

Dico Technologies

Empowering the voiceless



TECHNOLOGIES

The Challenge

Just in Italy, roughly 500 Intensive Care Units
(Terapia intensiva, rianimazione)

More than 200.000 patients
admitted every year

70% of these patients
are intubated, often awake but unable to
communicate



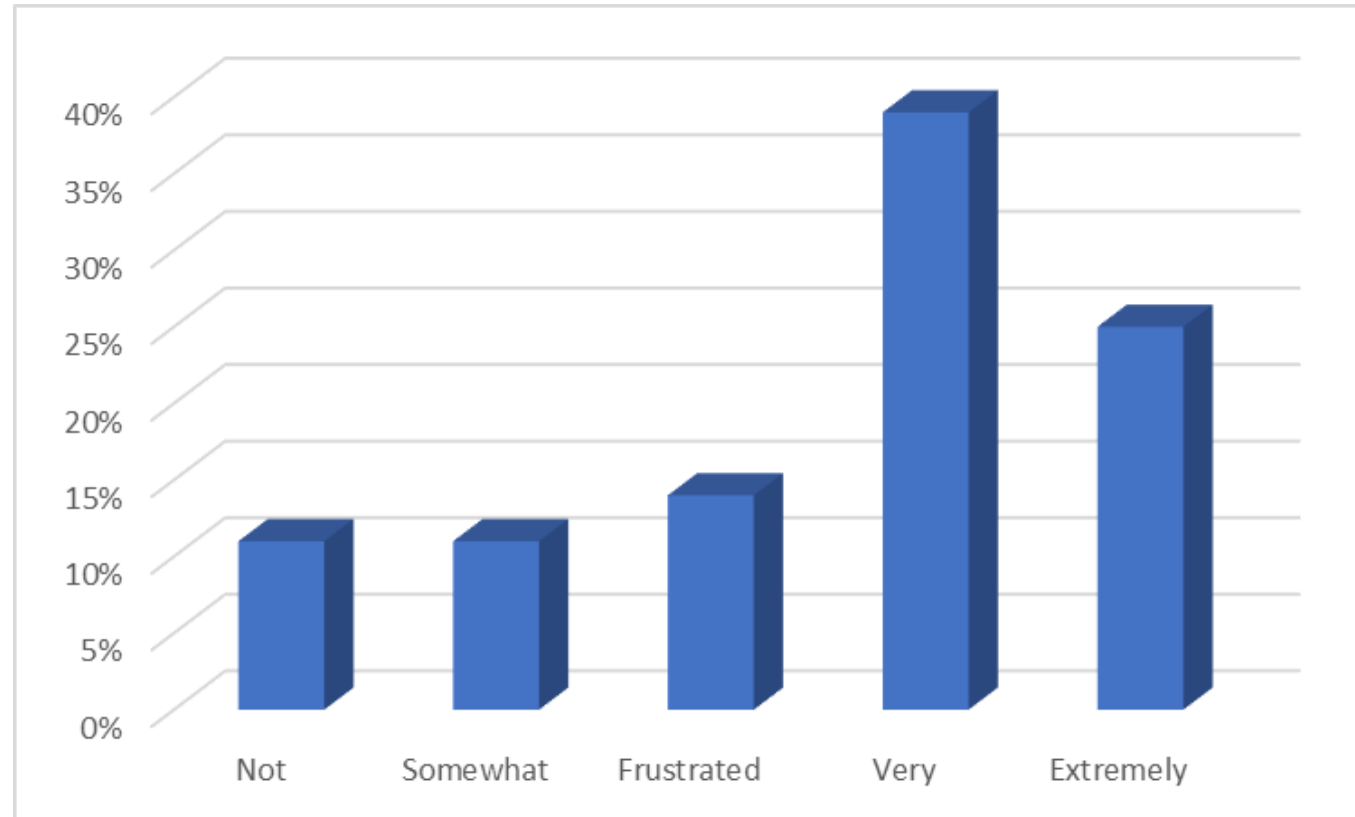
Inability to communicate perceived as major
source of distress for patients and clinical staff

Experiences reported by ICU patients (65) who had endotracheal tube (ETT)

Experience remembered	No. (%)	Bothered bot at all, a little or moderately, %	Bothered quite a bit or extremely, %
Not being able to speak	60 (92)	10	90
Pain or discomfort associated with ETT	59 (91)	22	78
Pain or discomfort associated with endotracheal suctioning	56 (86)	18	82
Pain or discomfort associated with ETT fastening	53 (82)	36	64
Feeling chocked by ETT	45 (69)	34	66
ETT interference with sleep	45 (69)	32	68
ETT interference with swallowing	53 (82)	23	77
Feeling of thirst associated with ETT	55 (85)	13	87
Not getting enough air from ETT	39 (60)	37	63
Difficulty breathing after ETT removed	32 (49)	38	62

Source: Jssennagger et al., 2018

Level of frustration reported by patients for inability to communicate



Source: Patak L et al. Heart Lung 2004;33:308 –21.

Vision



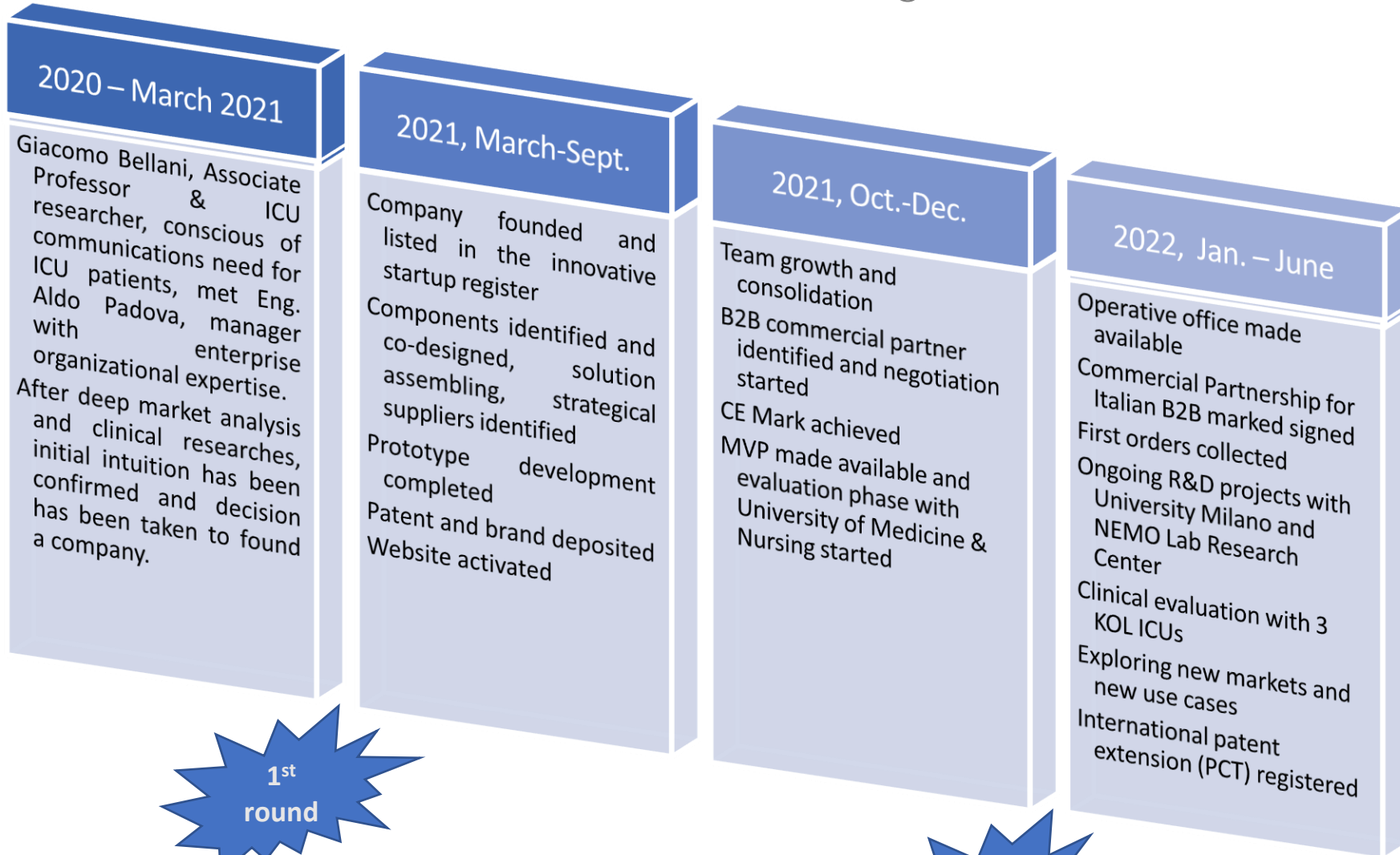
Empowering the voiceless

Mission



Our mission is allowing each patient, who cannot speak, to communicate, with family, friends, medical staff and with the rest of the world thru simple, easy to adopt and affordable technologies-based solutions, fully adaptable to the patient's capabilities

Our History



1st
round

2nd
round

The DICO® 1000 Solution

Designed for clinical environment, CE Mark as LTV device (2014/35/UE), made compliant with additional medical directives to ensure clinical usage

The motion co-engineered sensor transmits via Bluetooth protocol to the proprietary software which converts the user's gestures into the selection of textual content showed on the tablet screen



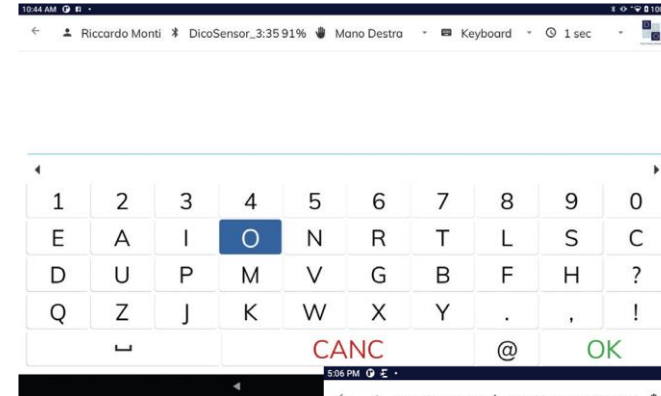
DICo® 1000 - how it works

The device supports multiple interaction setups:

- Single gesture interaction
- Up to 4 gestures interaction

as well as different interfaces:

- Virtual adaptive keyboard based on algorithm for text enhanced selection
- Configurable semiotic interface for messages editing



The MVP in a nutshell

CE Mark as LTV device (2014/35/UE), compliant with additional medical directives. Ready for clinical trials

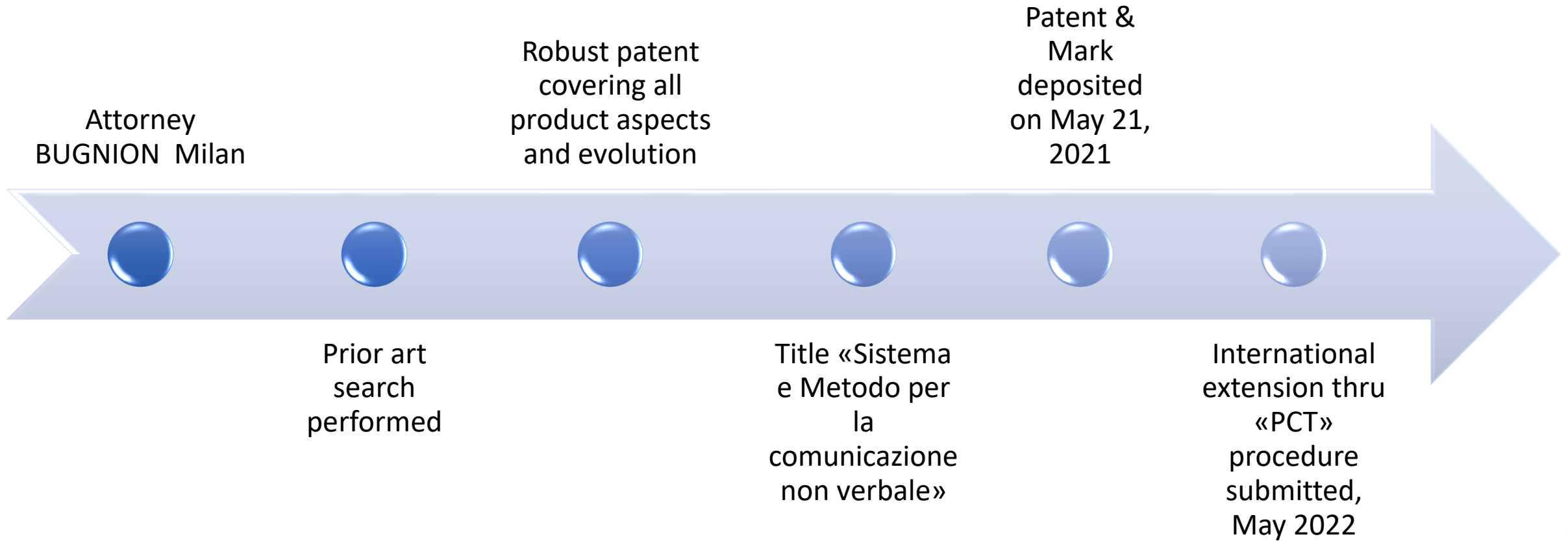
Primarily designed for usage as AAC in ICU Department, currently exploring other Departments

Simple and stand-alone architecture, securing smooth delivery & quick adoption process.

Natively designed to enhance voiceless experience, adapting to patient needs.

Smart terminal to the patient bed, suitable for hosting additional digital services

Patent's roadmap



Competitive advantages

User experience

Easy to use with quick calibration process



Ergonomics & Safety

Designed for medical environment, compliant with medical directives

Materials & costs

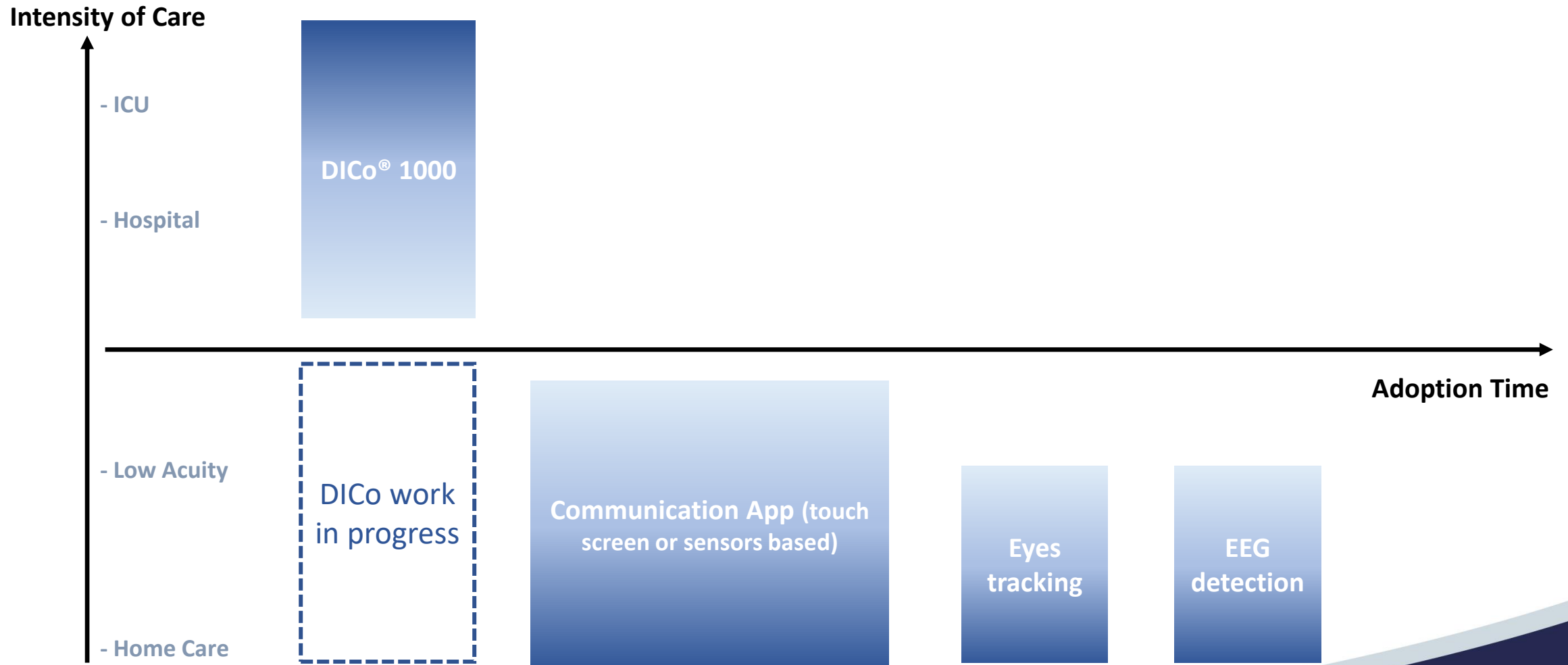
Antiallergenic and non-toxic materials, competitive quality/price ratio



Flexibility

Different interfaces and interaction modes ensure customization to user needs

AAC Tools - Competitive Analysis



Competitive landscape of AAC tools in ICU

	Cost	Adoption Time	Patient independence	Operator dependent	Compatible with ETT	Specific movement needed
Lips reading	Green	Yellow	Red	Red	Green	Red Lips
Writing tables	Green	Green	Red	Yellow	Green	Red Arm/finger
Speaking Valves	Green	Green	Red	Green	Red	Green
Eyes/Head tracking	Red	Red	Green	Yellow	Green	Red Eyes/Head
AAC Apps	Green	Yellow	Yellow	Green	Green	Red Arm/finger
DICo® 1000	Green	Green	Green	Green	Green	Green

The Team



Aldo Padova
CEO

Engineer & MBA,
experienced senior
advisor & executive
manager



Giacomo Bellani
Scientific Advisor

Associate professor of
Anesthesia and Critical
care Medicine, with a
passion for teaching
and research



Lorenzo Colnago
Operation Director

Senior biomedical
engineer, experienced
on the digital health
domain in medical
devices corporates



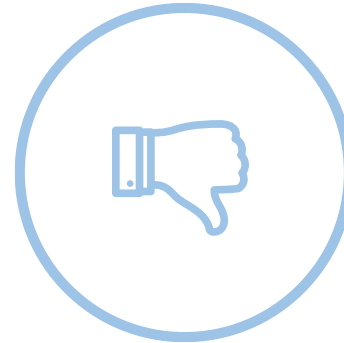
Riccardo Monti
Product Developer

Biomedical Engineer
and Android Developer
passionate for digital
technologies

SWOT Analysis

Strengths

Quick adoption curve
Affordable
Easy to maintain
Design based on deep knowledge of clinical domain

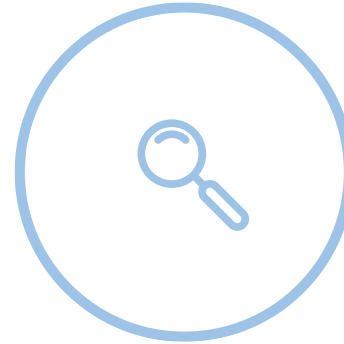


Weaknesses

Imitable
Require to change clinical staff behavior
Provisioning process at public hospitals

Opportunities

Unmet needs of Hospital Dept. beyond ICU
Home care and B2C
Telemedicine
Wellbeing services



Threats

After pandemic, less priority
ICU critical environment
Entry barriers to the medical market

The voice of the market

2020 2nd half: one to one interviews conducted involving 12 ICU Doctors (mainly dept. Heads), acting both in private and public hospitals, spread along Italy

- Clinical need and purchasing propensity confirmed
- Expected price 15-30% higher vs. internal business plan
- Roughly 20/30% of ICU beds perceived as suitable, willing to evaluate the device on real patients

2022 1st half: launching online survey involving roughly 200 ICU KOLs

- Focus on how lack communication in ICU affects care process and quality of life
- Collecting more details on % of ICU beds suitable for DICO 1000 usage

2021 2nd half: MVP tested on healthy subjects in frame of a Thesis of Nursing University

- Hints to enhance usability and user interface
- Confirmation of the smooth adoption process

2022 1st half: assessing MVP in 3 reference ICU Departments

- Focus on how lack of communication in ICU affects care process and quality of life, % of ICU beds suitable for DICO[®] 1000 usage

2022 1st half: running R&D projects in partnership with University and Research Center

- Involving NEMO Lab to evaluate DICO 1000 on patients affected by neuromuscular diseases
- Involving Nursing University of Milano Bicocca to evaluate DICO[®] 1000 on in-patients belonging to different Hospital Departments

ICU Market

Overall Italian Market

- 13.307 ICU beds during Covid19
- Roughly 10K beds confirmed post Covid19 in Italy, 60-80K beds in Europe

Addressable Market

- 30% of total number of beds

Target Market Share

- 30% of the Italian market (and 3% of the European one) within 2025

Commercial partnership



Commercial agreement with SEDA S.p.A. (<https://www.seda-spa.it/>) active since February 2022. SEDA is in charge for exclusive distribution in Italian Hospitals (private end public) with target on ICU and other suitable departments.

SEDA, one of the major Italian medical device's suppliers, has been founded in 1973 with specialization in the fields of cardiac surgery, cardiology, anesthesia, resuscitation and general surgery. SEDA has always placed, alongside and beyond the commercial purpose, the best protection of the health of patients, through the introduction of new more effective techniques, validated with the scientific help provided by the medical profession in order to fully demonstrate the clinical advantages and the opportunity for use in our country.



B2B Business Model

Italy - public/private hospitals thru commercial partnership with medical device distributor (Seda S.p.A)

- **Target Departments:** ICU (as fist), Neurology Department, Surgery, liaising with Speech Therapy teams
- **Revenues Model:** device and disposables selling (CAPEX), post warranty service contracts & ancillary services
- **Status:** partnership started on January 2022, promotion phase till June 2022 then forecast and orders collection

Italy - Long Term Care, Home for Elderly, Care Homes, Rehabilitation, Mental Health Facilities

- **Timeline:** 2nd Half 2022 – 1st Half 2023
- **Status:** identifying and selecting commercial partners (ideally medical assets suppliers)

Europe - Hospitals Departments (ICU, Neurology Department, Surgery...)

- **Timeline:** from 2023
- **Status:** Finalizing business analysis and identifying commercial partners (e.g., medical device distributors) & countries. OPEX model as well

B2C-B2B2C Business Model

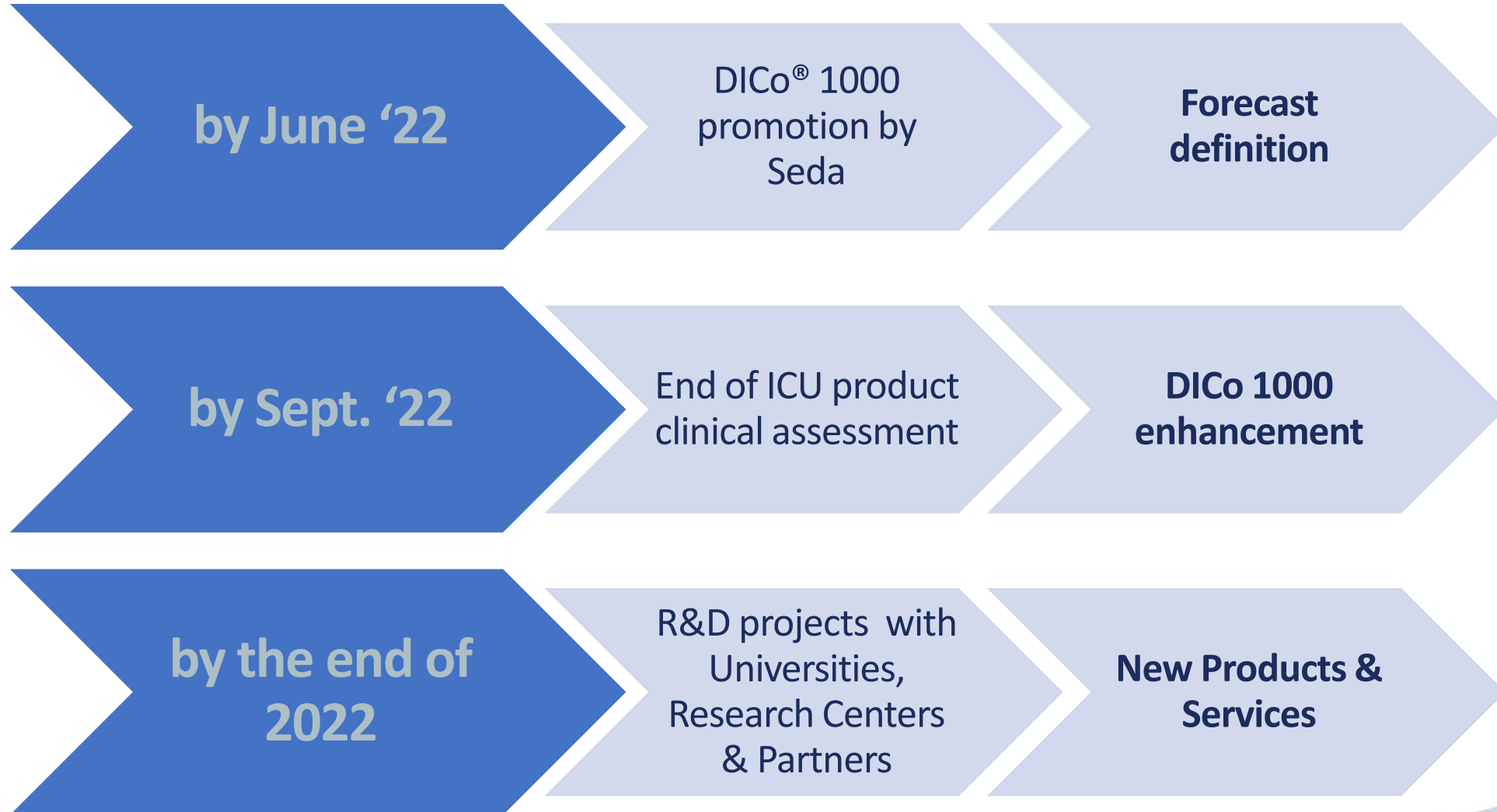
Italy – Domiciliary Care, Assisted Living, “Case di Comunità”

- **Timeline:** from 2nd Half 2023
- **Status:** currently assessing needs & functions, starting identification of commercial partners (ideally OEMs, like ventilators/medical gases suppliers,) and territory

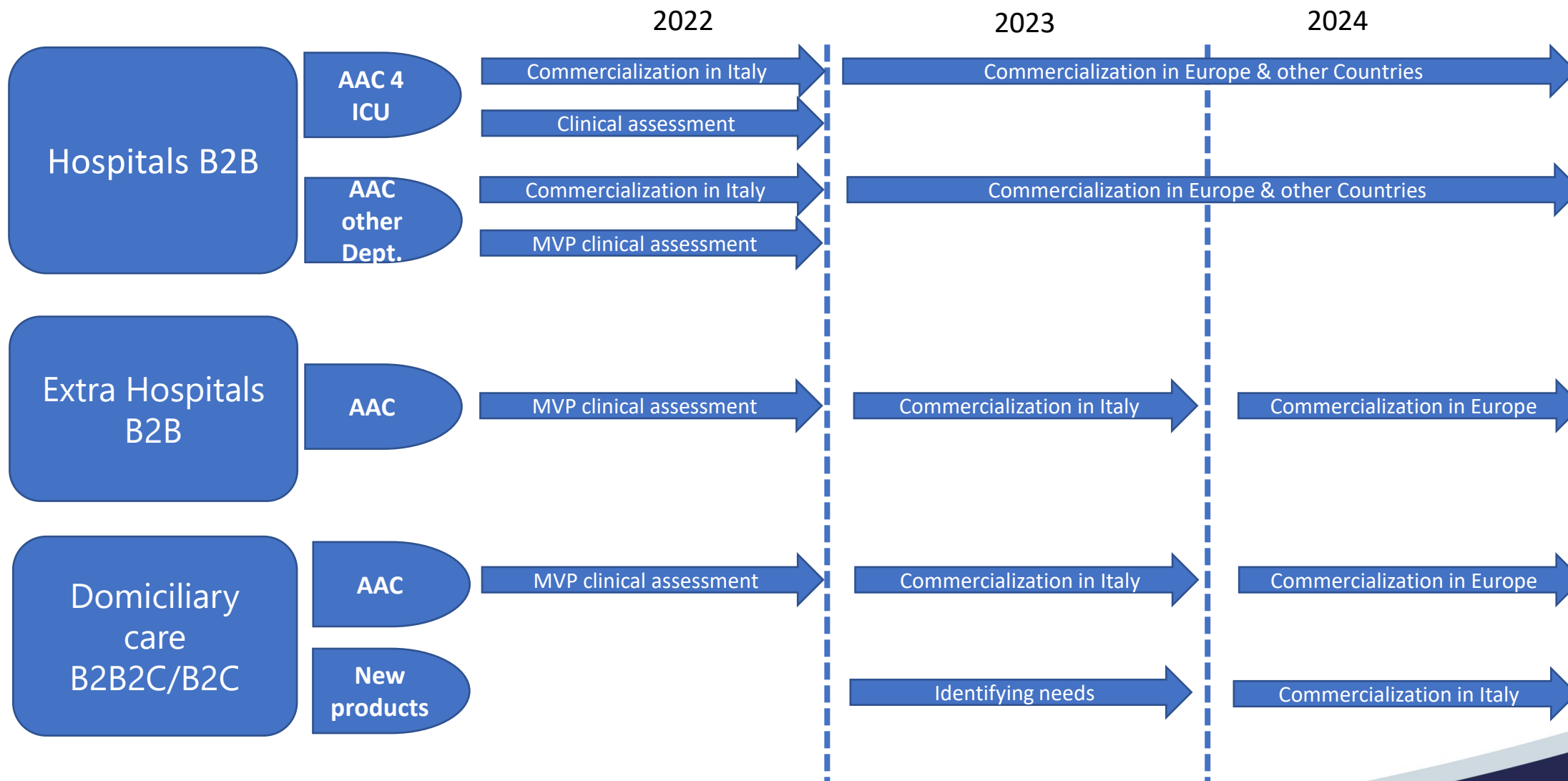
Europe - Domiciliary Care, Assisted Living

- **Timeline:** 2024
- **Status:** needs & functions to be assessed, to start identification of commercial partners (ideally OEMs, like medical assets suppliers or Telemedicine suppliers) and targeted Countries

Short term roadmap



Medium/long term roadmap

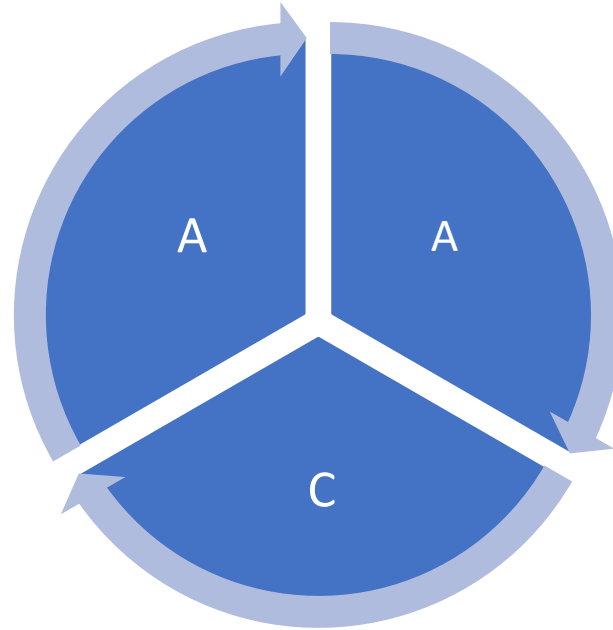
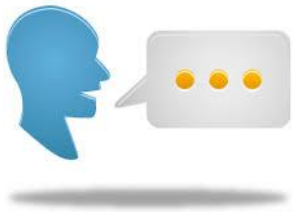


Surrounding AAC strategy



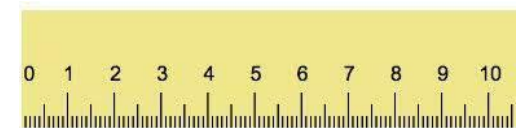
Dashboard for Clinical team & Family

Language support tools



Patient monitoring & rehabilitation

Clinical trails & Sedation scales



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