

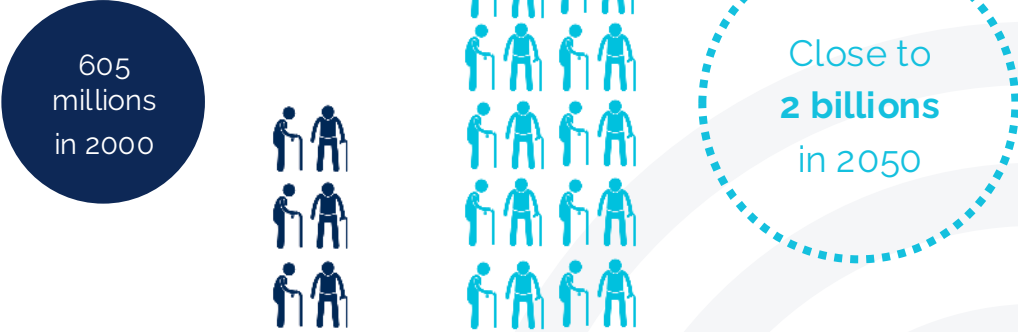
@Dessintey



SRT Lab | Self-Rehabilitation Technology
Group therapy & Self-rehabilitation

Population ageing and shortage of carers

A global challenge, "A time bomb"



36% Of countries report a shortage of medical staff

The harmful effects of patients' inactivity

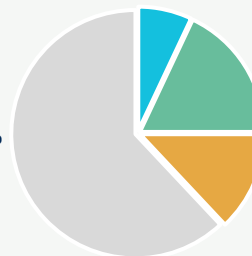


International guidelines recommends a minimum of
3 hours of rehabilitation a day

Daily life of a rehab patient

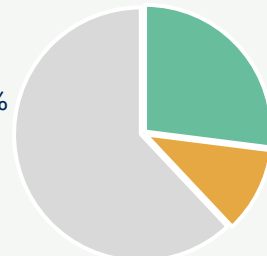
During weekdays

- Physical Therapy : 7%
- Leisure : 18%
- Daily life activities : 13%
- Sleep : 40%
- Rest : 22%



During weekends

- Leisure : 27%
- Daily life activities: 11%
- Sleep : 41%
- Rest : 21%



Source : Barrett et al. (2018)

Increasing activity time for patient is an essential factor in the functional recovery and autonomy maintenance.

Group therapy & Self-Rehabilitation

CONVENTIONAL THERAPY

1 for 1

Benefit sessions with his therapist



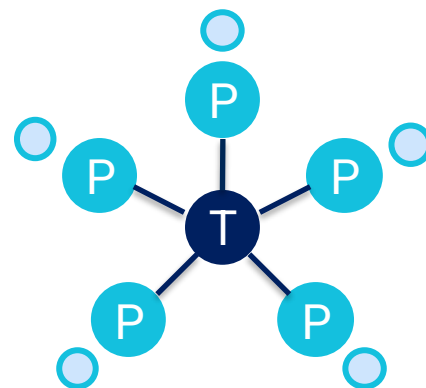
Dedicated and personalized therapy



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Group Therapy

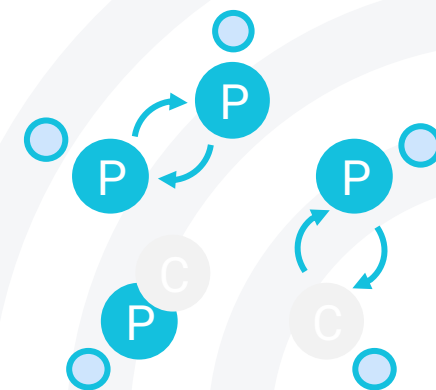
Discover a space and exercises dedicated to activity



Patients work under therapist' supervision

Self-Rehabilitation

Re-invest, cooperation between patients or with carers



Large diversity of exercises, cooperation / competition

T Therapist

P Patient

C Carer

SRT device

Activities



Shadow

Manipulate the piece so that it matches its shadow, then confirm by pressing the L/R button.

Mental rotation
Problem solving



Golf

Complete each course in the fewest shots possible. Set the direction with the sphere and control the angle and shot power with the L/R buttons.

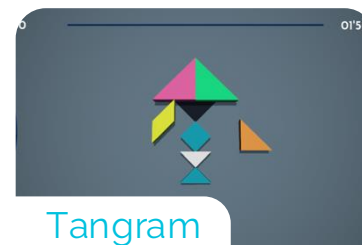
Bimanual coordination
Executive functions



Sokoban

Push the boxes onto the starred platforms without getting stuck.

Problem solving
Visual exploration



Tangram

Place the different pieces to complete the shape, using the sides of the screen to rotate them.

Mental rotation
Problem solving



Simon

Watch then repeat the sequence shown on the screen.

Memory
Attention



Mastermind

Find the correct color combination.

Problem solving
Attention

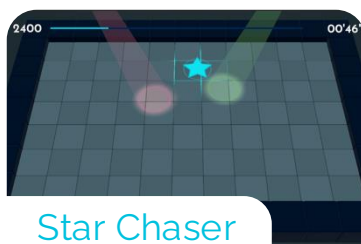
Activities dedicated to SRT5



Tilt City

Drop the balls into the correct basket by matching the colors.

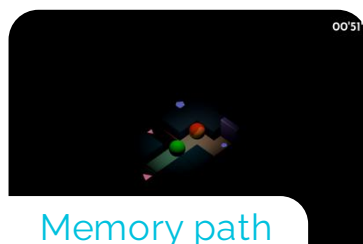
Bimanual coordination /
dissociation
Attention



Star Chaser

Chase the star with both lights at the same time.

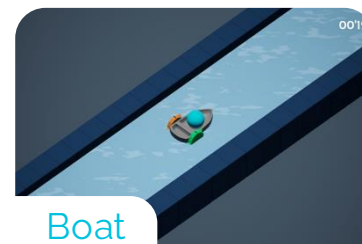
Attention
Bimanual coordination



Memory path

A path appears for a few seconds, then goes dark. Control both spheres to make them meet in the dark.

Memorization
Planning



Boat

Control both paddle wheels of a boat to propel it forward and navigate through a course.

Bimanual coordination
Anticipation

Activities dedicated to SRT6

+ large range of common cognitive and motor activities

Activities dedicated to SRT2

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Set of 5 devices to adapt to all kind of patients, from less motor impairments to severe



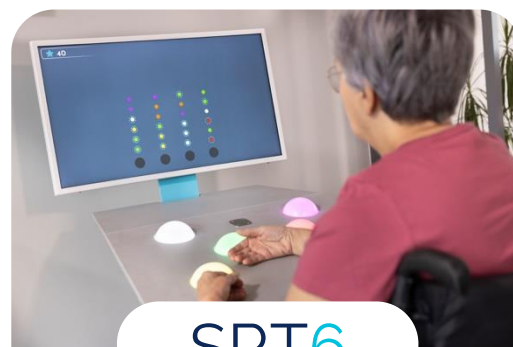
SRT5

- Proximal movements
- Large ROM



SRT2

- Bimanual coordination
- Medium ROM



SRT6

- Attentional work
- Limited ROM
- Active space definition



SRTDuo

- Stimulates cooperation and social interaction through collaborative activities
- Strengthens engagement and motivation through playful competition

→ Increase, diversify, and personalize patients' daily workload from the moment they enter a rehabilitation facility (neurological and orthopedic) until their

Indications

An inclusive space, adapted to all kind of pathologies



- Neurology
- Orthopedics

- Geriatric
- Pediatric

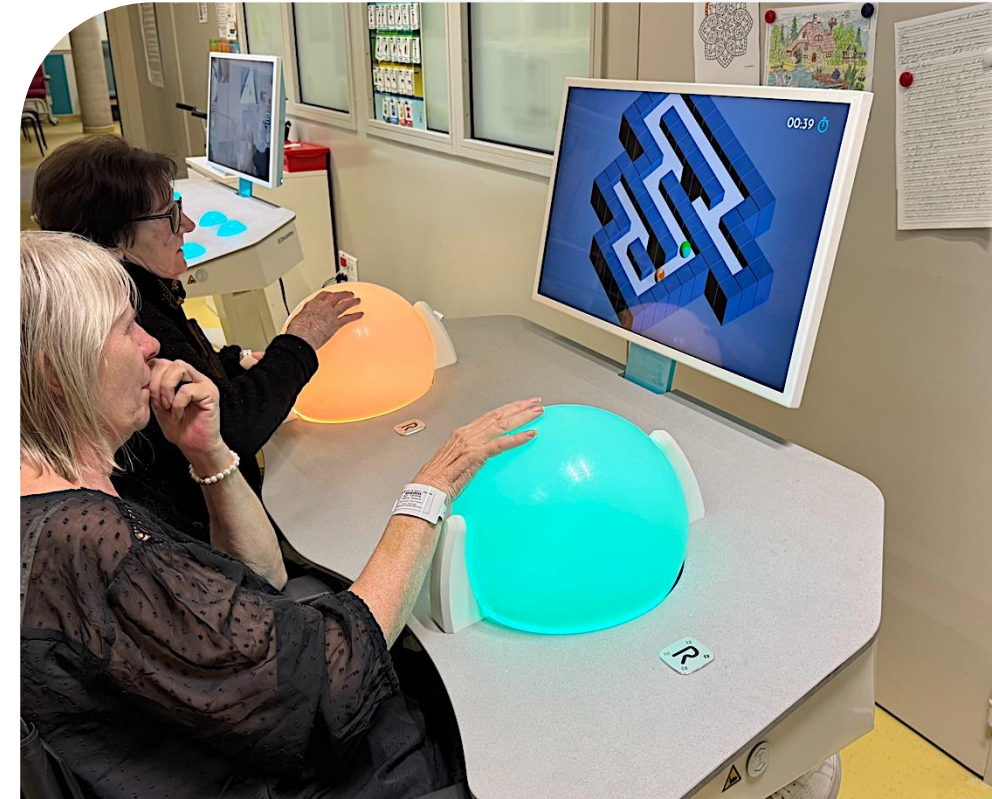
- Etc.

Group therapy

Requirement for the project's success

If a patient does

- 5 supervised sessions
➔ 50% of chances to keep going on his own
- 8 supervised sessions
➔ 80% of chances to keep going on his own



Which benefits with SRT?

- Cognitive and motor stimulation in group therapy
➔ Motivation / Involvement
- Efficiency and intensification of patient care (reduction in downtime)
- Potential financial benefits (group sessions)

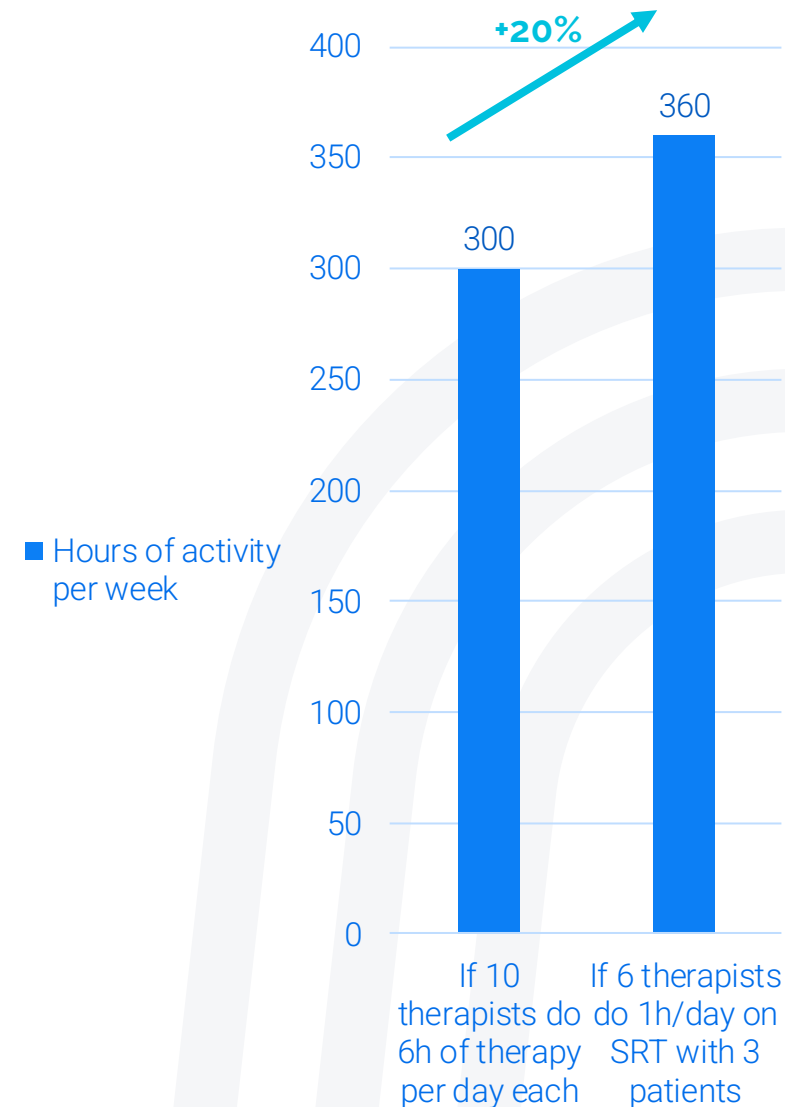


Which benefits with SRT?

Example of organisation for group therapy

- 10 therapists do 6h therapy per day
→ 60h / day, 300 h/ week
- If 6 therapists do each 1h/day on SRT with 3 patients → 90h/ week
- The 4 other therapists carry on their usual practice

We can notice a +20% increase of the global time of activity with the same resources.



SRT Lab | A few examples



IRIS St Priest clinic, FR



LNA Romainville, FR

SRT Lab | A few examples



Rothschild hospital, FR



Klinik Asklepios St Georg, DE

SRT Lab | A few examples



Johanniter Bad Oyenhhausen, DE



SRT Lab | A few examples



Molini hospital, FR



Klinik VITREA Zihlschlacht, CH



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