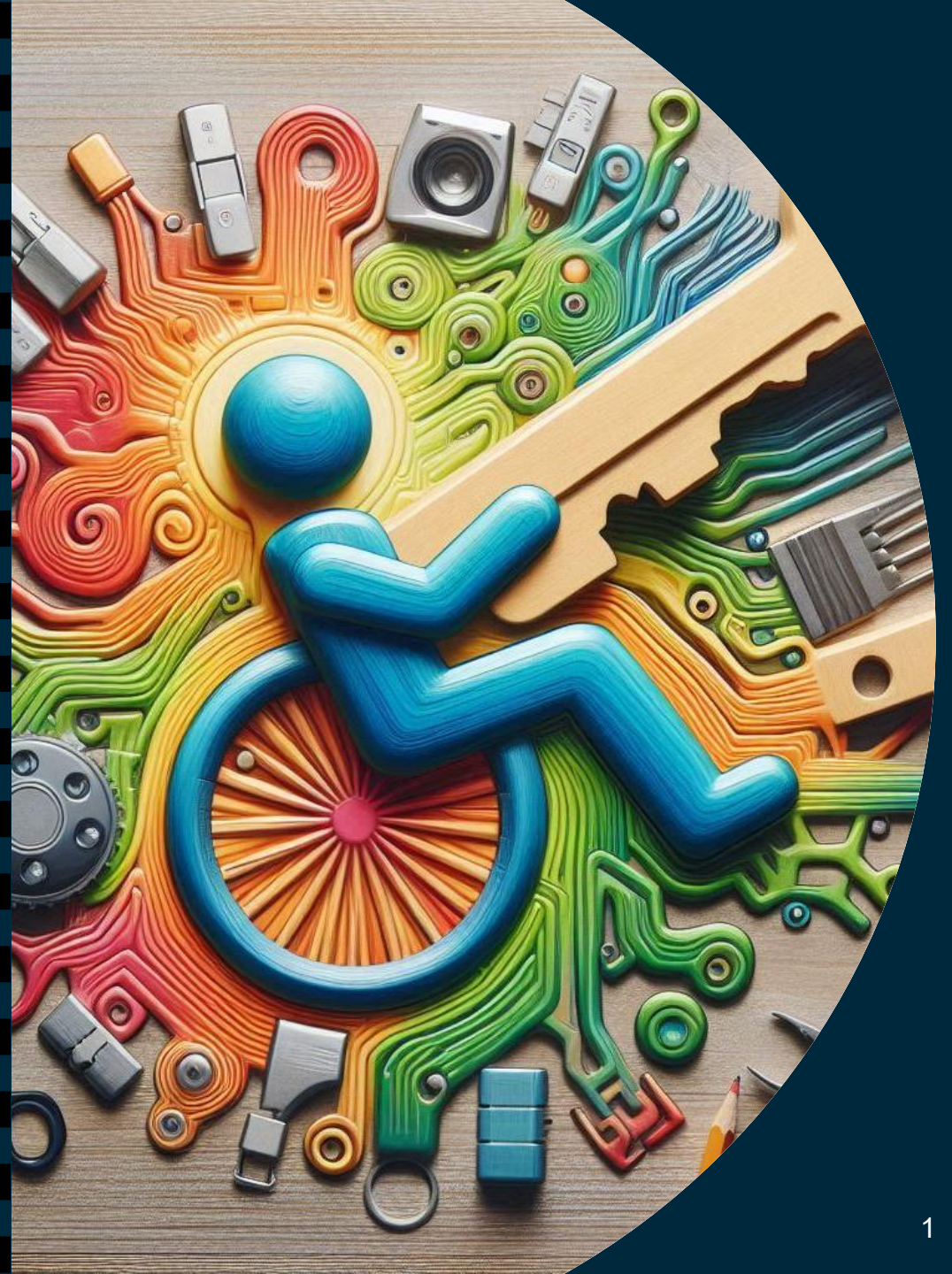


Technology as a key to (re-)integration

Eveline De Raeve

eveline.deraeve@thomasmore.be



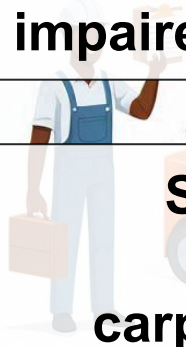
Who are the people who re-integration



Ruth (48), cleaner
fall at work
limited arm movement



Tobias (36), carpenter
clubfoot (corrected)
reduced ankle flexibility



Mario (32), technical draftsman
stroke
impaired fine motor skills



Jonas (29), delivery driver
traffic accident
limited knee mobility



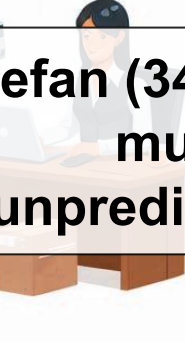
Dimitri (41), welder
diabetes
reduced finger sensitivity



Sofie (35), cashier
work overload
carpal tunnel syndrome



Fatima (45), assembly line worker
repetitive tasks
chronic wrist pain



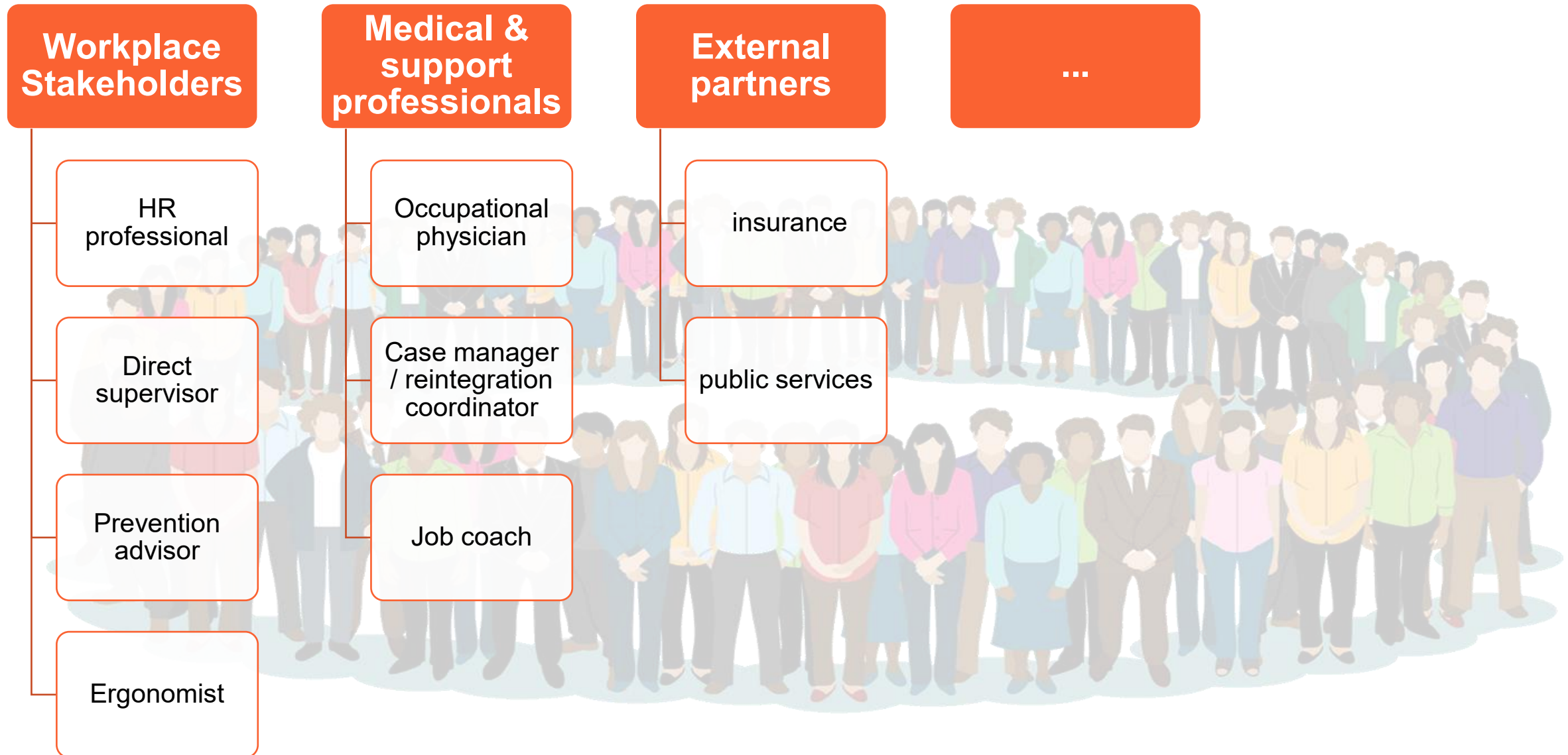
Stefan (34), software developer
multiple sclerosis
unpredictable energy levels



Anja (50), primary school teacher
age-related hearing loss
difficulty in group conversations

The complexity of roles in reintegration

Who needs to know what's possible?



Factors that influence the re-integration proces

The lack of clarity around roles is due to a number of important factors:

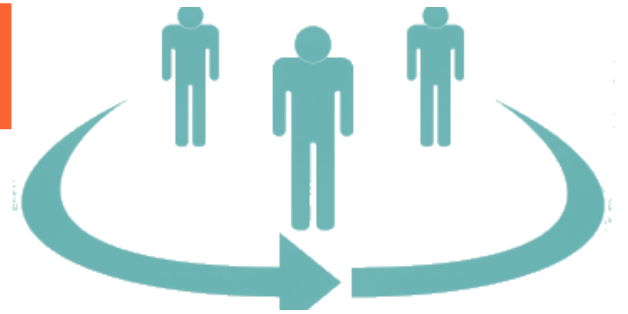
Specific situations: Every employee has unique needs, which means that the standard process is not always divided.

Level of knowledge: Not everyone in the team is aware of all possible options: An occupational physician thinks from a health perspective, an HR manager from a work process perspective, and a healthcare provider from a health perspective. Who ensures that these perspectives come together?

Availability of resources and technology

“Reintegration is a shared responsibility”

Sustainable reintegration



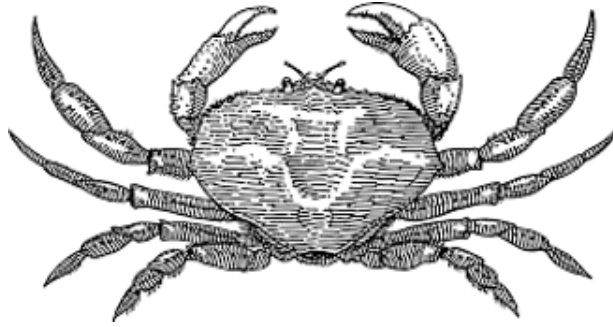
Jobmatching: “How do I choose the right job for someone who has/may have physical challenges?”

Aids: Is it possible to adapt the workplace or job to personal needs? How do I use (existing) technologies for this?

Exoskeletons



Exo-technology?



Mechanical structures

- Assist
- Support
- Limit
- Improve ergonomics



Types of exoskeletons (astm-definitions)

Hard materials

Soft materials



Exoskeleton



Exosuit

Passive



Wearable robotics



Powered clothing

Active

Hand/fingers/wrist

Actief

Ironhand

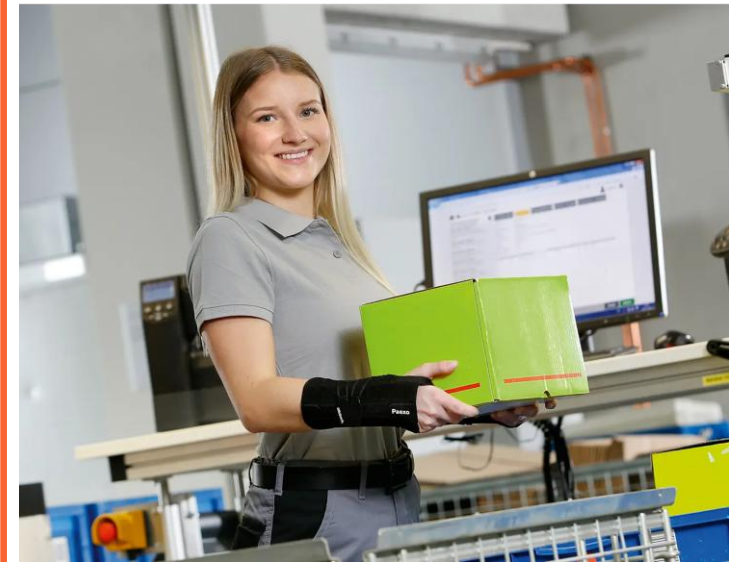


Passief

Paexo Thumb



Paexo Wrist



Shoulders

Active

Agadexo shoulder (Agade)



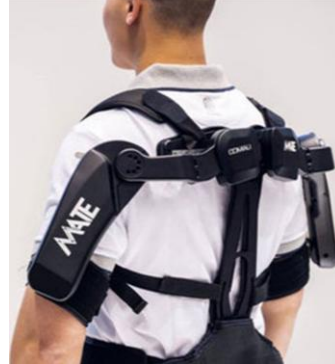
Skelex 360 XFR



Paexo Shoulder



Mate (Comau)



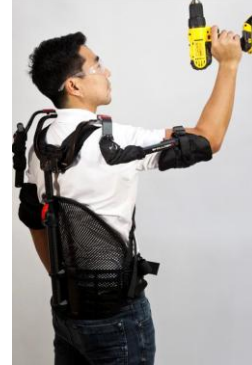
BESK (Cyber Human Systems)



Plum' (HMT)



SuitX ShoulderX



EVO (Ekso Bionics)



Passive

Hapo MS (ErgoSanté)



Light (HMT)



Neck

Passive

Skelex Neck Support



Paexo Neck



Moon (HMT)



Back

Passive

LiftSuit (Auxivo)



HeroWear Apex Suit



ALDAK (Cyber Human Systems)



CareExo Lift (Hunic)



SuitX BackX



Paexo Back



SoftExo Lift (Hunic)



Exosoft (Cyber Human Systems)



Hapo Posture Harness



Paexo Soft Back



SoftExo Hold (Hunic)



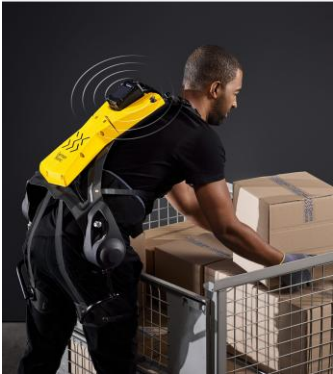
Laevo Flex



Back

Actief

Cray X (German Bionic)



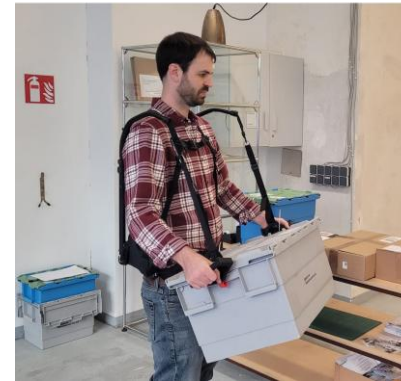
Softexo Carry (Hunic)



CarrySuit (Auxivo)



Atlas (Exomys)



Passief

Back Protect (BeMedico)



Back Support (SBI)



Legs

Passive

SuitX LegX



Archelis (Nitro)



Chairless Chair (Noonee)



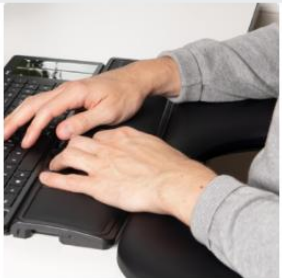
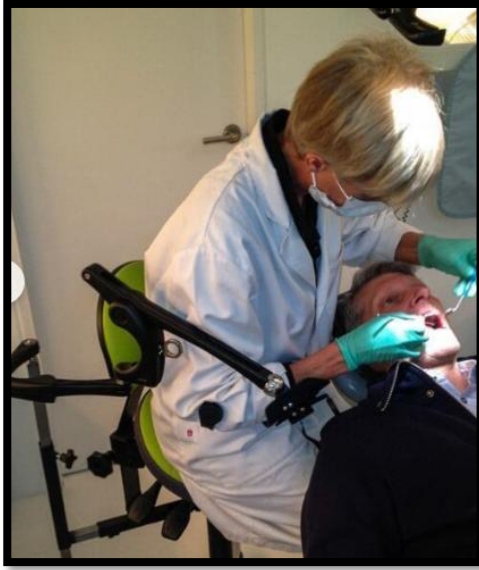
Lex Wearable Chair (Astride)



Ergonomic aids



Ergonomic aids



Mousetrapper Armrest
Symmetrisch TB216



Mousetrapper Armrest Split TB217



Mousetrapper Armrest Standaard



Ergonomische bureaustoelen



Baliestoelen



Zitballen



Zit hulpmiddelen



Stokke kniestoel



Trippelstoel



Vergaderstoel



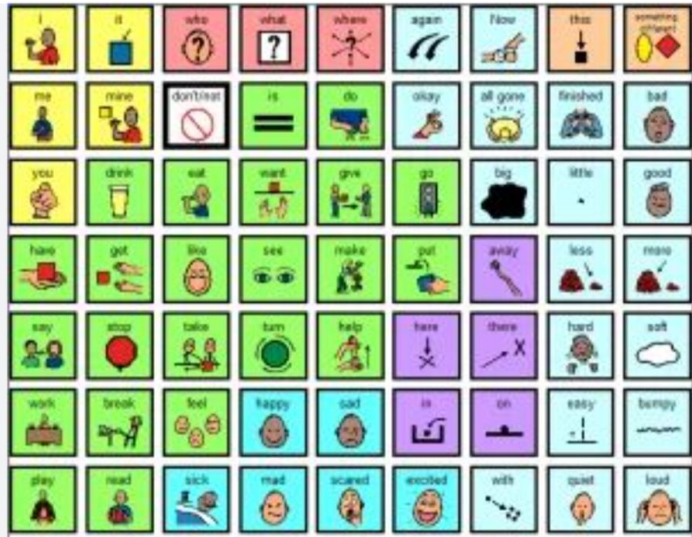
Vloermat bureaustoel

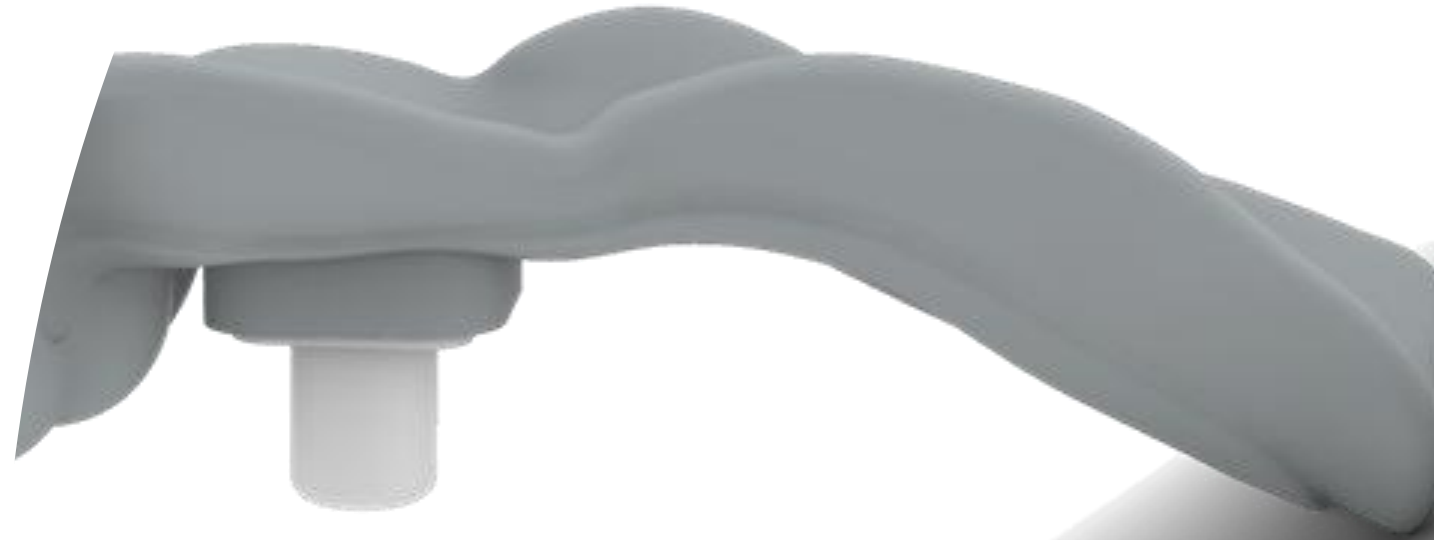


Communication technology



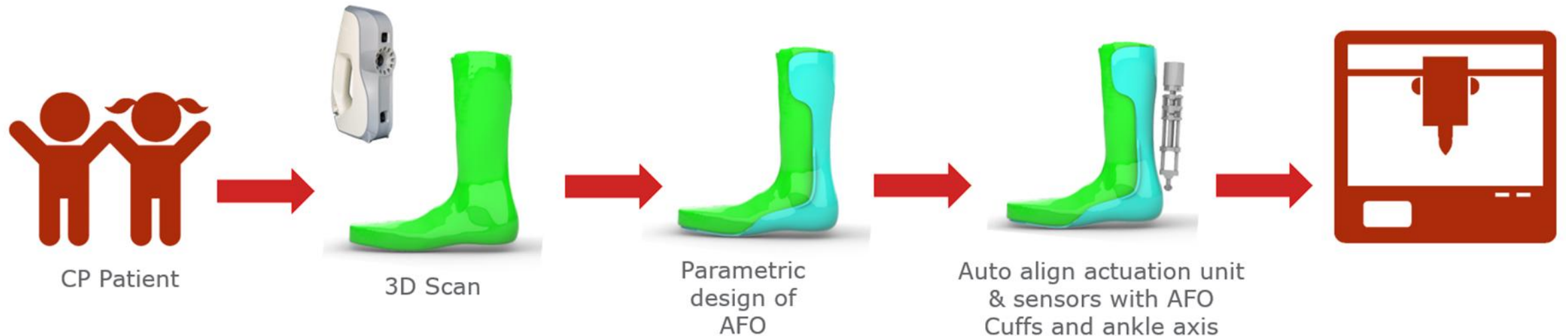
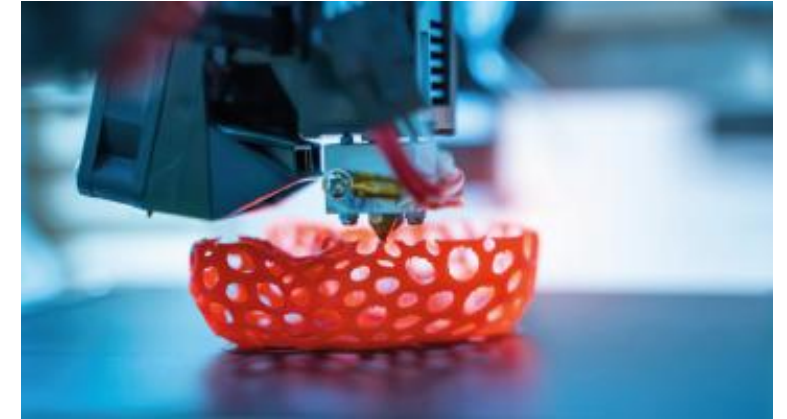
Technology for communication



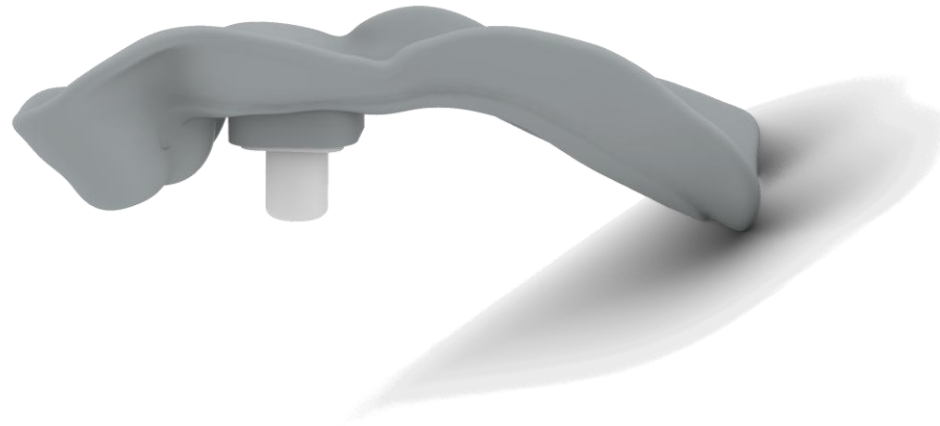


From scan to print

Digital design



Joystick wheelchair



Keyboard aid

A patient with limited motor function in his hand (tremor due to Parkinson's disease) needs a keyboard grid to do his job, and he wants to use his laptop for his job



Scannen toetsenbord
of
parametrisch ontwerp

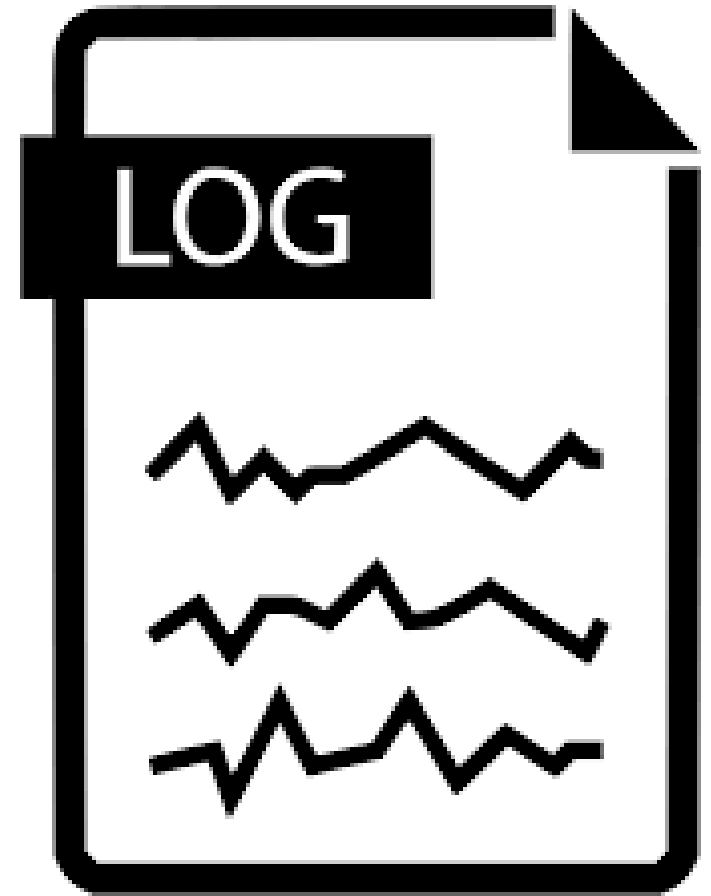
Plug help

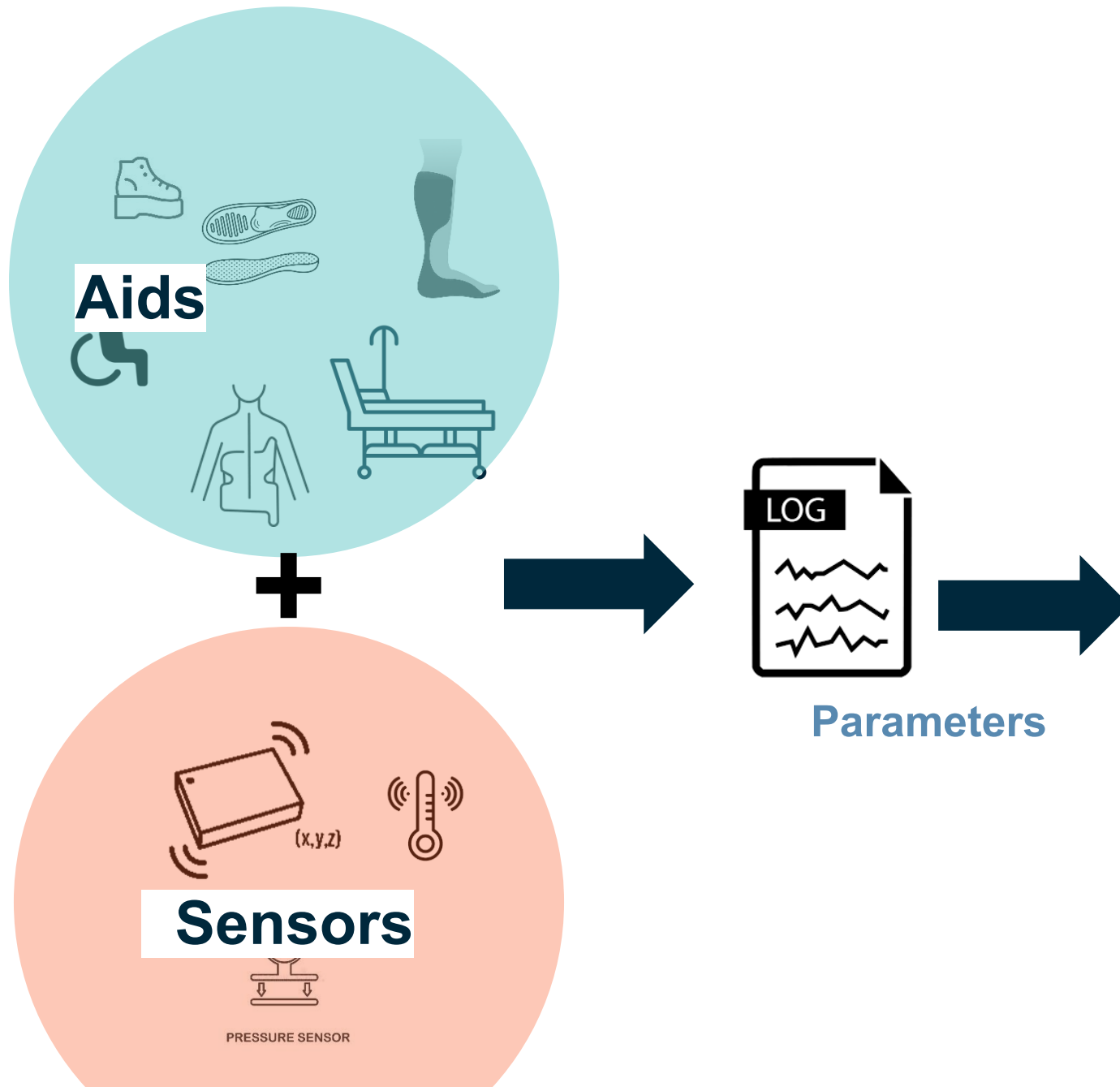


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Thee force of data





Insights

Improve technology

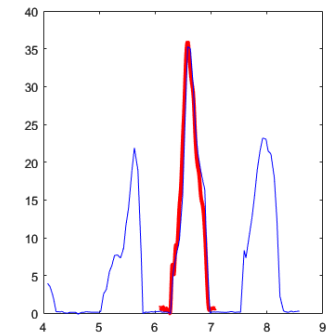
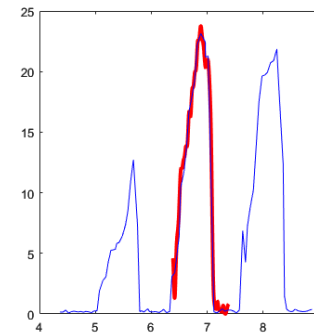
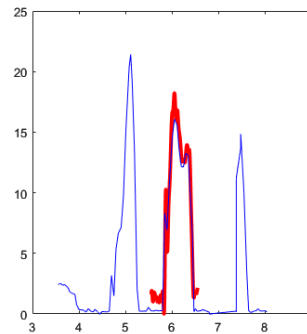
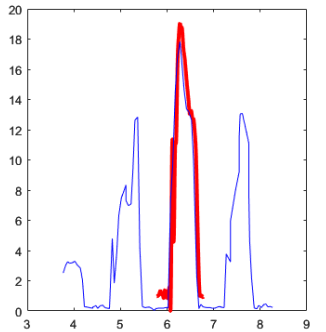
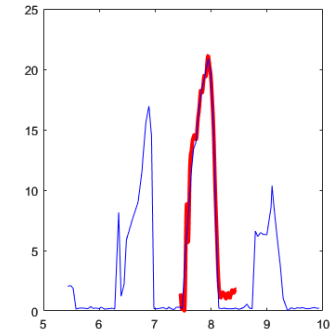
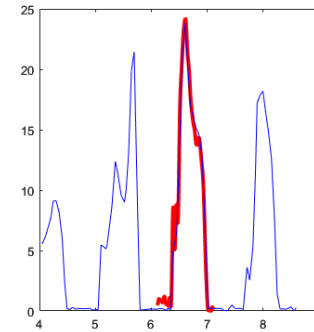
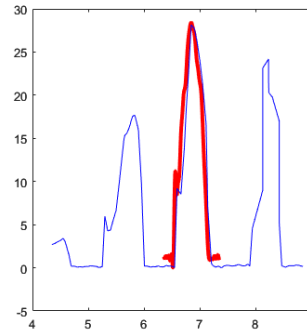
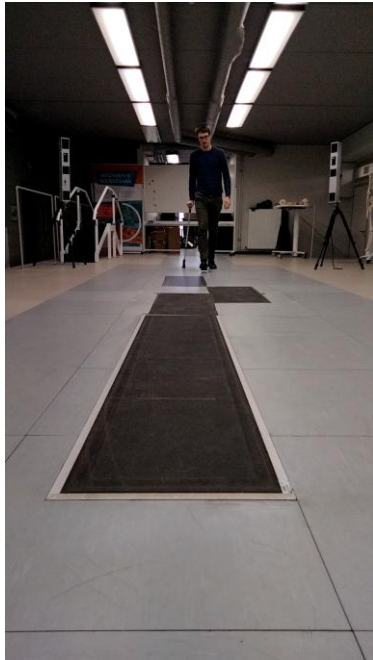
Real-time steering

Identifications of problems

therapy compliance

...

example: Sensor to measure



force plate

example: Sensor to steer



Mobilab & Care



Onderzoek & Innovatie

Expertisecentra



Budget en
financieel welzijn



Duurzaam
ondernemen en
digitale innovatie

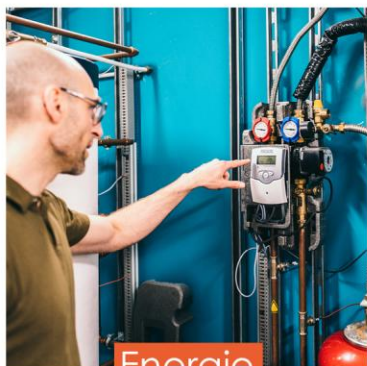


Duurzame
biomassa en
chemie

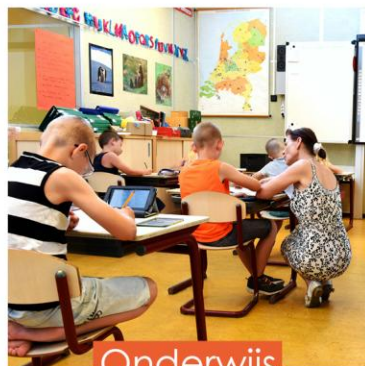
Zorg en welzijn



Zorgproeftuin
LiCalab



Energie



Onderwijs
en leren



Ontwerp en
technologie



Mobilab & Care



Mens en welzijn

The aim of Mobilab & Care

is to improve the ***quality of life of people*** in need of
care or support

Physical, psychological, social aspects
prevention, rehabilitation and permanent support

Multidisciplinary perspective
Broad network

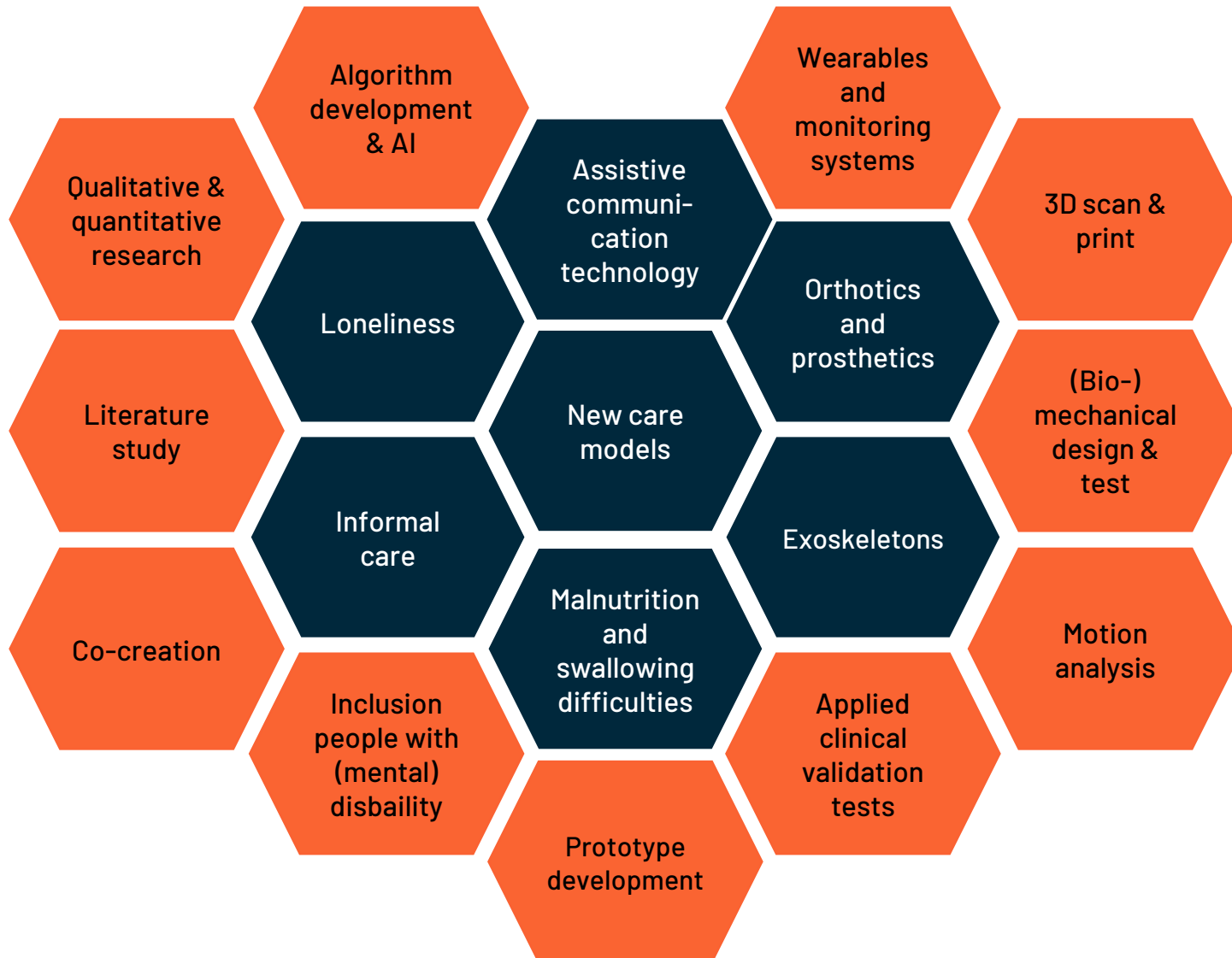
TECHNOLOGY FOR SMARTER CARE



A CARING AND INCLUSIVE SOCIETY



Expertise





Infrastructure

Mobilab & Care

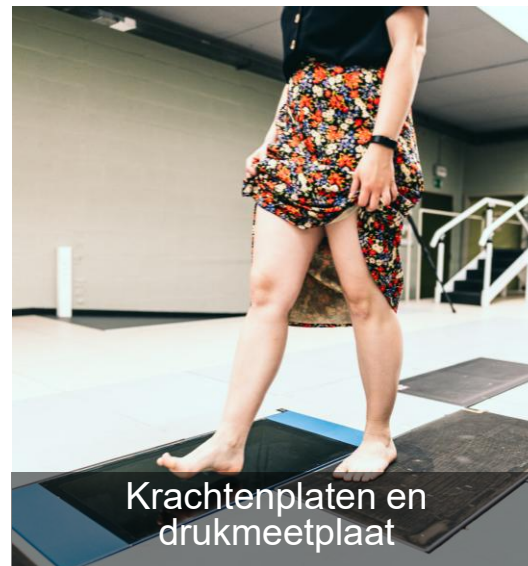
Infrastructuur



Volledig uitgerust ganglabo



Captiv (IMU gebaseerde bewegingsregistratie)



Krachtenplaten en drukmeetplaat



Codamotion systeem met optische markers



Delsys EMG sensoren



Novel sensoren:
Plantaire drukmeting in de schoen



High speed camera's



Passieve exoskeletonen

Technology as a key to (re-)integration

Eveline De Raeve

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**Reintegration is a
shared responsibility**