social-economic viability and impact of some of these projects, their assessment should take place through a more extensive process using appropriate and clear criteria, taking more time than was available to compose this list. The list is therefore in no way to be regarded as an exhaustive, formal or final pipeline of investment possibilities in the Netherlands.

When projects appear on this list, this does not imply or exclude current or future commitment of public funding from the Dutch national government, nor from any other level of government, private parties, or the European level. Nor does it imply or exclude current or future endorsement of or commitment to these projects by Dutch political decision makers. Projects not included in the list are not excluded from any Dutch public funding, European funding or political endorsement. Commitment of any public funding to the listed projects will require them to comply with the same criteria and processes as applied to non-listed projects requesting the same funding. In short, no rights can be derived from appearance or omission of a project on this list.

Finally, while we have avoided the selective listing of individual investments by private enterprises, we wish to signal the existence of several potential investments that could be unlocked/facilitated by a less restrictive policy of the European Investment Bank (either directly or as a result of the use of EU funds) with regard to – for example - the following issues:

- Limited risk capacity/appetite, often forcing them to be more conservative than many of the large commercial banks.
- Limited (EU supported) EIB firepower for innovative/growth companies in the Midcap category, and only for loan amounts until 25 mln. No EIB appetite or even eligibility for loan amounts between 25 and 70 mln. This is a very important size-category for Midcaps or companies just beyond the Midcap limits, in particular for growth and innovation, who are often in real need of medium term financing from the EIB.
- A rigid model for the loan agreement, which in some cases makes it hard to co-finance projects together with local banks, including promotional banks, or under certain state guarantees.
- Restrictive sector policies, for example in transport, even where EIB financing is highly additional to private financing possibilities.
- Demanding requirements for intermediaries, for example with regard to reporting and the definition of certain eligible client categories (eg. SME's)

PROJECT LIST

CROSS CUTTING ISSUES

Sector	Sub-sector	Project name	Implementing agency	Description	Included in national investment plan (yes/no)	Status	Total investment cost (EUR bn)	Investment in 2015 – 2017 (EUR bn)	Barriers/solutions
SME's	SME's with a stable growth path	Non-bank financing alternatives – Development of alternative financing platforms	Non-bank market parties with a focus on SME finance	For SME's alternatives for bank financing are needed. E.g. crowdfunding, credit unions, SME bond issuers and supply chain finance are on the rise, but lack the funds to reach out to a bigger part of the SME market	Related to national programme	In development	Based on a 400 mln Dutch partial guarantee instrument, the intention is to mobilize a multiple of this amount in private financing	Depending on market development, 1-5 bln (rough estimate) EU wide	Non-bank alternatives lack the track record to get the funding they need to lend to SME's. EIB could be a corner stone investor to kick start investment platforms and catalyze private funding.
SME's	SME's in growth fase	IMF-SME : International Mezzanine Fund for SME's	Financial intermediary, different semi-private-public actors possible	International fund for mezzanine finance targeting financial needs of viable and (fast) growing SME's.	SME Action Plan	Early stage of development. Could be set up within one year.	For 5-year fund in total € 1 bln funding for Dutch market. For EU-market a x? multiple	€ 600 mln for NL. X? multiple EU wide.	There is scarce availability of mezzanine finance for fast growing companies in the EU. Solution could be a European corner stone investment in a mezzanine fund operating at EU level.
SME's	Very fast growing / expanding innovative SME's	Expansion phase co-investment fund	Potentially EIF	Large scale co-investment vehicle for fast expanding phase. Deal size range €5-€40 mln.	SME Action Plan	Early stage of development	For 5-year fund in total € 500 mln to €800 mln. for EU-market	€ 250 mln to €500 mln. for EU-market € 100 mln in NL.	Lack of large scale investment funds/rounds in EU compared to the US. Now it happens regularly that US-funds benefit from the EU early stage investments. Solution would be an EU-wide co-investment fund managed by the EIF.
SME's	SME's in growth fase	Renewable raw	Ministry of Economic	In Europe the urgency to move to a biobased economy	Yes		0,1 (5 years, 20 million a	0,06	Biomass investments are often too big for local

		materials. Biomass investments.	Affairs	is higher than in the rest of the world, because of the price difference of fossil fuels compared to the US (shale gas) and the Middle East (oil). The project offers support for SME's to Expand their business with the use of renewable raw materials.			year)		banks (€ 20 - € 30 mln.), but too small for specific financing projects. Biomass is a very specific market and bankers lack knowledge of it. The prices of biomass raw materials are quite volatile. Finally, the cascaded value chains are not yet closed and this makes investment for the whole value chain difficult.
Innovative companies	Mainly innovative SME's and midcaps with substantial investment in innovation projects for new products, processes and services	IPFS : Innovation Project Finance Scheme	National Promotional Bank / NPB Funding from Investment Platform vehicle/EIB group	Debt funding through a portfolio strategy for innovative SME's and midcaps with substantial investments in projects for new products, processes and services. With this approach, instead of a subsidy instrument, it is feasible to create an investment capacity of more than five times. Similar to the RSI-concept.	yes	Under development, possible to implement within 1 year	Yearly investment cost 50 up to 100 mln. Private capital leverage 2 times or higher	Depending on market developments between 150 -300 mln	Bank and other private investors are very reluctant to invest in private innovation projects of these companies. European matching of national instruments which accept a small but predictable loss of a small part of the investment portfolio enables private investments for activities with substantial economic return and spin off. No such facilities exist at the moment. EIB-group funding of this project portfolio with limited loss taking by EC-instruments could enable these innovation investments.

KNOWLEDGE AND THE DIGITAL ECONOMY

Sector	Sub-sector	Project name	Implementing agency	Description	Included in national investment plan (yes/no)	Status	Total investment cost (EUR bn)	Investment in 2015 – 2017 (EUR bn)	Barriers/solutions
Knowledge and the Digital Economy	Public and Private R&D	Smart Industry	FME, VNO-NCW, Chamber of Commerce, Ministry of Economic Affairs	As part of an Action Plan Smart Industry 10 fieldlabs will be started. Goal is to invest in the digitalisation of the Dutch Industry. We aim to cooperate with several countries, like Germany, Belgium, France, UK and Denmark.	Yes	Action plan is ready. Smart Industry 10 fieldlabs will be started in 2015.	0,09 (first 10 fieldlabs, 20 more to come)	0,09 (first 10 fieldlabs, 20 more to come)	International standardization of industrial supply chains. Cybersecurity and privacy. Business models in respect of big data. Fieldlabs will be the main part of the solution. International cooperation is essential. Financing the international standardization only by private investments is difficult, so initial public financing is needed to kick-start these investments.
Knowledge and the Digital Economy	Public and Private R&D: Health	PALLAS	Pallas foundation	PALLAS is the future, multi-purpose nuclear research reactor which will ensure the European security and independence of the supply of medical radioisotopes beyond 2020. PALLAS is set to replace the High Flux Reactor in Petten which currently supplies 60% of the European demand for medical radio-isotopes and 30% of global demand. PALLAS will provide nuclear research and irradiation services for public and private R&D in medical isotopes, industrial isotopes and nuclear security.	National and regional governments provided EUR 80 mln financing for early development stages (design and licensing)	Preparations have started early 2014 and a project organisation is in place (PALLAS foundation) Design (procurement) licensing will start in 2015. Procurement for construction and start construction planned for 2017-2018 period.	0,6	0,2	Barriers: Assessment of PALLAS business case is positive. However historically low pricing of medical radio-isotopes, market failure and lack of European policy have made private investors hesitant. A combination of predominantly private financing and EC and EIB financing is envisaged. Solutions: 1. a EUR 0.2 bn European investment will leverage private financing for PALLAS. 2. Implementing EU-policy on the security of supply of medical radioisotopes will further improve the business case of PALLAS and other European

									research reactors.
Knowledge and the Digital Economy	Public and Private R&D	QuTech	EC for core project; Partnering projects by participating countries and industry	Next wave of innovation: Quantum Technologies Research & Venture Initiatives. A novel partnering approach to boost innovation in Europe through excellence in quantum science and engineering to ensure safe and secure communication and to boost ICT industry and employment in Europe. This way EU can regain leadership compared to US and Asian ICT industries.	Yes	Planning in EU quantum community started in 2014. Member States recently initiated several initiatives that can join forces, starting in 2015. Venture Capital in Europe has started to investigate this topic in 2014.* Setting up a joint public private investment fund could take shape in 2015. (*draft report available)	1	0.4	Barriers: lack of high-risk investments from existing industries (more risk averse than US counterparts) and the absence of early-stage angel-investors and venture funds. Additionally national research initiatives are fragmented. Solution: In Quantum Technology, Europe has a lead scientific position. If the EU can synergize existing national programs by adding a joint core research programme directly coupled to strong venture capital / angel investment stimulating measures, the EU can stay ahead in innovation as well. This will create growing private capital investments in EU and leverage the birth of a new industry.
Knowledge and the Digital Economy	ICT infrastructure	Fast broadband roll-out in rural areas	Regional authorities	Roll-out of fast broadband (>30MB/s), both fixed and mobile, in less densely populated areas.		Planning stage	0,4	0,2	Barriers: The return to investors from subscriptions is lower than needed to justify the investments. Benefits to society from including these areas in the digital single market do not accrue to investors. Public money to fill the gap is scarce. Solutions: use of financial instruments to better leverage scarce public money, as well as risk-sharing operations to support local broadband

									infrastructure projects.
Knowledge and the digital economy	Public and Private R&D	Investments in science: Large scale research Infrastructure and e-infrastructure	Ministry of Education Culture and Science/ NWO (Dutch research council)	Investments in research infrastructures and in e-infrastructure		Investment decisions have to be taken. NL has a roadmap aligned with ESFRI-roadmap for pan-European Infrastructures. Regarding e-infrastructure a plan for e-science is present at NWO	1.5	0.5	Despite EU support for feasibility studies contributing to the maturity projects, and existing EIB-facilities, national MS investments have been too low to implement ambitions. Additional European investments will leverage the national considerations and especially private sector contributions to implement the ESFRI roadmap. The same holds for <u>e-infrastructure</u> s. Using public funds (from the existing available resources) to catalyze private sector financing could be considered. To enable increased private participation reviewing state aid regulations could also be considered.
Knowledge and the digital economy	Public R&D	Investments in science: 1. Thematic technology transfer	Ministry of Education Culture and Science/ NWO (Dutch research council), Ministry of Economic Affairs, Ministry of Health	Pool excellent science and professionals and dedicated technology transfer from several universities and knowledge institutes together along the lines of a theme, such as cardiovascular research or oncology	Yes, on a small scale together with stakeholders related to the theme.	On a national scale there are pilots. The health foundations like to invest as well.	0,2	0.1	The model is proven by the VIB (Vlaams Institute for Biotechnology). Now a scaling up of a pilot in some sectors would result in much more translation of science into innovation. These are modest initiatives with high EU wide public and private spin off. Current EU eligibility criteria for EU-level R&D resources (e.g. requirement to involve other MS) present a barrier for further investments.
Knowledge and the Digital Economy	Public and Private R&D	Investments in science : industrial doctorates	Ministry of Education Culture and Science/ NWO (Dutch research	Programme to increase the number of phd's in the private sector to increase the use of knowledge by the government. The aim is		Initiative has been announced by Dutch Government	p.m.	p.m.	More effective links are needed between higher education, research and business, including effective knowledge

			council)	several hundreds of phd's.		in September 2014 (Growth Letter), to pursue a charter with the private sector (2015-2025).			transfer activities and business-academia staff exchanges. EU funding could contribute to planned agreements with the Dutch private sector, resulting in considerable private investments in phd's.
Knowledge and the Digital Economy	Public	Applied research infrastructure Examples : Phase Transition Lab, DATA science center, Geocentrifuge, Testing facilities, ICT big data & sensor lab, high energy systems integration lab, smart cities fieldlab	RVO	Research infrastructure		New.	0,1 p.y.	0,03	Applied Research Institutes are developing a Strategic Research Facilities plan. Part of the investments in facilities will however not be profitable, without risking to outprice the use of the facilities towards third parties on an international playing field. Fully privately funded facilities are hard to realized. The Strategic Research Facilities Plan will therefore have to take into account new and modern ways of financing.
Knowledge and the Digital Economy	Public R&D	R&D investment fund (toekomstfonds)	Ministry of Economic Affairs	Revolving fund for research infrastructure and public private partnerships		New	0,1	0,1	Investments in R&D require public participation to attract interest of private parties. Non-revolving investments should be covered by additional public budgets. The total investment package of € 100 does not cover the investment needs in research infrastructure and public private partnerships.
Knowledge and the Digital Economy	Applied Research Infrastructures Example 1	Grand Design, Dutch Food & Biobased Centre	Public and private parties	TKI Agri&Food, Top Institute Food and Nutrition, the applied research institutes DLO en TNO build bridges between academic research and product development.		Business plan has been developed in 2014 as a Public Private Partnership.	0,03	First round financing of € 8 mln in 2015-2016.	To bring existing research together, a new research centre including facilities needs to be built. Precompetitive research programmes on Food and

	Public and Private R&D: Agri&Food			Innovation is stimulated to meet societal and industrial needs. Research infrastructures, research programmes and valorisation activities will be joined. A new 'open innovation' research centre, including research infrastructure and ICT facilities, will be built in Wageningen. New research programmes in Food and Nutrition and Biobased will be developed.		About 200 private international companies participate. Links to other Dutch universities and academic hospitals. Links with European programs, such as EIT are envisaged. Start in 2015.			Nutrition and Biobased need additional investments to match current public and private investments and build a world class research infrastructure. Public funding can contribute to scarcely available private investments.
	Applied Research Infrastructures Example 2 Public and Private R&D: Agri&Food	Protein Competence Centre	Public and private parties	Seven companies from the food and feed business and six knowledge institutes from Holland combine their knowledge on proteins.		New research programme on proteins is needed focussing on the societal need resulting in increasing demand for high quality protein world-wide. Start in 2015.	0,006	0,006	Benefits to society and industry exceed the benefits to individual public and private research partners. Initial public financing is needed to kick-start private investments and balance investment costs and benefits of the partners.
	Applied Research Infrastructures Example 3 Public and Private R&D: Agri&Food	Carbohydrate Competence Centre	Public and private parties	CCC is a centre of expertise on carbohydrates. CCC is cooperation of 6 knowledge institutes with 19 (bigger) companies. Goal is to improve the innovation power of Agro&Food, Chemistry, Life Sciences and Health and Energy industries.		New research programme on carbohydrates is needed to perform research on the societal need resulting in increasing demands for carbohydrates for healthy food and biobased	0,006	0,006	Benefits to society and industry exceed the benefits to individual public and private research partners. Initial public financing is needed to kick-start private investments and balance investment costs and benefits of the partners.

						applications world wide.			
	Applied Research Infrastructures Example 4 Public and Private R&D: High Tech Systems and Materials	Holst	Public and private parties	This partnership from TNO and IMEC is a world class innovation centre on micro/nano technology and fonotica. Holst is established in the High Tech Campus in Eindhoven and is supported by 40 industrial companies. Holst has 180 employees with 28 nationalities. Holst is a good example of the situation at several public/private R&D centres.		Holst needs certainty about funding after 2016. This is necessary for the facilities, development s of demo plants and long term research programs. This certainty will improve the position of Eindhoven as high tech region (Brainport).	0.04	0.02	Benefits to society and industry exceed the benefits to individual public and private research partners. Public financing is needed to kick-start private investments and balance investment costs and benefits of the partners. This problem occurs in many other public-private R&D partnerships. Holst should therefore be seen as an example out of many.
All	Private and Public R&D : Smart specialisation	Vanguard initiative	Regional and local governments in partnership with private parties	A fund of funds for piloting the Industrial Renaissance. Three pilot actions to develop networks of demonstrators: high performance production through 3D printing, efficient and sustainable manufacturing, off shore energy applications.		new	100 mln	10 mln	In the present business climate, barriers for investing can be reduced by appropriate mechanisms for co-creation and risk sharing. Therefore the Vanguard Initiative for new growth through smart specialisation has engaged its partners in exploring solutions to leverage public-private investments through EIB/EIF. The Vanguard Initiative proposes to start a process for a co-investment mechanism which combines regional/national risk capital funds with a European fund of funds, sharing risks and sharing futures.

ENERGY UNION

Sector	Sub-sector	Project name	Implementing agency	Description	Included in national investment plan (yes/no)	Status	Total investment cost (EUR bn)	Investment in 2015 – 2017 (EUR bn)	Barriers/solutions
Energy Union	Connections and Production / Energy Efficiency: Better use of industrial heat	Regional heat-infrastructure: Rotterdam; Amsterdam; Arhem-Nijmegen; Geleen; Noorden NB : Examples below !	Local government, province; energy-, chemistry-horticultural, -housing sector	Construction of large scale heat infrastructure in 6 regional clusters for the efficient use of industrial heat and use of residual heat for horticultural clusters and housing. Connection of geothermal heat. Combination with CO2 delivery for horticultural use.	Part of Dutch energy agreement	Design, study, business case, investment plan ready.	1.5	1.0	Investment barrier: Return on investment takes long. Public funds may be needed to catalyze private investment.
	Example 1 : Chemical Industry	Steam pipeline in Eemsdelta	Private parties	Private parties are planning to build a steam pipeline with residual heat. This residual heat is beneficial for the whole chemical cluster in the Eemsdelta. The pipeline will reduce steam prices and make the cluster more competitive. There are environmental benefits. The investment in the new steam pipe line will double the amount of Green Energy produced.	Part of Dutch energy agreement	Akzo/EnecoPrivate parties are ready for the investment but financial hurdles exist.	0,15	0,15	Investment barrier: Return on investment takes long. Public funds may be needed to catalyze private investment.
	Example 2: Chemical Industry	Steam pipeline in Port of Rotterdam	Private parties	Project building steam pipelines that make sharing of residual heat possible. The pipeline will reduce steam prices and make the whole chemical energy cluster in the Port of Rotterdam more competitive. There are environmental benefits as well.	Part of Dutch energy agreement	The first pipelines have been built, but there are opportunities for more. Companies are reticent to make these extra	0,37	0,2	Investment barrier: Return on investment takes long. Public funds may be needed to catalyze private investment.

Energy Union	Connections and Production	Off shore wind	Ministry of Economic Affairs and private partners	Realisation off 5x700 MW off shore wind.	Part of Dutch energy agreement	investments. First tender will be granted in the period 2015-2019. Start construction will be 2017, start energy production in 2019.	12	2	These are large ticket investments requiring long term financing and potentially also subordinated facilities at different stages of development. Availability in the market is scarce, and the EIB has limited capacity in particular where size and risk taking has to be combined. EIB as a corner stone financier also with mezzanine financing is important to catalyze private financing (also after construction phase), including institutional investors. Cooperation between EIB and National Investment Institute (NII) could be explored.
Energy Union	Connections and Production: Geothermal steam	Deep geothermal energy	Dutch Enterprise Agency	Deep bore-holes for geothermal energy 4-6 projects. This pilot at ultra deep level would reduce the technical risks for future projects and gives more insight in geological risks. Project has considerable spin off effects regarding know how for future projects and is scalable.	Part of Dutch energy agreement	Business case, investment plan ready.	0.5	0.1	High technological and geological risk present an investment barrier for current business cases. Sufficient risk capacity and availability of European funds needed.
Energy Union	Connections and Production: Geothermal heat	Acceleration geothermal horticulture plan	Dutch Farmers Organisation	Geothermal heat for green house horticulture: 5 PJ reduction fossil energy in 2020 by circa 60 bore-holes.	Part of Dutch energy agreement	Business case, investment plan ready.	0.45	0.2	Insufficient financial buffer of horticulture enterprises; front loaded spending is high; return on investment takes long. Bundling/structuring of investments and equity investments in horticulture enterprises needed.

Energy Union	Connections and Production: Port	ROAD	Private parties	Project for CO2 capture, transport, and storage from the Port of Rotterdam in the sea.		Ready to start.	0.2	0.2	The current CO2 price is too low to make this project economically profitable. This issue applies to a broader range of projects involving CO2.
Energy Union	Energy Efficiency: Steel sector	Hisarna	ULCOS	<p>In 2009 the Public Private Partnership ULCOS (Ultra Low CO2 Steelmaking) started with testing new technologies for pig iron. This is called the Hisarna-proces. This process costs 20% less energy and results in a reduction of 20% of CO2-emissions.</p> <p>The consequence of a possible delay in scaling of the pilot phase is that qualified employees will leave and the installation will become obsolete.</p>		After four phases of testing a European partnership (GER, LUX, NL) will start scaling of the pilot phase to produce pig iron from the beginning of 2015 for a period of 6 months. This requires big investments.	0.3	0.3	The project can help the European steel sector to improve its competitiveness, especially v-a-v competitors in low-cost energy countries like the US. Banks are reluctant with financing and it's hard for the companies to invest because of the low margins on the steel market. Low CO2-prices are a factor.
Energy Union	Energy Efficiency in Buildings	Energie Sprong (« Energy jump »)	Energie sprong	<p><i>Energiesprong</i> an independent, non-for profit market development team, supports greater scale and reinforces the existing energy efficiency market structuring energy efficiency refurbishment programs for buildings. The program created the market conditions to broker a deal for 111.000 Net Zero Energy refurbishments for social housing in the Netherlands. <u>Refurbishments are done within 10 days per house, financed off the energy bill savings and come with a 30-year energy performance warranty from the builder.</u></p> <p>This deal is driving the construction sector into a transformative innovation trajectory, based on prefabrication and</p>		Pilot phase (without refurbishment subsidies) starts to transition into scaling up delivery in 2015.	<p>Social housing deal implicates 6 bln for Dutch market.</p> <p>Making that succeed will be the catalyst for offerings in the private market. Implicating additional 2 bn / year market.</p>	<p>Until 2017: 1.5 bln for Dutch market only for social housing.</p> <p>Additional 1.5 bln for private homes.</p>	<p>Barriers: Sufficient affordable financing, also for the non-guaranteed investments in the affordable housing and private home owners category.</p> <p>Solution: Existing EIB funding for targeted funds could be expanded.</p>

				<p>industrialisation. Current solutions are based on a new building envelope, which integrates production, insulation, ventilation and efficient consumption. An impression: https://www.youtube.com/watch?v=5Do2IMB8xQs&list=PLjsYYZd8-kqH7npZw37P830BozqKeCLGd&index=3</p> <p>Additional funding is needed to:</p> <ul style="list-style-type: none"> - drive suppliers of builders to develop better components for the retrofit package - Piloting support for the private homeowner market 					
Energy Union	Energy Efficiency in Buildings	"EnergieRijk Den Haag"	Ministry of the Interior and Kingdom relations, local government in partnership with private parties	<p>Within the project "EnergieRijk Den Haag" the national government cooperates with the municipality of The Hague for more reliable, cleaner and cheaper energy. Its focus is on properties owned by the national government, the municipality and any other parties around the Hague Central Station. The Hague and the government will explore how sustainable energy can be realized with an area-specific approach. Consider integration of existing thermal storage systems, the use of district heating for energy exchange between buildings and the use of decentralized technologies such as geothermal energy generation and solar panels. The experience gained in the field of finance, procurement, technology and organization may in the</p>	Part of Dutch energy agreement	Business case, investment plan ready.	PM	PM	High technological risk is currently a barrier for the business case. Sufficient risk capacity and availability of European funds needed in order to catalyze private financing.

				future be applied in similar projects.					
Energy Union	Industrial processes	Green growth SME energy efficiency booster	Public/private	Investment facility for energy efficiency investments in small industry (incl retail and multi-tenant building).		Early	0,1	0,05	<ul style="list-style-type: none"> • Insufficient access to finance for SMEs, causing economically viable solutions to remain on the shelf • Insufficient access to expertise • Split incentives between owners and users • Fragmented financing needs requiring bundling

TRANSPORT

Sector	Sub-sector	Project name	Implementing agency	Description	Included in national investment plan (yes/no)	Status	Total investment cost (EUR bn)	Investment in 2015 – 2017 (EUR bn)	Barriers/solutions
Transport	Maritime and inland shipping	Greening the shipping sector (energy mix and exhaust gas cleaning)	Private	<p>Maritime shipping is to comply with (IMO/EU) emission standards, requiring major investments for the industry (e.g. scrubbers, new engines).</p> <p>Inland shipping can reduce its environmental impact by retrofitting vessels to LNG</p>		Combined with high investments the shipping and barge industry is faced with low margins. These extra requirements are (financially) difficult to achieve. Mature: technology can be applied directly	1,0	0,2	<p>Because of the relatively low margins in the industry banks are reluctant to finance the extra investments that are needed to meet the extra environment requirements. The industry is important for the logistical function of the Netherlands in Europe. Financial support in meeting these extra requirements is needed.</p> <p>In particular for inland shipping, shipping is an SME activity: bundling of smaller financial needs may be necessary. EIB could contribute to structuring and financing.</p>
Transport	Corridors and Missing Links	PPP Road Programme	Public/private	<p>The full rolling PPP road programme amounts to 8,3 bln.</p> <p>Of this 2,1 is off the TEN-T network:</p> <ul style="list-style-type: none"> - 1,3 national roads (see below) - 0,8 is regional (Rijnlandroute). 	Yes	Mature	7,0	2-3	<p>PPP's are facilitated against more favourable terms if private financing can be combined with long term corner stone financing from EIB with generous volume (especially with sizable projects) and risk taking capacity or new financial instruments such as EIB/EU enhanced project bonds</p>
Transport	Corridors and Missing Links	PPP Road Programme	Public/private	The rolling PPP road programme includes various heavily used sections that	Yes	Mature	1,3	<0,5	Regulatory restrictions: EIB is heavily restricted in its capacity to finance

				are arbitrarily off the TEN-T network, such as nearby Utrecht (Ring Road and A27/A1 connection)					crucial infrastructure not within the narrowly defined TEN-T network. PPP's are facilitated against more favourable terms if private financing can be combined with long term corner stone financing from EIB with generous volume (especially for sizable projects) and risk taking capacity or new financial instruments such as EIB/EU enhanced project bonds
Transport	Corridors and Missing Links	PPP Lock Programme	Public/private	The programme includes two complete lock complex renewals, the Amsterdam locks and the Beatrix locks, increasing the transport capacity to/from the Port of Amsterdam (4 th in EU) on the North Sea - Baltic and Rhine - Alpine corridors	Yes	Mature	1,4	0,6	PPP's are facilitated against more favourable terms if private financing can be combined with corner stone long term financing from EIB with generous volume (especially for sizable projects) and risk taking capacity or new financial instruments such as EIB/EU enhanced project bonds
Transport	Corridors and Missing Links	ERTMS Deployment	Public/private	The programme includes full implementation of ERTMS on TEN-T core network until 2028. The technology is available and the revenues are high, in particular in densely populated areas.	Yes	Mature	2,8	0,5	The use of PPP is under development. If a PPP is to be used, it could be facilitated by combining private financing with corner stone financing from EIB with generous volume and risk taking capacity or new financial instruments such as EIB/EU enhanced project bonds.
Transport	Corridors and Missing Links	Road capacity management	Public/private	A large scale programme is under implementation to optimize the use of existing road infrastructure by smart logistic interventions, often using intelligent transport	Yes	Mature	2,0	<0,5	In particular smaller ITS firms face problems raising capital due to uncertain returns on investment. More risk capacity needed.

				systems (eg real-time traffic information systems)					
Transport	Corridors and Missing Links	Multimodal terminals	Private	Whereas rail, road and navigation infrastructure is a government responsibility, the multimodal facilities at their junctions are fully private. With increasing freight volumes, in particular on rail and inland navigation, there is a large need for more multimodal terminals, with clear long term viability		Mature	0,8	0,2	Investors have insufficient certainty when freight streams will indeed relocate and revenues will start. More risk capacity needed. Potential for EIB cornerstone financing or project bond enhancements, if terminals combine efforts.
Transport	Corridors and Missing Links	Clean Fuel infrastructure – in Road Transport (Hydrogen, biogas and e-mobility)	Public/Private	Fuel infrastructure is fully private responsibility, with limited government resources to assist frontrunners. Given the policy goals for alternative clean fuels such as electricity, hydrogen and biogas, such investments are bound to be viable	Yes	Mature	1,9	0,5	Investors have insufficient certainty when the new technology will become large-scale. More risk capacity needed. EIB would be cornerstone investor.
Transport	Corridors and Missing Links	Clean Fuel infrastructure – in Aviation	Private	A programme under the heading <i>BioPort Holland</i> is in operation to accelerate deployment of bio-kerosine in civil aviation. Very limited public resources available.	Yes	Mature	0,1	0,03	Investors have insufficient certainty about long term and large scale supply of biokerosine. More risk capacity needed. EIB would be cornerstone investor.
Transport	Corridors and missing links: Transport in Harbour	Multicore Line	Private parties	The construction of a cluster of pipelines in the Port of Rotterdam. Clusters of pipelines make the transport of raw materials more efficient, safer, quicker and better for the environment. The pipelines benefit the energy efficiency of energy intensive industries in the port through improved transport system of raw materials.		At the moment there is already one cluster of pipelines. The capacity of this cluster is too small for demand. The plans for building a second cluster exist. A few interested parties are in the planning stage, but	0,015-0,02	0,015-0,02	The investment benefits the chemical and refinery cluster as a whole. It is difficult to organize cooperation between the parties because there is a lack of appropriate incentives for early stage investments because the pipeline will not be fully exploited in the beginning. A revolving fund might be needed to bridge the gap between short term users and future users.

						have difficulties with financing.			
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SOCIAL INFRASTRUCTURE

Sector	Sub-sector	Project name	Implementing agency	Description	Included in national investment plan (yes/no)	Status	Total investment cost (EUR bn)	Investment in 2015 – 2017 (EUR bn)	Barriers/solutions
Social Infrastructure (but with positive impact on all sectors)	Education and Training	Life long Learning fund	Ministry of Education, Science and Culture and / or Ministry of Social Affairs and Employment	The fund provides public co-financing for employers who invest substantially in their employees' education and training. Aim is to generate human capital and skills required for job transition. This will also enable close cooperation between employers and Higher Education institutions and VET providers.		Inception phase (but aligned with recent government initiative)	NA	NA	Investments in education during working life are lagging behind and are decreasing in the Netherlands, while job mobility is expected to become more important. Availability of public co-investments from EU level could catalyze private investments.
Social infrastructure	Built environment and urban services	Affordable housing (i.e. housing in the non-regulated segment, with rents between € 700 and 1000)	Ministry of the Interior and Kingdom relations	<p>Demand for affordable housing has been increasing substantially. Growth of the affordable housing segment will improve the performance of the housing and labour market. OECD and EU have recommended housing market reforms in the Netherlands, including support for the private rental sector.</p> <p>The government is actively promoting the sale of rental housing stock by housing associations to private investors. Rules regarding these sales have been significantly reduced, providing private investors with opportunities to acquire sizeable amounts of rental stock and a position on the</p>		Dependent upon coming legislation on housing corporations , due for 2015.	<p>10 bln in loans over a 15 yr period to be refinanced for affordable homes currently owned by housing corporations</p> <p>Additionally up to € 10 bn in loans to be refinanced for sale of housing corporation social housing to private entities</p>	<p>Refinancing is now expected to start in 2017</p> <p>(< 1 bn)</p>	Investments in the rental sector offer good returns. Between 1995-2012, the average total return of residential investments in the Netherlands was around 9%. The affordable housing category nevertheless faces financing difficulties as the EIB and other public entities are not able to finance this category according to current eligibility criteria and/or without a state guarantee, which is conform EU legislation reserved for social housing only. Until now two sectorbanks (BNG and NWB) financed the affordable houses of housing associations. Unclear is if commercial

				<p>Dutch rental market. The private sector will also invest in building new affordable homes. The affordable housing segment will therefore face considerable financing and investment needs.</p> <p>Moreover due to legislative adjustments expected in 2015, housing associations are required to move a part of their housing stock from the social to the affordable housing segment, to be commercially financed after a 15 yr transition period.</p>					<p>banks are interested in financing the affordable housing segment in the future.</p> <p>Financing by the EIB would enhance the needed growth of the affordable housing segment. The EIB is not allowed to do refinancing at the moment, even if this would enhance the capacity of housing corporations so build social homes by selling off affordable housing.</p>
Social infrastructure	Built environment and urban services	New concepts for elderly homes, student housing and housing of start-ups	Various : municipalities, housing corporations, private sector	<p>As a result of aging of the population and reform in the health care-sector, new forms of housing for the elderly are required. Investments to adapt the housing stock to changing demand contribute to a more dynamic housing and construction market. Redundant homes for elderly can be transformed into (for example) student homes. Similar concepts exist for start ups.</p>		Small scale initiatives on local level	<p>5 bn (2014-2040). 40.000 homes have to be adapted to meet demands of the elderly (annually).</p> <p>Investment needs for student housing are estimated at 1 bln.</p>		<p>The business case for new housing concepts for the elderly is underdeveloped. Solutions are to be found in developing aggregators/organizational intermediates to develop business cases and attract financing. EIB financing could be possible if several smaller projects are combined. Similar issues exist for student and start up housing.</p>
Social infrastructure (structural reform)	Urban innovation	Urban Agenda (EU programme) (« Agenda Stad »)	Ministries of the Interior and Kingdom Relations, Infrastructure and the Environment, and Economic Affairs ; in cooperation with city councils and entrepreneurs.	<p>Cities face complex challenges that cannot be solved by spatially blind sectoral policies. To tackle these challenges cities need a set of social, economic, governmental, and spatial interventions. "Agenda Stad" aims to stimulate policies, investments and innovations that contribute to resilient and thriving cities in line with the EU Urban Agenda.</p>	Agenda Stad was announced in the National budget 2015.	The Agenda Stad will be launched in 2015.	Unknown. To be presented in the Agenda Stad.		<p>Solutions to stimulate investments in the field of "Agenda Stad" are to be found in developing aggregators/organizational intermediates to develop business cases and attract financing.</p> <p>E.g. Dutch entrepreneurs are organizing themselves to develop "value cases" around smart cities solutions which cannot be marketed individually. An</p>

									<p>investment fund could offer opportunities to accelerate smart cities solutions around energy grids or smart mobility.</p> <p>Example (also mentioned in this list): Circular city concept, using excess industrial heat for homes in Rotterdam. Requires investments of several 100 mln. This concept promotes energy saving and carbon reduction.</p>
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RESOURCES AND ENVIRONMENT

Sector	Sub-sector	Project name	Implementing agency	Description	Included in national investment plan (yes/no)	Status	Total investment cost (EUR bn)	Investment in 2015 – 2017 (EUR bn)	Barriers/solutions
Resources and environment	Natural Resources	Circular economy facility	Public/private	Financing mechanism for investments in large scale high tech recovery of materials like rare-earth metals, concrete, phosphate from solid or liquid waste streams		Early	1,0	0,3	Investors face high initial investments with long returns on investment. More risk capacity needed. Furthermore uncertainty whether recovered materials can be transported and re-used or are regarded as waste (<u>regulatory</u> bottleneck: waste is defined too widely) Possibly a combination of of existing EU programmes (H2020, EFRO, LIFE) can be used.
Resources and environment	Natural Resources : Waste, retail, logistics, high-tech industries, cities	Circular clusters	Netherlands Enterprise Agency	In a circular economy, energy and materials are used far more intelligently by creating multiple uses, closing material loops and use of renewable energy. This generates innovation, new jobs because of longer value chains and stimulates resource independency. Economic opportunities arise on the scale of European regions (enough resources, complementary business and innovation networks, developed markets). Coordination problems, lack of integral system analysis to identify large scale economic opportunities and lock-in investments in linear production processes hamper creating new value chains across borders. Creating a		New	0,3	0,3	Vested interests benefiting from current linear production modes (recycling industry, municipalities, dominant market parties). Public funding is needed to kick start private investments.

				research call in which EU knowledge and business networks are challenged to build one regional circular business case would showcase the opportunities a circular economy can bring to the EU.					
Resources and environment	Resilience to Climate Change: Climate adaptation	Flood protection linked to energy supply and urban development	Public/ private	The Delta Programme includes a range of innovative and integrated investments with flood protection as a driver. In open water areas tidal power plants (Brouwersdam, Afluitdijk) are planned, in urban areas combinations with urban project development are anticipated.	Delta Programme	Mature	2	<0,5	Investors have insufficient certainty on the future revenues. More risk capacity needed.