

Rehabilitation

Yesterday – Today – Tomorrow

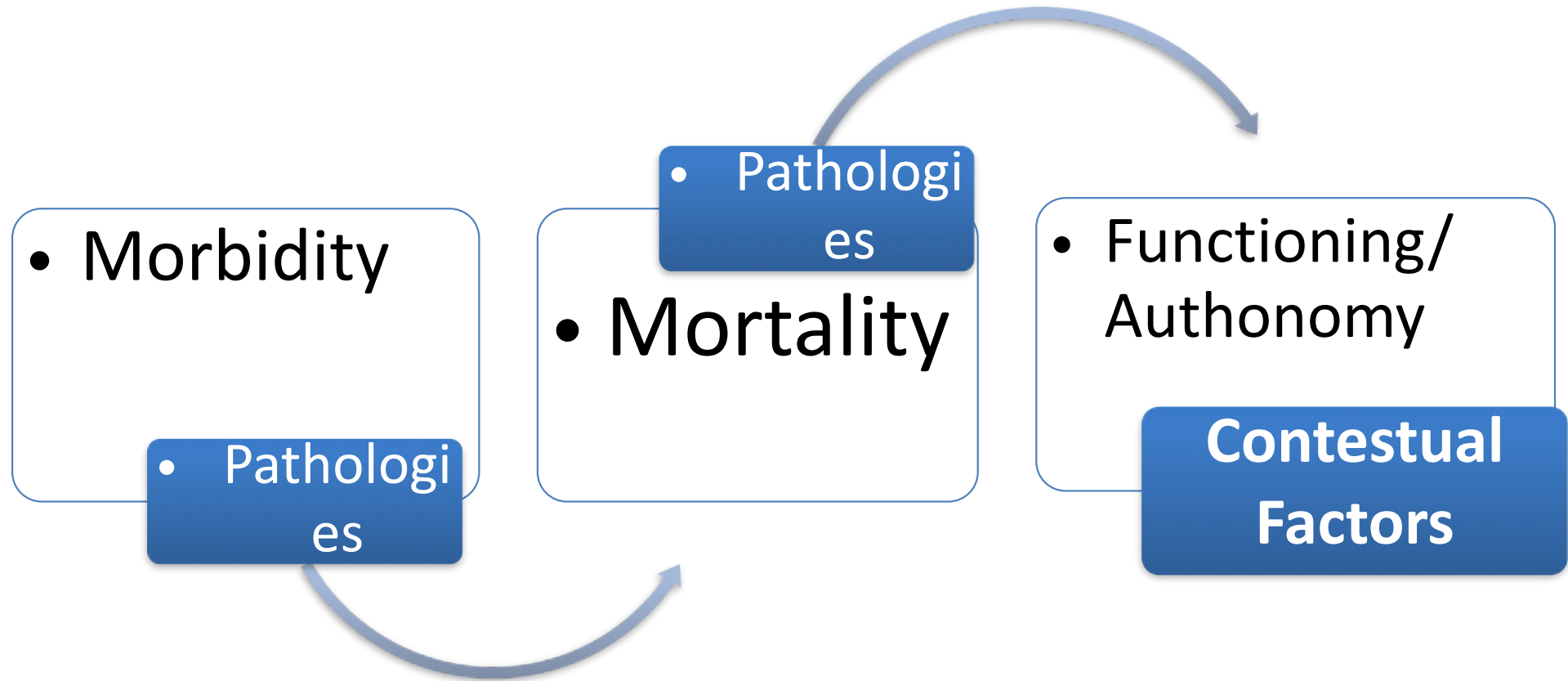


E. M. R. S. S.

**Euro Mediterranean
Rehabilitation Summer School**

Siracusa, Italy

Evolution of the concept of HEALTH(OMS)



Pathologies are not always modified but functioning can be modified and autonomy can be built.



Roots for this
development

WORLD REPORT ON DISABILITY



World Health
Organization



THE WORLD BANK


WHO action plan 2014-2021:
Better health for persons with
disabilities



World Health
Organization

REHABILITATION
— 2030 —
a call for action



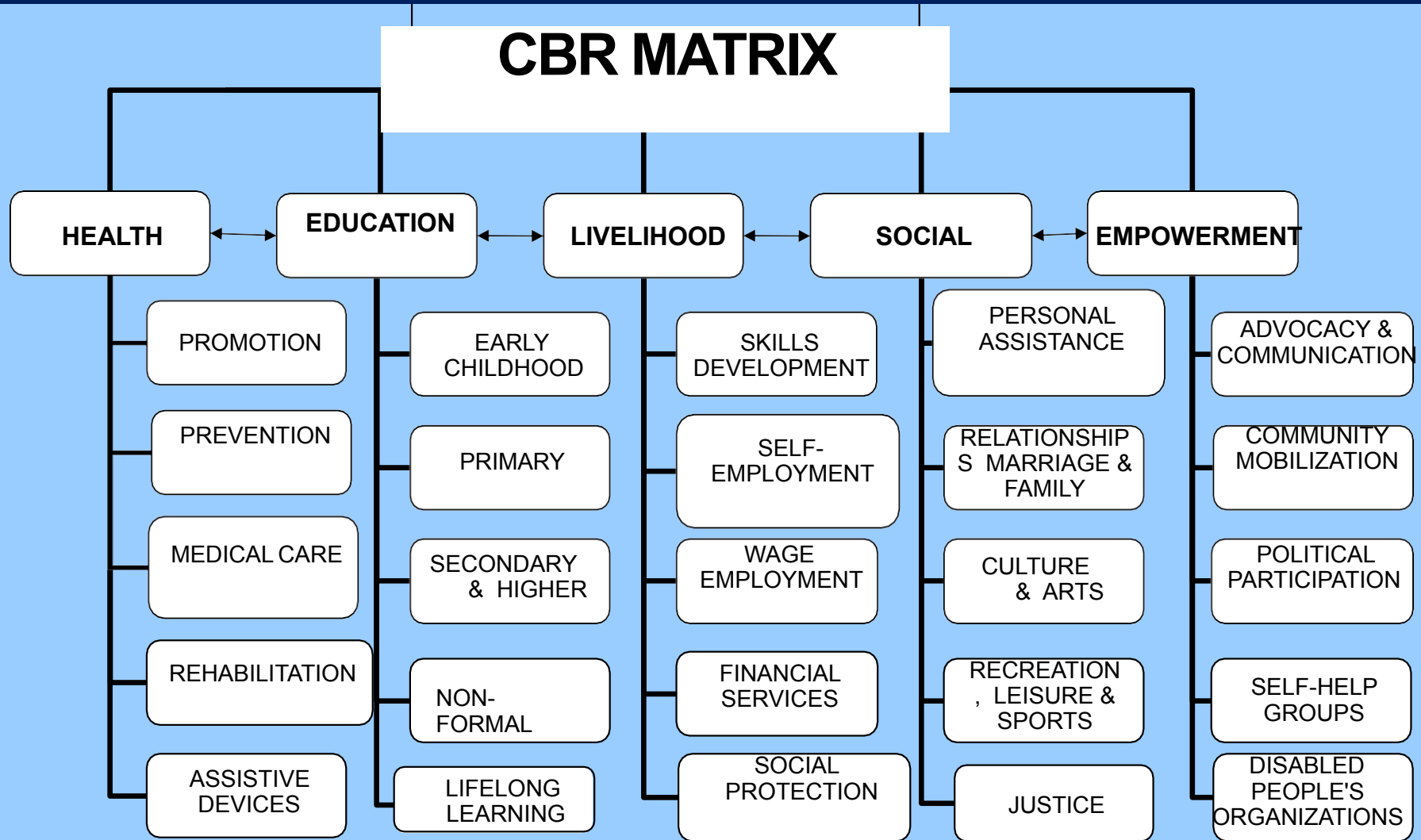
	United Nations		<i>Ethical basis</i> A/61/611
	General Assembly 		<div>But firstly :</div>

December 2006 ,13

United Nations General Assembly

approved quite unanimously “ **Comprehensive and Integral International Convention on the Protection and Promotion of the Rights and Dignity of Persons with Disabilities** ”

Rich and multifactorial the potential that any Community has for Personal Health is in every socio-economic and cultural context , mainly for Rehabilitation .



AI and Doctor GOOGLE ?

Another factor driving this transformation is the enormous and continuous expansion of the possibilities for information, communication, and discussion of every technical, scientific, and social issue among people of every country and of every cultural level: with enormous risks of confusion, errors, and negative effects. People who possess specific skills and social duties must be able to perform an information and orientation function.

Italy – Alice

A Network to fight Stroke



**Quick evolution from “Disease centered”
Medicine towards
“ Person- and Community-Centered Medicine
“ ----**

**Synergistically, the awareness that Community-
Based Medicine has many virtues for building
and defending the health of populations has
spread from developing countries to all others:
it has progressively modified the roles and
relationships of professionals, the activities and
the aims of Medicine in all the Countries and
Health Services**

In this overall framework, the challenge of Autonomy grows up in a world where Chronicity and Aging has assumed a significant role in changing healthcare and social care systems in every country, in terms of user awareness and sensitivity and at the same time in transformation of the demand to be answered.

A challenge that cannot have adequate answers from a traditionally based approach on parameters that are in some way substantially fragmented and operated in "silos" for organs, pathologies and procedural and temporal distinctions.

Autonomy means better HEALTH possible at any age and in any clinical condition!

Optimal relationship between subjective, emotional, and cognitive aspects and personal motivations with physical, social, cultural, religious, historical, economic, and even biomedical and functional conditions.

Autonomy also means increasing Person's autonomy in assessing and deciding on the individual's treatment, regarding goals and methods of that treatment, and their perspective on their personal and relational lives. This participation and sharing of decisions also turns into active commitment which is fundamental in the recovery process towards Quality of Life.

Therefore, physicians, and especially those of us in Rehabilitation, are no longer just often solitary decision makers but observers, evaluators, informants based on their own knowledge and experiences in favor of the person and his free decisions : we are increasingly at the service of the individual's health and its goals .

This is the Future, but in reality it is already Present today in our daily work (and even in patient dissatisfaction and sometimes in medical-legal issues). Especially in today's hyper-communication society

In this sense, it is very important to always apply a "narrative" method to understanding and communicating, in order to prevent problems and best manage our relationship with people with disabilities on their journey and aims toward autonomy and functioning.

All the knowledge and evidence of Medicine traditionally focused on pathologies are confirmed and implemented in Medicine centered on the person who suffers from these diseases, integrating with the specific characteristics and potential of the person himself, and in relation to the context in which the person develops these characteristics and free choices also in terms of Health and Life. This is precisely the Individual Rehabilitation Plan that is the foundation and strength of our work, of our specific culture, and of our professional evolution.

Even before Medicine as a whole transformed .

Definition

Rehabilitation is the health strategy which, based on WHO's integrative model of **functioning, disability and health**

applies and integrates

- **biomedical and engineering approaches to optimize a person's capacity**
- **approaches which build on and strengthen the resources of the person**
- **approaches which provide a facilitating environment**
- **and approaches which develop a person's performance in the interaction with the environment**

Health condition



Therefore Rehabilitation

firstly focused on clinical conditions,

then on disability conditions,

and more recently, and for the future,

is working on building the person's Autonomy

(despite pathologies and disabilities).

I don't think it's right to talk about Yesterday, Today, and Tomorrow because these three different perspectives (clinical and functional assessment, "narrative" collection of the person's characteristics, shared construction of possible autonomy) and all the essential skills involved must always coexist and cooperate to guarantee the person (truly at the center of "care") every useful element for this free construction, and must be an integral part of the physiatrist's medical-scientific role at the service of the person themselves.

At the same time, the mechanical and technological component, the physical means , that have been and still are large part of our care capabilities (Yesterday, Now and Future), have evolved towards virtual reality, robotics, use of tran-scranial stimulation, artificial intelligence, implanted devices and transducers, etc., continuing with us to build better functioning solutions for people with disabilities.

**Actually for upper arm
and hand**



Other recent tools for balance and upright posture



**For
standing
and walking**

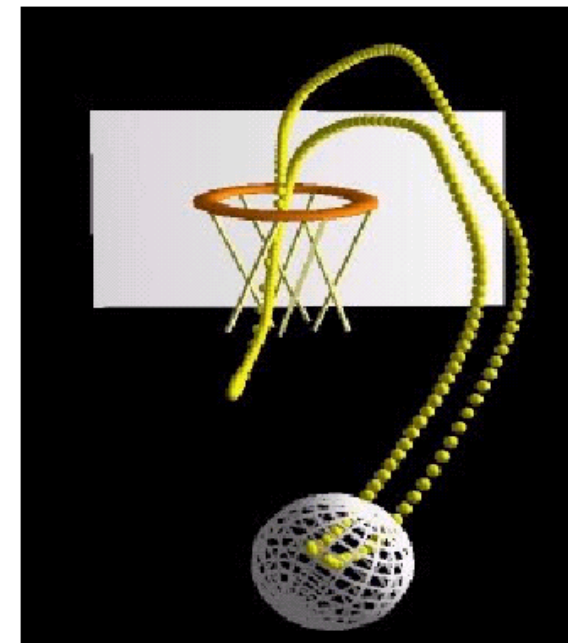
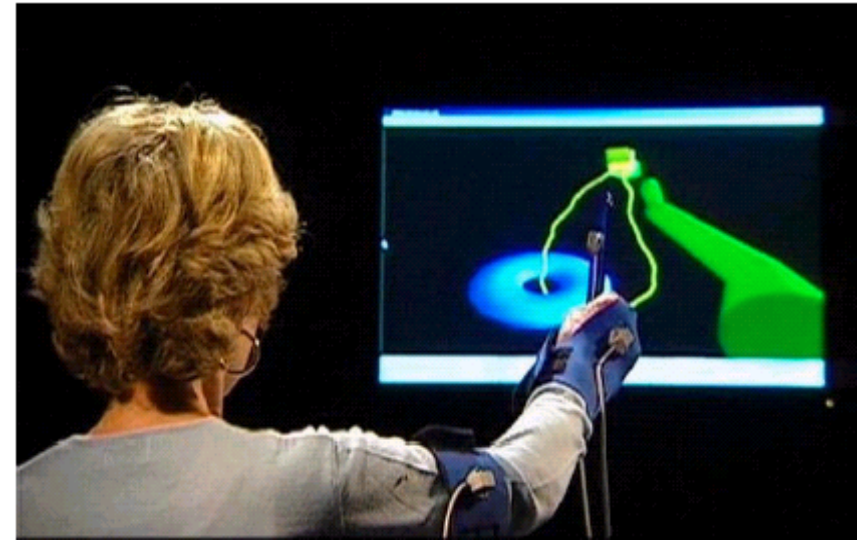


Virtual Reality/ Telerehabilitation

For Motor and Cognitive recovery.

Tailored on time, place and on different Person aspects and aims and environmental possibilities.

Suitable to be a specific
Rehabilitation Programme
also combined with Robot
Programmes and for Home
and Tele -Theraphy.



**Exercise in immersive conditions preparing
common Life too !**



And Assistive Robots

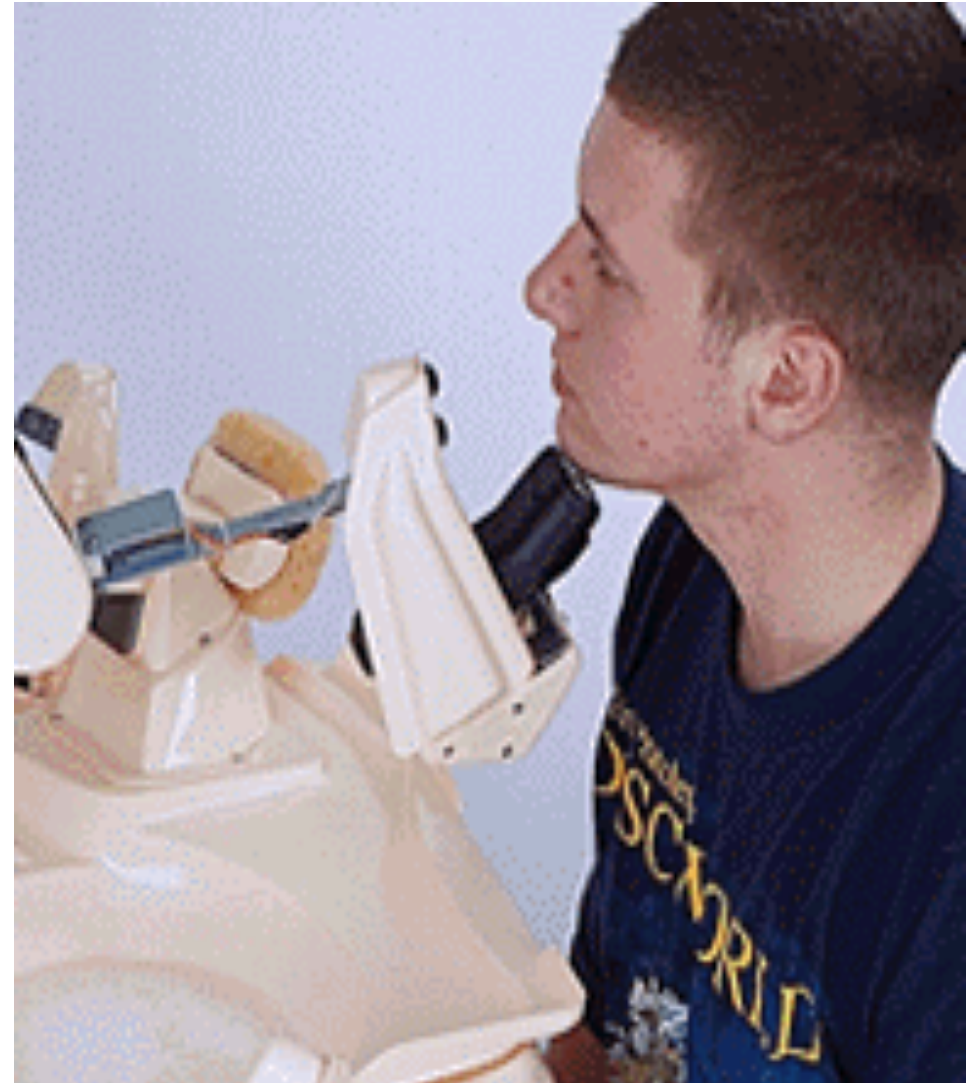
- Supporting eating, drinking, grasping, washing
- Supporting mobility
- Carrying objects: meals, books etc.
- For cognitive support
- For safety : fall detection, emergency alarm
- Operation of home electronics
- Household duties
- Entertainment

**Personalized Shared Rehabilitation
Programmes including detailed active training
aiming to modify home/daily Functioning**

My Spoon



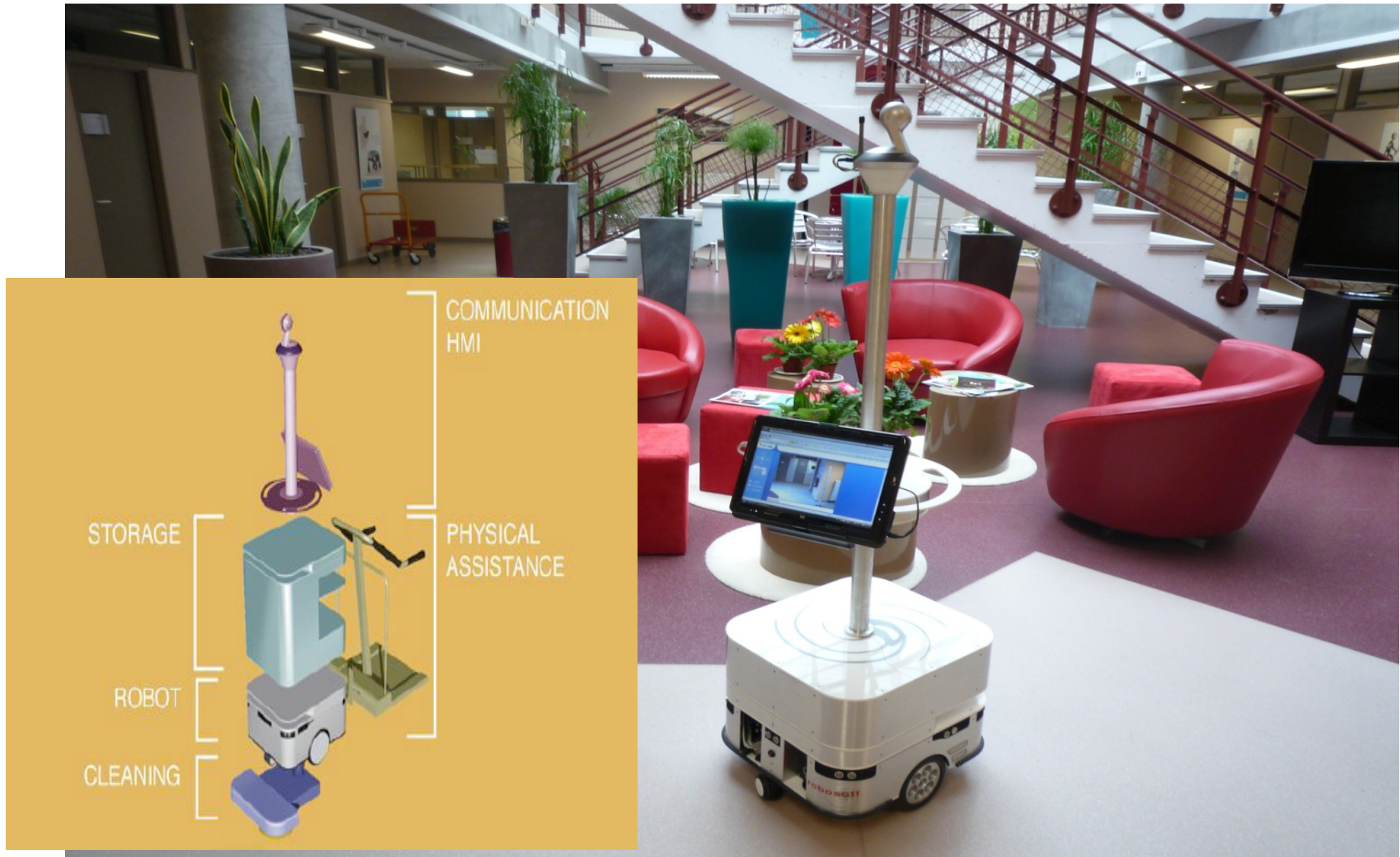
Handy 1 beard



ACROBOTER: a ceiling based robot



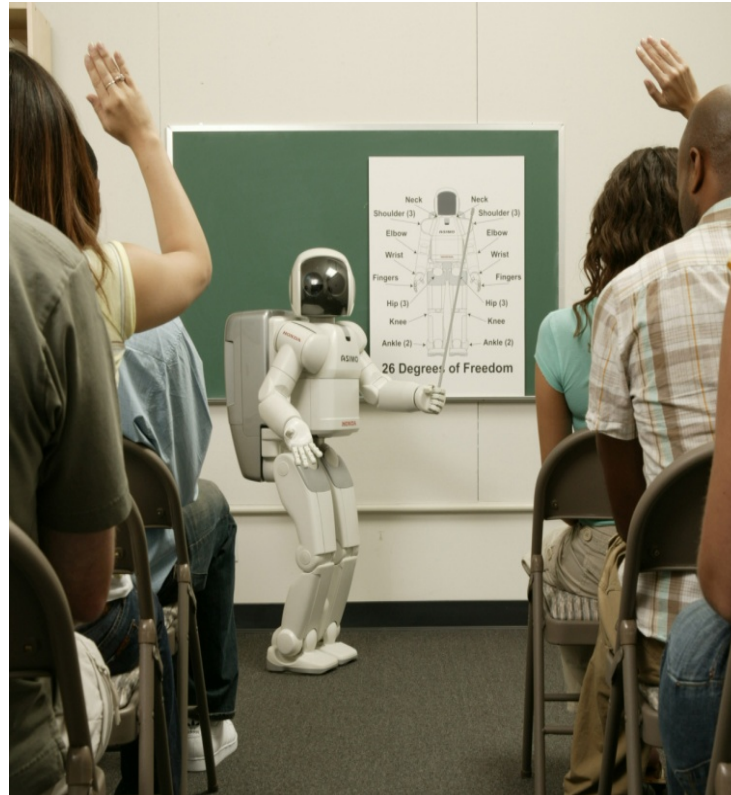
DOME0



Humanoid ?



Mitsubishi
Wakamaru

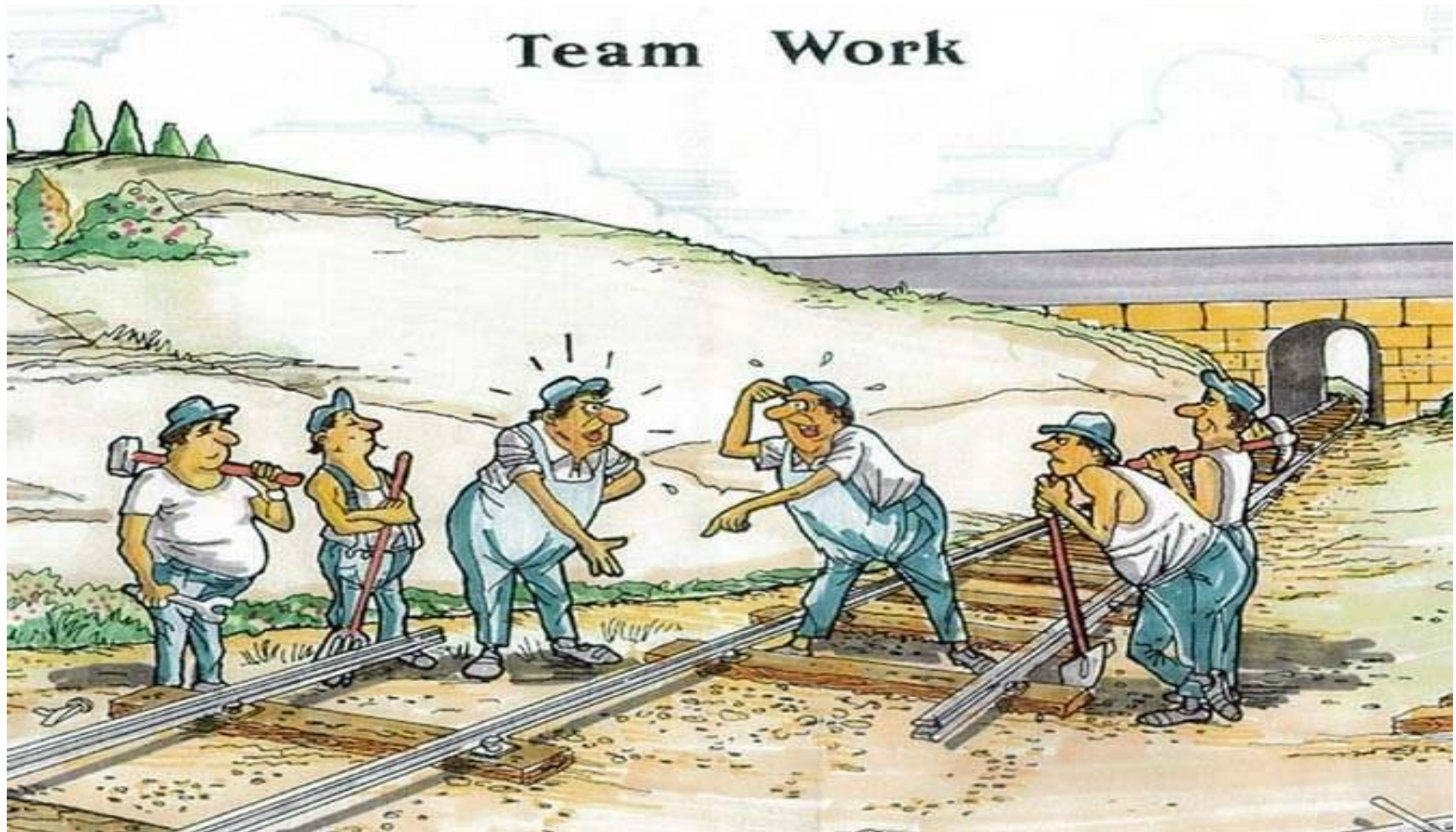


Honda
Asimo



Actroid
DER2

All these tools and professionals must enter in the Individual Rehabilitation Plan defined by the PRM Specialist together per patient and family based on :



We are going to a sort broad and multifactorial cooperation :

**A post Human Rehabilitation :
many hands in the Team and many robots
to reach the common goal "Functioning and
possible Authonomy "**





**Today we are also addressing the question that was
posed here in Syracuse a few years ago :
Is Physical Medicine the opposite of internal medicine?**

L. Tesio



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**Unità Clinica e Laboratorio di Ricerche di Riabilitazione Neuromotoria
Istituto Auxologico Italiano IRCCS - Milano**

We have always evaluated and treated the person as a whole and not the single pathology or organ

- In this transformation towards Person-Centered Medicine and its free choices regarding Health and Life, our Discipline demonstrates that it possesses greater skills and capabilities, and indeed initiated and perhaps favored this evolution before others.**

Eric Topol, in his masterly “The Creative Destruction of Medicine” How the Digital Revolution Will Create Better Healthcare, (B Book, 2012, Isbn 0465025501) describes the ethical -technological-informatics radical transformation of medicine.

I think we all can work towards a
“Creative revolution of
Rehabilitation to face and serve Func
and free Authonomy”.

