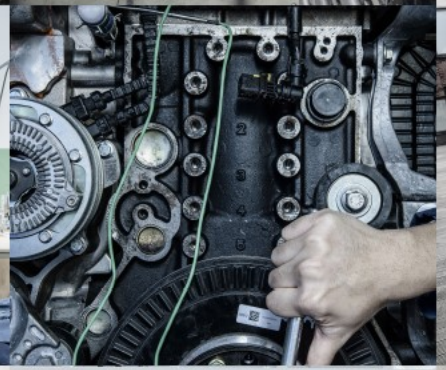
Actionplan Green and Digital Jobs

09 November 2023











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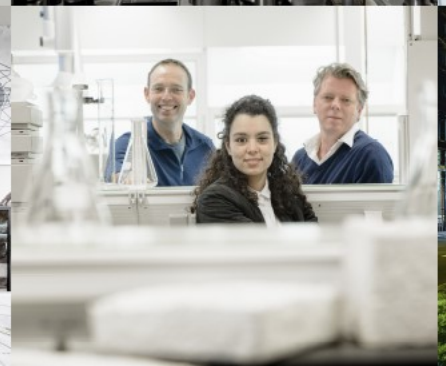


Urgency

- The shortage of technical professionals is visible: waiting lists for solar panel installers, shortage of technicians who expand the electricity grid, short of construction workers
- In the second quarter of 2022, there were already more than 85,000 vacancies in technology and 35,000 in the IT sector.
- The labour shortage slows down the energy transition, digitalizationd and sustainability
- Solutions require patience and cooperation between public and private parties

Joint problem analysis

- We started with the three departments (ministry of economic, ministry of education and ministry of social affairs) conducting a joint problem analysis
- Given the increasing demand for technicans and IT professionals it is not realistic that there is a quick fix
- The issue of shortages for the green and digital transition is complex and requires targeted and more far-reaching policy.
- We also looked explicitly at the contribution that employers and other (regional) stakeholders can make

Identified bottlenecks

- Declining inflow of woman and young people with a migration background
- Lateral inflow: stakeholders indicate that in the current labor market it is difficult for lateral entrants to switch to a technical or it job.
- Lack of an active learning culture
- Outflow, especially woman
- Coordination failure: supply and demand of work must actively seek and find each other. This requires coordination, which does not happen automatically.
- Fragmentation of subsidy schemes

A study into the shortage of technical workforce I

- The increasing shortage of technical workforce is largely structural, due to aging workforce.
- In addition to the shortage of highly educated technicians, there as recently been a shortage of executive positions at intermediate level
- There is a lot of leakage during the career: this is especially the case among women. This is mainly because part-time working not yet common practice in the technical sector.
- Despite the tightness, adjustment mechanisms such as improvements in real wages and work conditions, or increased investment in labor-saving innovation have only taken place to a limited extent.

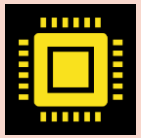
A study into the shortage of technical workforce II - recommendations

- Ensure more labor-saving innovation
- Stimulate more interest in technology at a younger age
- Invest more in matching and training of lateral inflow
- Set up a joint network for technical education and training
- Provide attractive primary employment conditions
- Puts shortages into a social perspective by seeing it in connection with reducing shortages in other sectors

Action plan from the technical employers

- An important first in tackling labor market shortages has been taken by the technical employers (industry coalition)
- On November 4, 2022, the industry coalition presented their own action plan.
- The action plan contains measures and actions that employers will use to reduce shortages over the next 10 years.
- The action plan includes, among others, the following measures:
  - Further improvement of employment conditions
  - Encouraging diversity and inclusivity
  - 10-year learning, work and income perspective
  - Investments in innovation to increase productivity
  - Investments in technology promotion
  - Train and make available 1,000 hybrid teachers

Starting point Actionplan Green and Digital Jobs

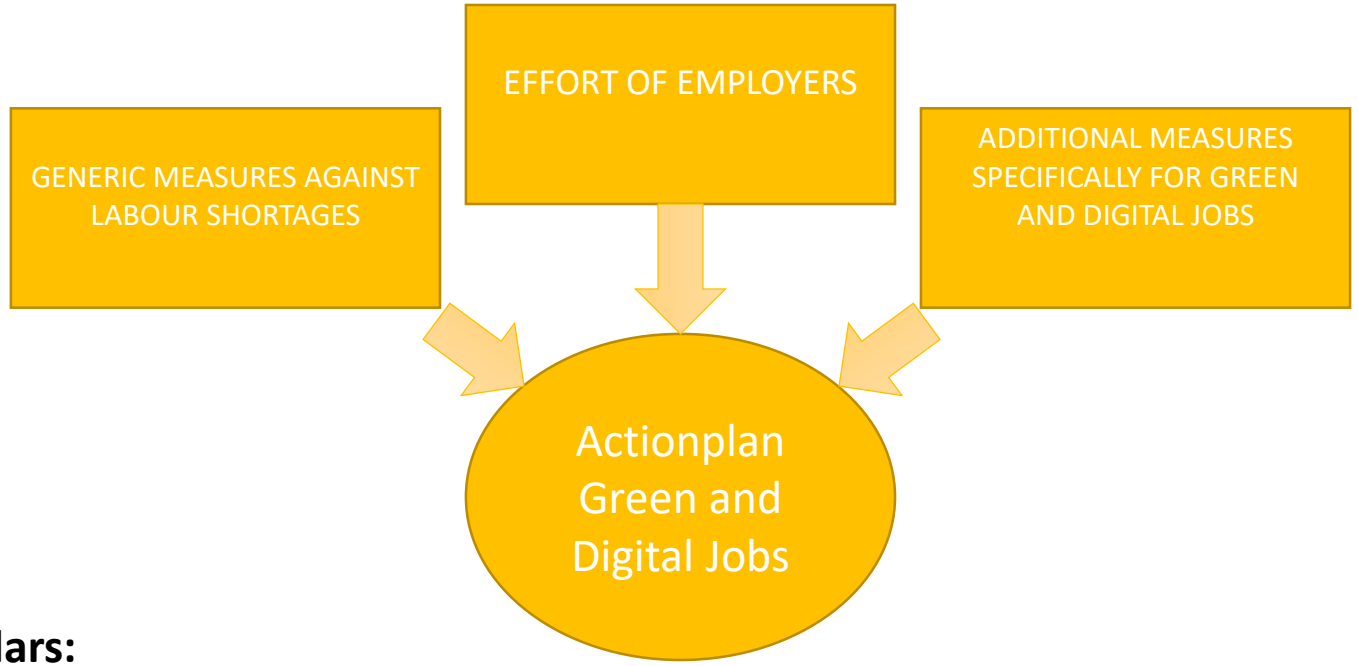


Reducing shortages in technical employees for the Green and Digital Transitions

Coherent package of initiatives with the employers, educational institutions and governments.

More coordination and managing the public efforts and reducing fragmentation

Coherent package



4 Pillars:

1. **Increase inflow in STEM education**
2. **Retaining and increasing technical employees in technology and IT**
3. **Labour productivity enhancing innovations**
4. **Strengthening governance and reducing fragmentation of initiatives**

Pillar 1 – Increase inflow in STEM education

- Government is commited to:
  - Strong technical education and technology promotion
  - Cooperation between education and business; for example, through the practical learning subsidy and regional investment fund for secondary vocational education
  - Offering education more in line with the needs of employers
  - Investment in sector plans - 150 million euros structurally for domain science and technology
  - Investment in practice-oriented research - 100 million euros
  - Increase (lateral) inflow, limit dropouts and study switches and prevent leakage after graduation - structural 14 million euros for higher vocational education courses in the technology sector
  - Strengthen career orientation and guidance in secondary vocational education - structurally 33 million euros
  - Exploration of how projects within shortage sectors, including technology, can benefit even more be stimulated and strengthened within mandatory social service

Pillar 1 – Increase inflow in STEM education

- Together with employers the following measures are being explored:
  - Technology promotion in primary and secondary education
  - Increasing hybrid teachers through employee exchanges
  - Hybrid vocational education through innovative hubs

Pillar 2 – Retaining and increasing technical employees in technology and IT

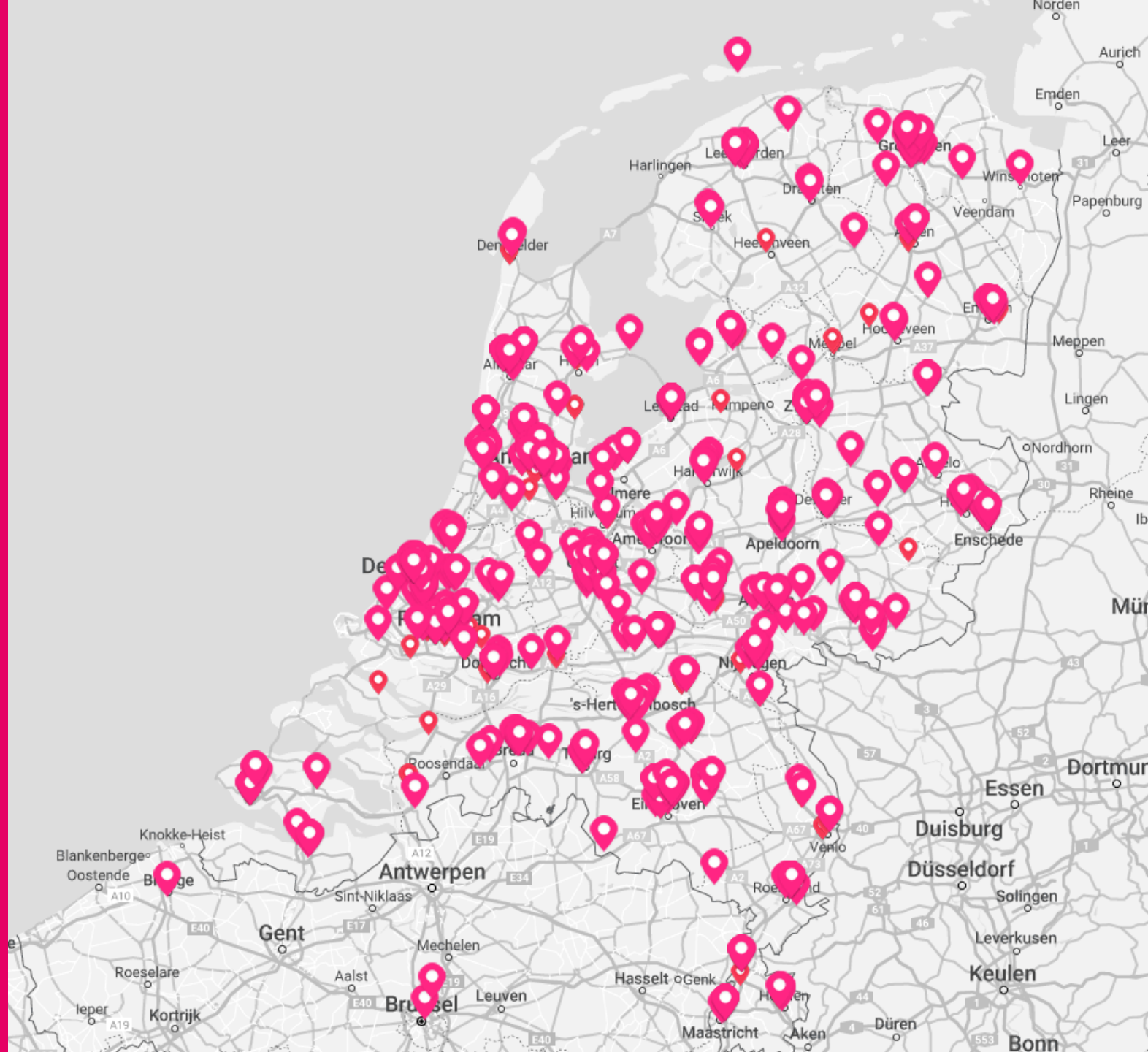
Government is commited to:

- Stimulating lateral inflow and matching supply and demand
  - Exploring possibilities for better targeting subsidy schemes
  - Expanding the labour market infrastructure through improving public services
  - Scale up regional partnerships focused on IT

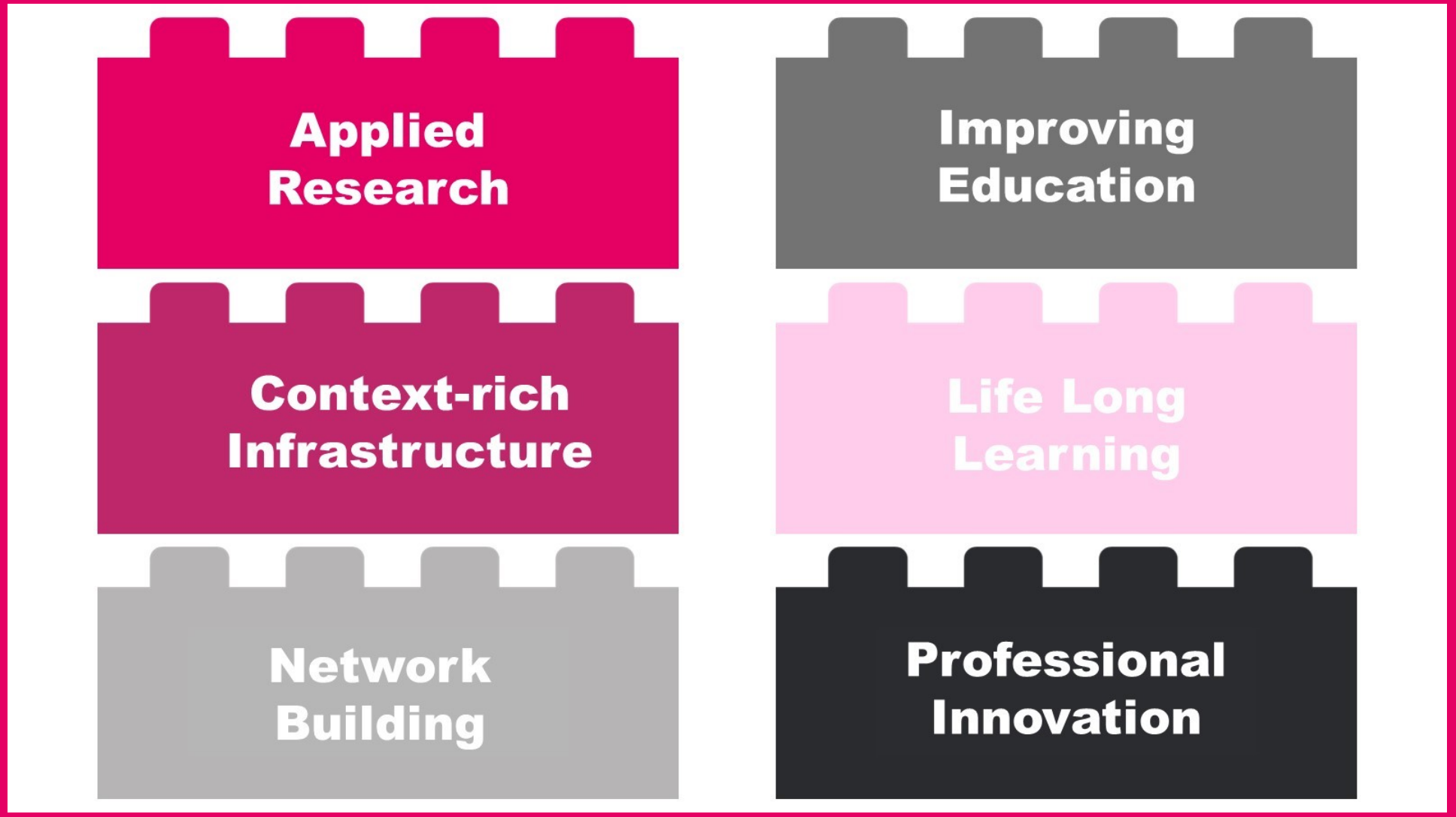
Pillar 2 – Retaining and increasing technical employees in technology and IT

- Live Long Learning (LLL)
  - Labour market focused on skills (project Skillful with Skills, Platform Learning Overview, National LLL catalysator)
  - Increasing inflow from specific targetgroups (VIA, Coalition Women in Tech, Taskforce IT)
  - Scale up successful public private partnerships in vocational education

- 450+ public private partnerships in VET and professional education in NL
- 10 years of not reinventing the wheel: sharing knowledge, best practices & lessons learned
- Open source learning community
- Spreading throughout Europe: Centers of Vocational Excellence
- Latest development: Scale up successful PPP in VET



•BUILDING BLOCKS



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Pillar 2 – Retaining and increasing technical employees in technology and IT

- Together with employers the following measure is being explored:
  - Connecting the Golden Gate initiative (10 years work and development guarantee) with the new labor market infrastructure

Pillar 3 – Labour productivity enhancing innovations

- Facilitating role through the program Accelerate Digitalisation SME, the Smart Industrty program, My Digital Business (retail) and the European Digital Innovation Hubs
- We are going to conduct a study into how we can increase investments in Labor-saving innovation
- The downside of this effort also requires additional technicians and IT professionals
- Technological process innovation is therefore not an isolated action; is included in further development of the (process) innovation policy

Pillar 4 – Strengthen governance and reducing fragmentation of initiatives

- Two starting principles for the governance of the Actionplan:
  1. Simple and clear implementation structure
     - Make use of existing national or regional infrastructure (networks and partnerships)
     - Combine agenda's of different administrative bodies
  2. Structure has to connect to the level of the activities, subsidiarity
     - Regional cooperation remains the fundament
- Monitoring the implementation of the Actionplan using the Technology Pact Monitor and Climate Monitor and the emancipation monitor

- Links: Monitor Techniekpact – Techniekpact, Regionale klimaatmonitor - Klimaatmonitor (databank.nl),

Monitoring proposal for pillar 3

Pijler 3/ Doelstellingen	Betreft	Huidig cijfer	2030
Productiviteitsgroei in ICT en technische sectoren	Arbeidsproductiviteit op basis van productie	nader te bepalen	
	Multifactorproductiviteit op basis van productie	nader te bepalen	
Groei toegevoegde waarde ICT en technische sectoren	Arbeidsproductiviteit op basis van toegevoegde waarde	nader te bepalen	
	Multifactorproductiviteit op basis van toegevoegde waarde	nader te bepalen	
Aandeel bedrijven dat innoveert neemt toe	Aandeel dat organisatorisch innoveert	nader te bepalen	
	Aandeel dat technologisch innoveert	nader te bepalen	
	Uitgaven aan technologische innovatie gedeeld door aantal bedrijven per sector	nader te bepalen	
Bedrijven adopteren steeds vaker technologie	% bedrijven met website	nader te bepalen	
	% gebruikt AI	nader te bepalen	
	% gebruikt robots	nader te bepalen	

Monitoring proposal for pillar 1

Pijler 1/ Doelstellingen	Betreft	Huidig cijfer	2030
Toename van keuze voor b ètatechnische profielen in het voortgezet onderwijs	vmbo-bb/-kb/-gl technisch profiel	20%	
	vmbo-gl/-tl NaSk	36%	
	havo natuurprofiel	36%	
	vwo natuurprofiel	59%	
Toename doorstroom vanuit voortgezet onderwijs naar bètatechnische opleidingen in mbo en hoger onderwijs	vmbo naar bètatechnisch mbo	30%	
	havo naar bètatechnisch hoger onderwijs	25%	
	vwo naar bètatechnisch hoger onderwijs	40%	
Vrouwen maken een steeds groter deel uit van instroom in bètatechnisch mbo en hoger onderwijs	vertegenwoordiging vrouwen binnen instroom bètatechnisch mbo	15%	
	vertegenwoordiging vrouwen binnen instroom bètatechnisch hbo	28%	
	vertegenwoordiging vrouwen binnen instroom bètatechnisch wo	43%	
Nederland loopt in de pas met de EU als het gaat om keuze voor ICT-opleidingen	afgestudeerden: aandeel ICT	3,4% NL t.o.v. 3,9% EU	
Instroom in bètatechnische lerarenopleidingen neemt toe	instroom bètatechnische lerarenopleidingen hbo en wo	1477	
Er staan steeds meer vrouwen voor de klas bij bètatechnische lessen	voortgezet onderwijs, aandeel bètatechnische lesuren gegeven door vrouwen	39%	

Follow-Up

Letter to Parliament end of the year with a new governance and monitoring proposal

Organizing regional support session on how we can organize regional infrastructures

Progress reports every two years from 2024

Takeaways

Mandate from the government and cooperation with the responsible departments of education and the labor market

Use regional infrastructures, a bottom-up approach

Joint responsibility, commitment and co-financing of public and private partners