

8-11
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EMERGENCY MEDICINE



Why and how do we build a simulation centre?

ASSISTANCE
PUBLIQUE  HÔPITAUX
DE PARIS

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Objectives:

- Discussion of physical and technological functional requirements and solutions.

Definition of a simulation center

- A simulation center is *“an entity with dedicated infrastructure and personnel where simulation courses are conducted.”*

SSH - Society for Simulation in Healthcare. (2012). SSH Accreditation of Healthcare Simulation Programs. from Society for Simulation in Healthcare, <http://ssih.org/accreditation-of-healthcare-simulation-programs> visited on January 5th 2013

Guide de bonnes pratiques en matière de simulation en santé

Haute Autorité de Santé, Janvier 2013

(Working group including Dr François LECOMTE)

Critères	Type 1	Type 2	Type 3
Type de programmes de formation par la simulation			
Offre de programmes multi professionnels	Optionnel	Obligatoire	Obligatoire
Offre de programmes multidisciplinaires	Optionnel	Obligatoire	Obligatoire
Ressources humaines			
Responsable de l'infrastructure	Identifié Temps dédié \geq 10%	Temps dédié \geq 30%	Temps dédié \geq 50%
Responsable scientifique et/ou pédagogique (minimum un par discipline)	DU de formation de formateur ou attestation de formation à la simulation Identifié	DU de formation de formateur Temps dédié \geq 30%	DU de formation de formateur Temps dédié \geq 50%
Responsable(s) pédagogiques(s) (minimum un par discipline)	Identifié(s)	Temps dédié \geq 20%	Temps dédié \geq 30%
Personnel administratif	Temps dédié \geq 20%	Temps dédié \geq 50%	Temps plein
Activité du formateur (minimum un par discipline)	Assurer au moins 6 jours de formation par an	Assurer au moins 6 jours de formation par an	Assurer au moins 6 jours de formation par an
DU de formateur en simulation pour les formateurs	Optionnel	Au moins un formateur	Au moins deux formateurs
Personnel technique	Optionnel	Temps dédié \geq 50%	Temps plein
Types de simulation			
Haute fidélité	Optionnel	Obligatoire	Obligatoire
Locaux			
Salle d'enseignement	\geq 1	\geq 2	\geq 3
Salle de débriefing	Mutualisée	\geq 1	\geq 1
Salle technique/stockage	Mutualisée	Dédiée	Dédiée
Locaux administratifs	Mutualisés	Dédiés	Dédiés

Why do you want a simulation center?



Aim of the Simulation Center

- Educational contract
 - To up-to-date pedagogy (CRM...)
 - To improve simulation sessions (material, spaces, acoustic...)
- Patients
 - care/outcomes,
 - length of stay,
 - satisfaction,
- Healthcare providers
 - Improve Performance
 - Improve self confidence
 - Improve satisfaction
- Teachers
 - Ready to use tools
 - Assistants?
 - Better material?
 - Best and easier research
- Money :
 - Reduce healthcare costs,
 - Reduce insurance premiums,
 - To make money

Why don't you copy and paste your friend's simulation center?



Why don't you copy and paste?

Too difficult!

- Guys already made the job
- Architects knowing simulation?
- AV ingeneers knowing simulation?

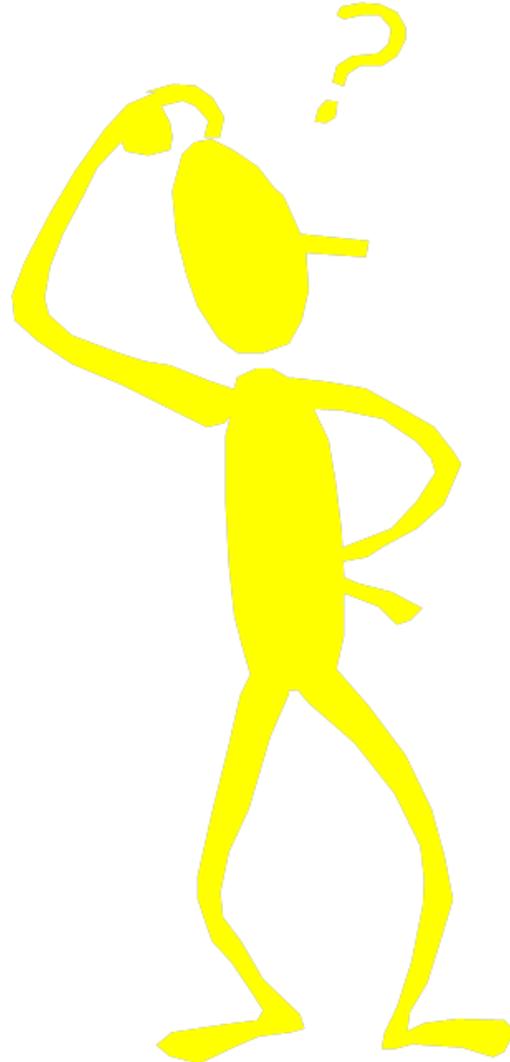
But...

Do you just have to « copy and paste » a single map?

Don't you want to add your own expertize?

- Up to date
- Realistic
- Specificity
- All facilities
- Flexibility with adaptation to
 - Your faculty or facilitators,
 - your students, trainees or participants,
 - to the programs and varied curriculums
 - The evolution of your center

Define the size and the location of your simulation center?



The location of your simulation center

- **University**
 - « Pedagogy arena », OK for AV but no medical devices...
- **Hospital**
 - Gas, material...almost everything but quite unusual...
 - Just in situ simulation?
- **Independant?**
 - Autonomy
- **Which Floor?**
 - Paramedics/SAMU ⇔ ground level?

Define the size of your center

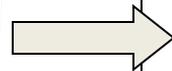
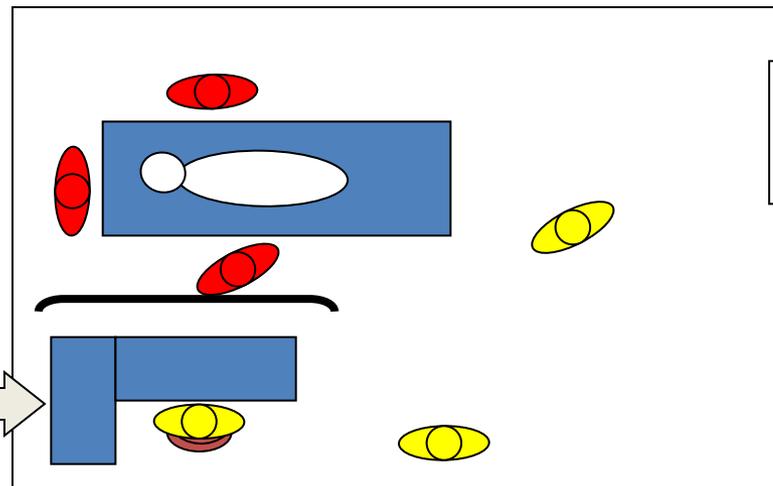
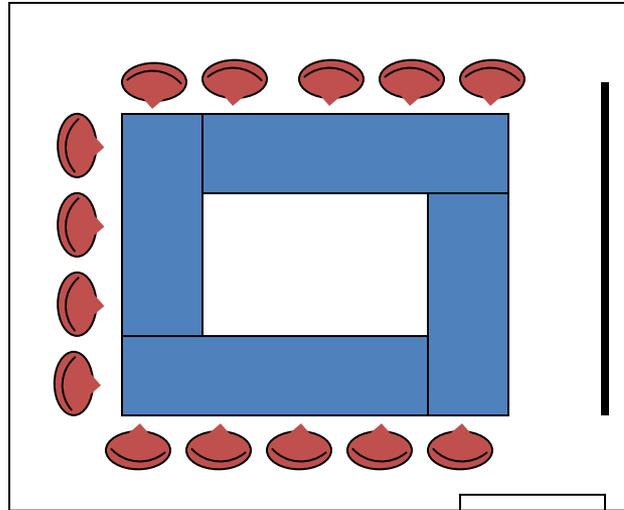
- What are your objectives:
 - Pedagogy
 - Rooms and ergonomomy
 - Human ressources
- Deal with « authorities »
- Keep in mind the evolution of your center
 - = > business plan

What kind of rooms will you need?



Examples of simulation centers

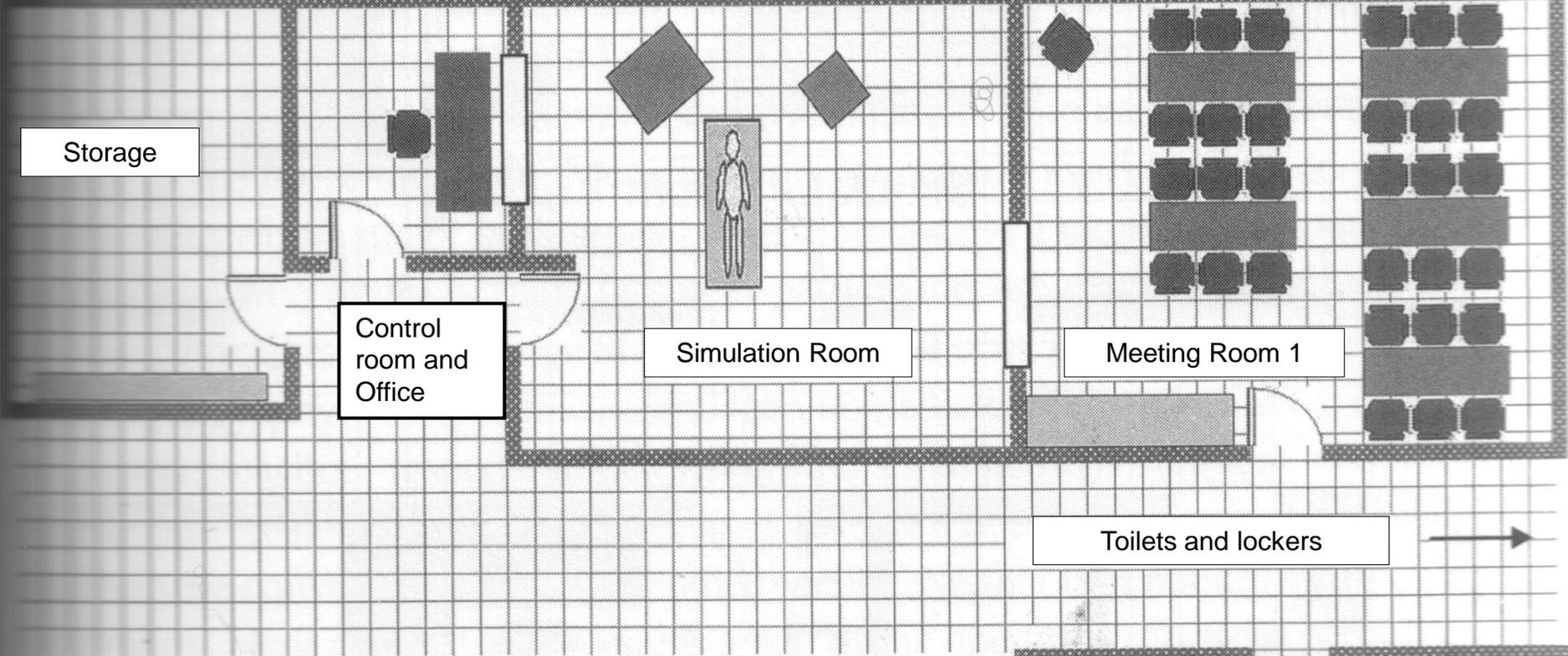
Dräger, Antony, France



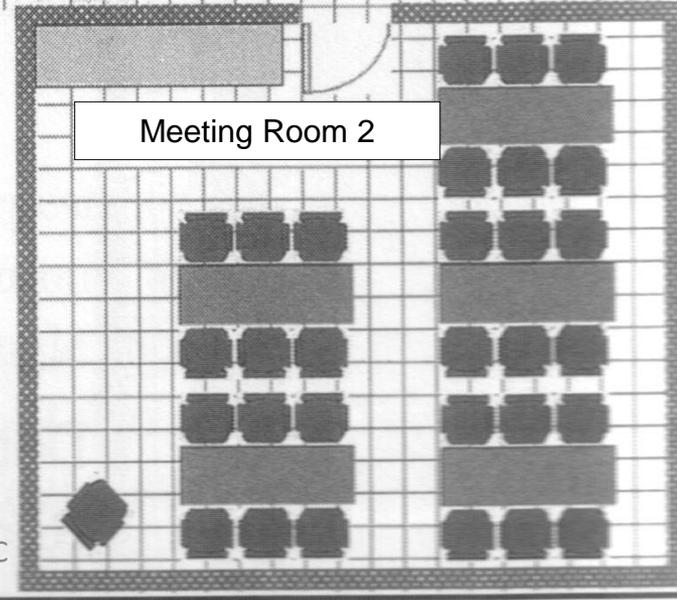
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Simulation Center of Saint Michael's Hospital, Toronto, Ontario, Canada



Simulation Center of Toronto, Ontario, Canada



SAU

- DU de Prise en Charge des Urgences Médico-Chirurgicales
- Training of the ED staff



SAMU



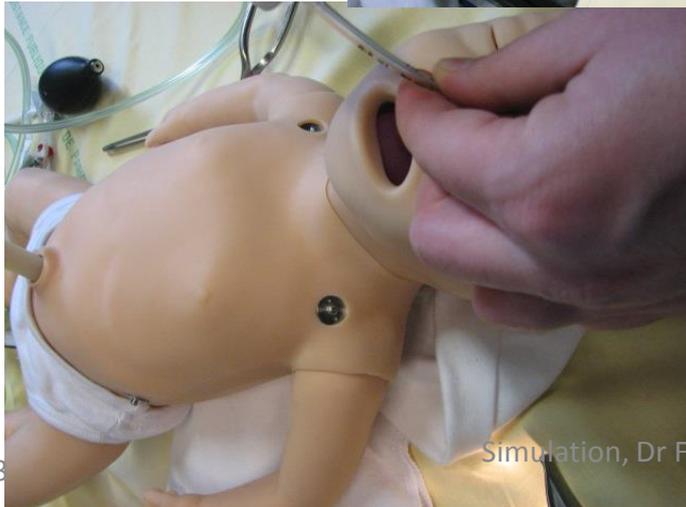
- Formation continue APHP, Formations de service

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DU Formateur à l'Enseignement de la Médecine sur Simulateur





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Delocalized sessions, ex : Vietnam





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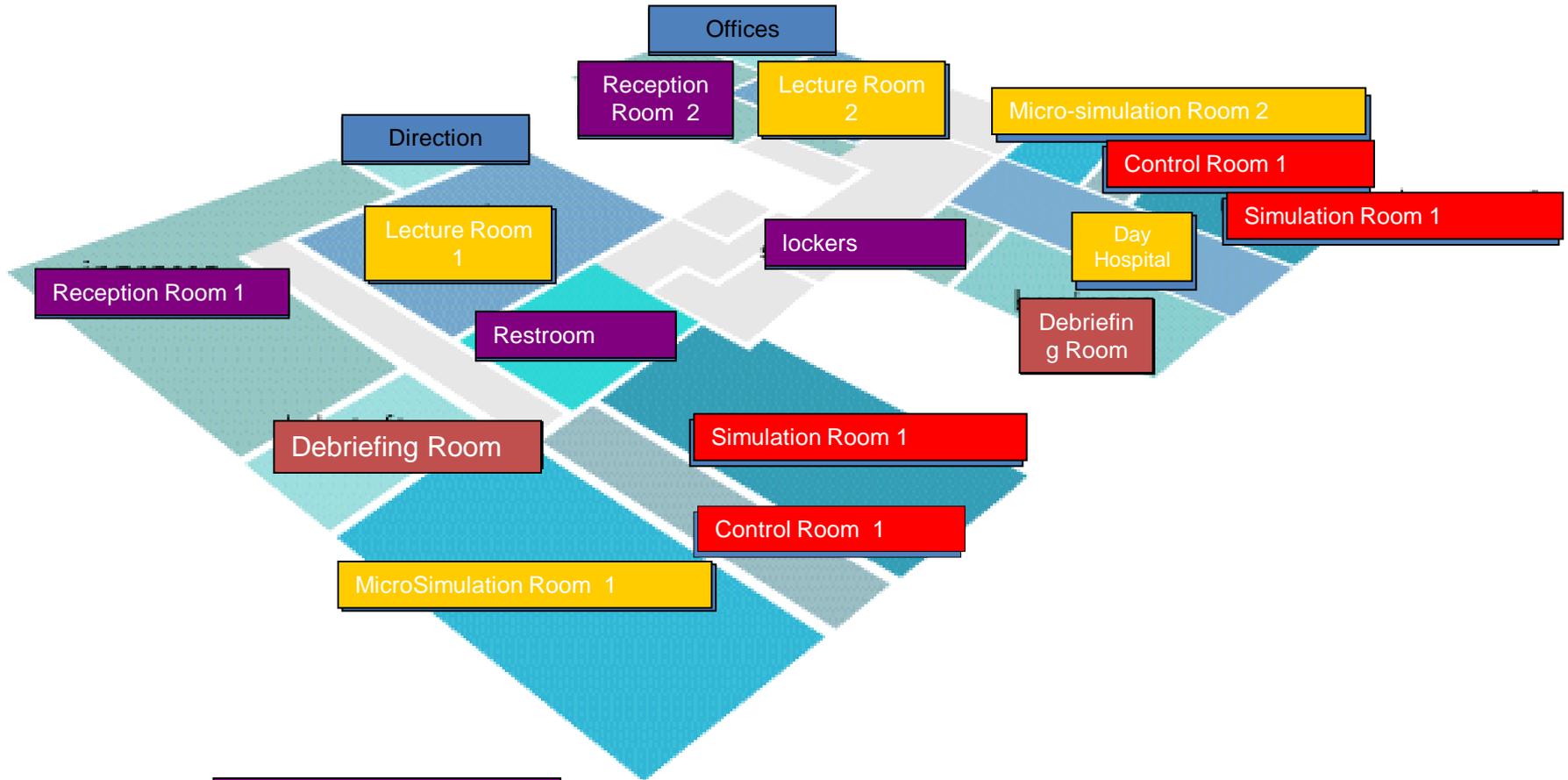


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Bologna, Italia

« Simulearn[®] »

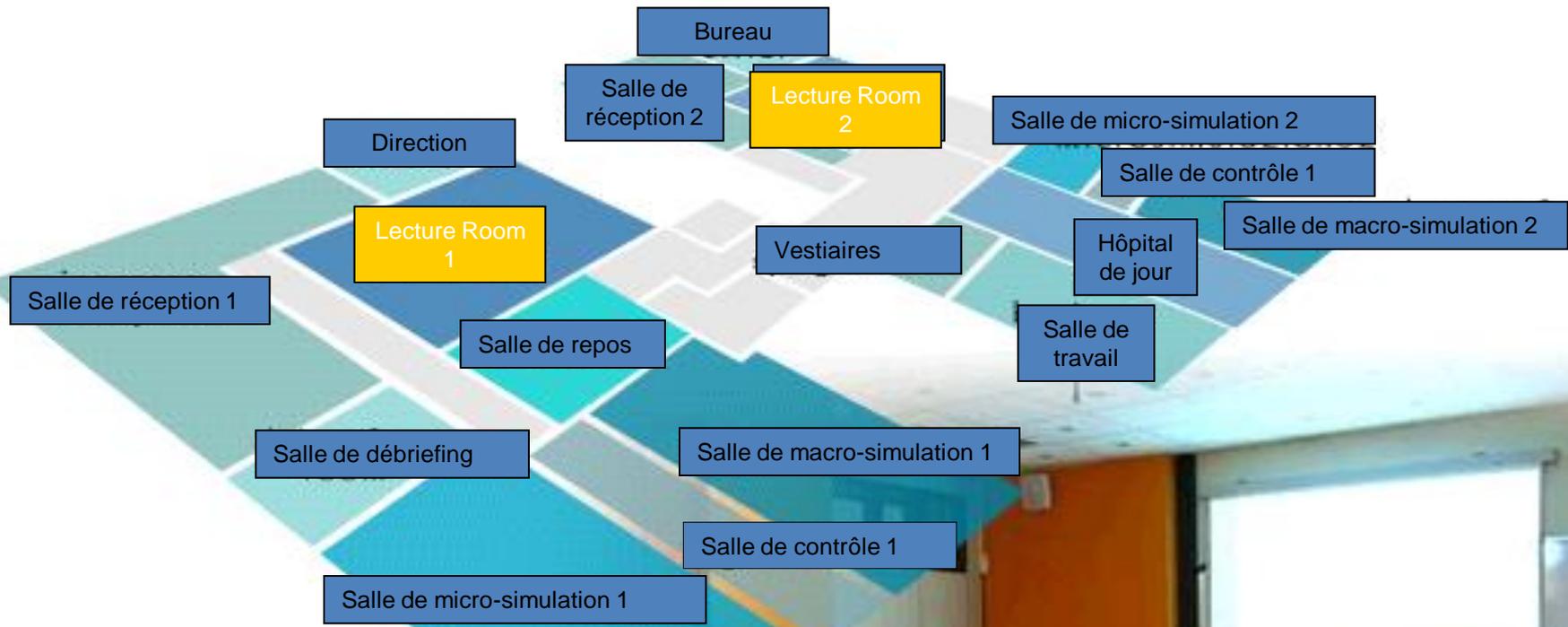


Réception

Theoretical lectures and Microsimulation Rooms

Simulation Rooms and Control Rooms

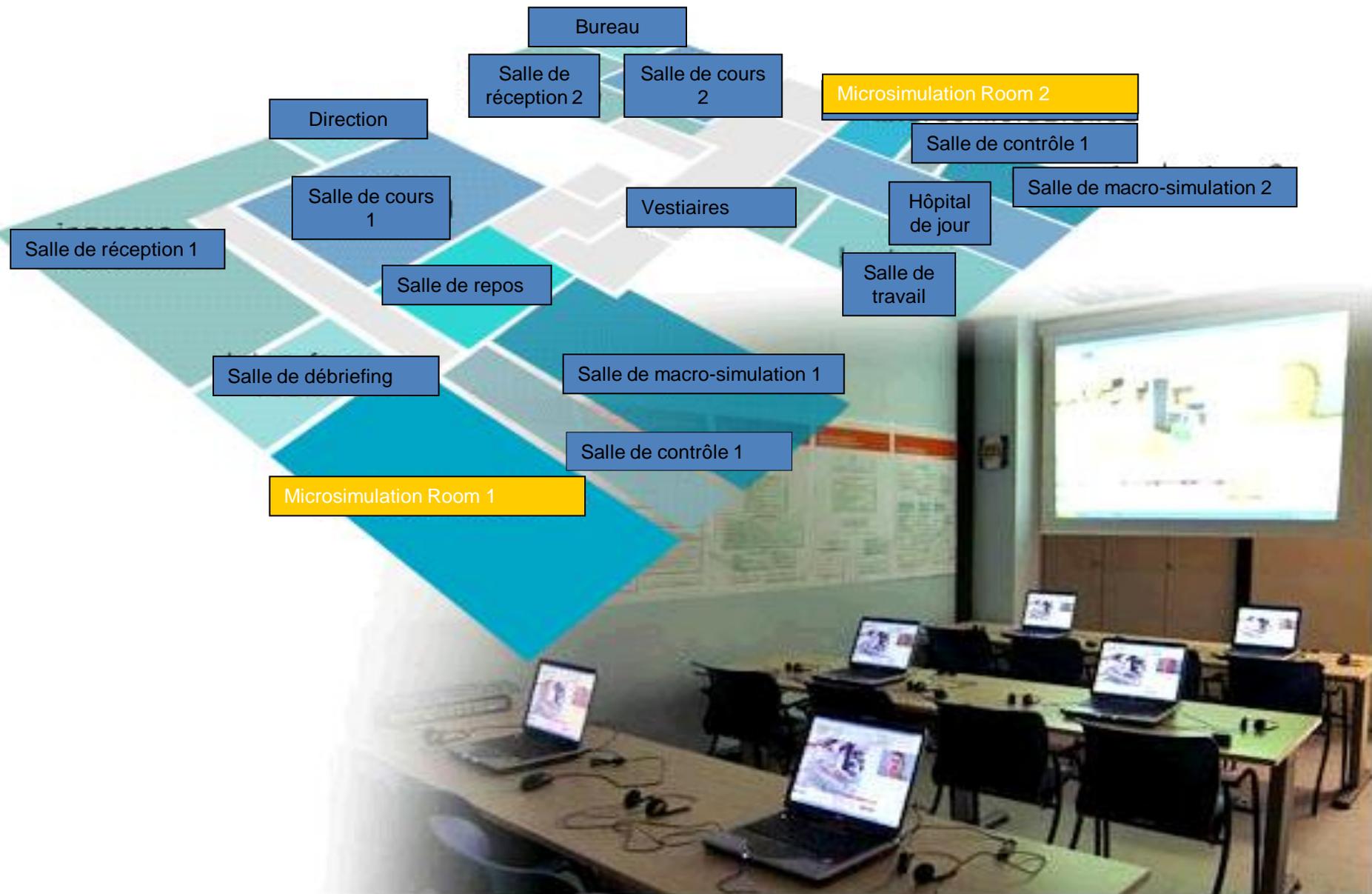
Debriefing Room

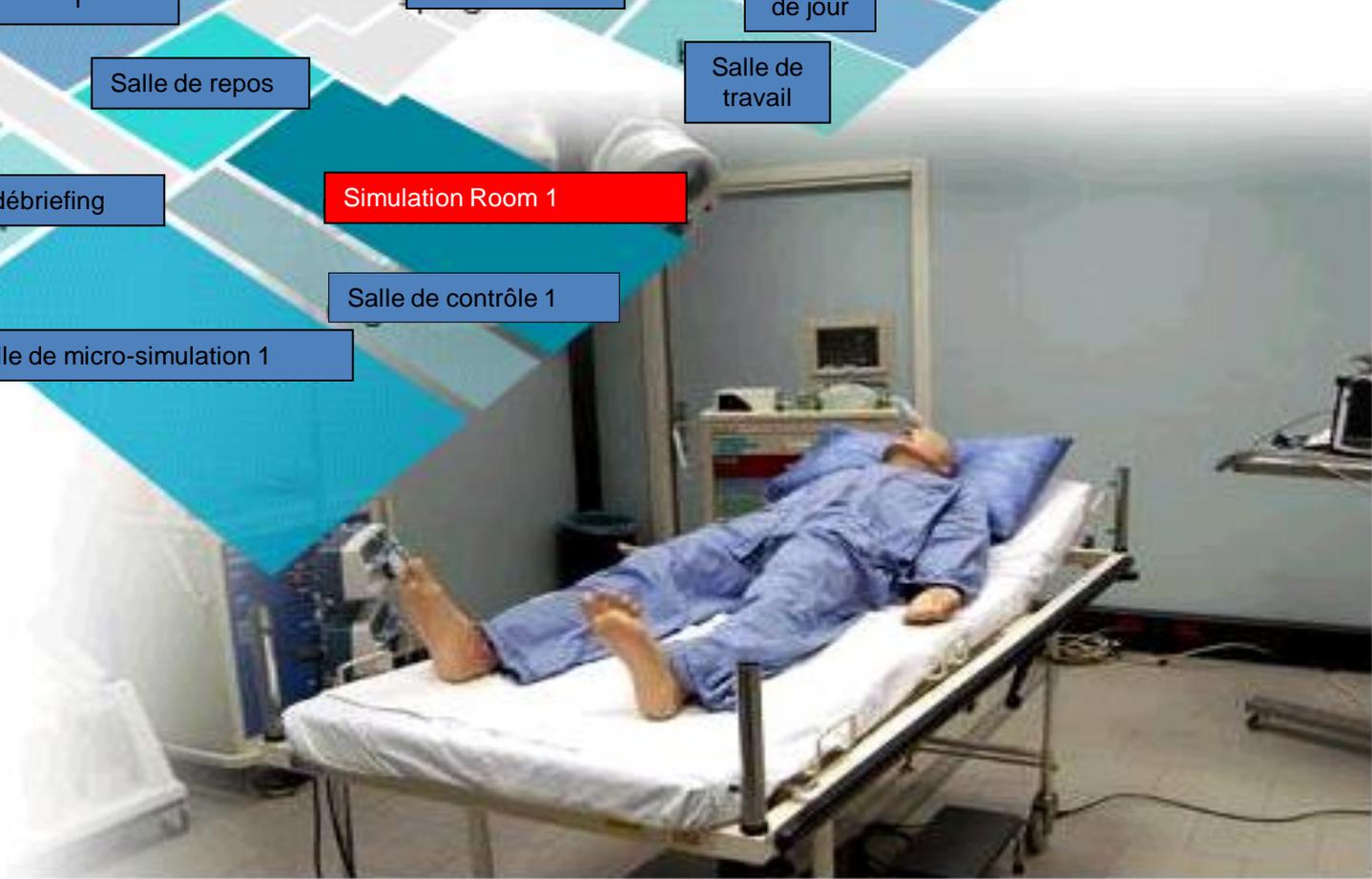
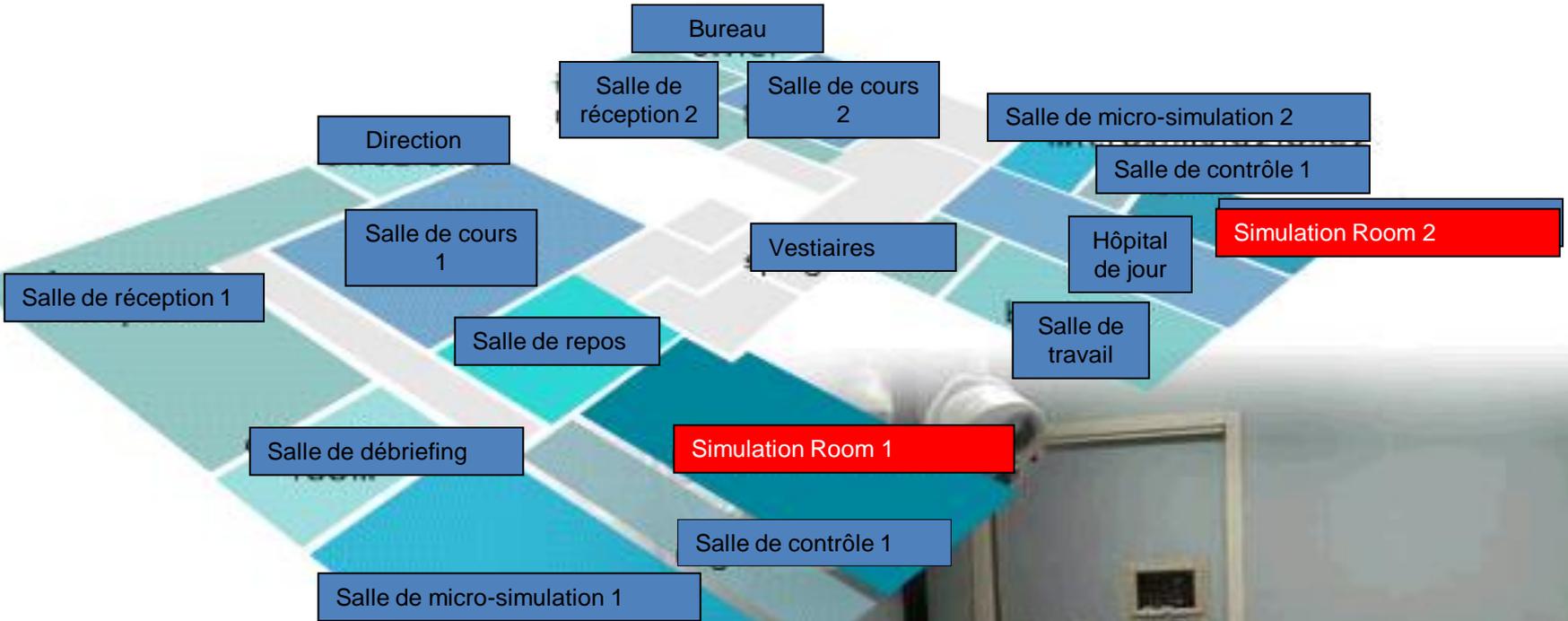




Lecture Room : Task Trainers or lectures







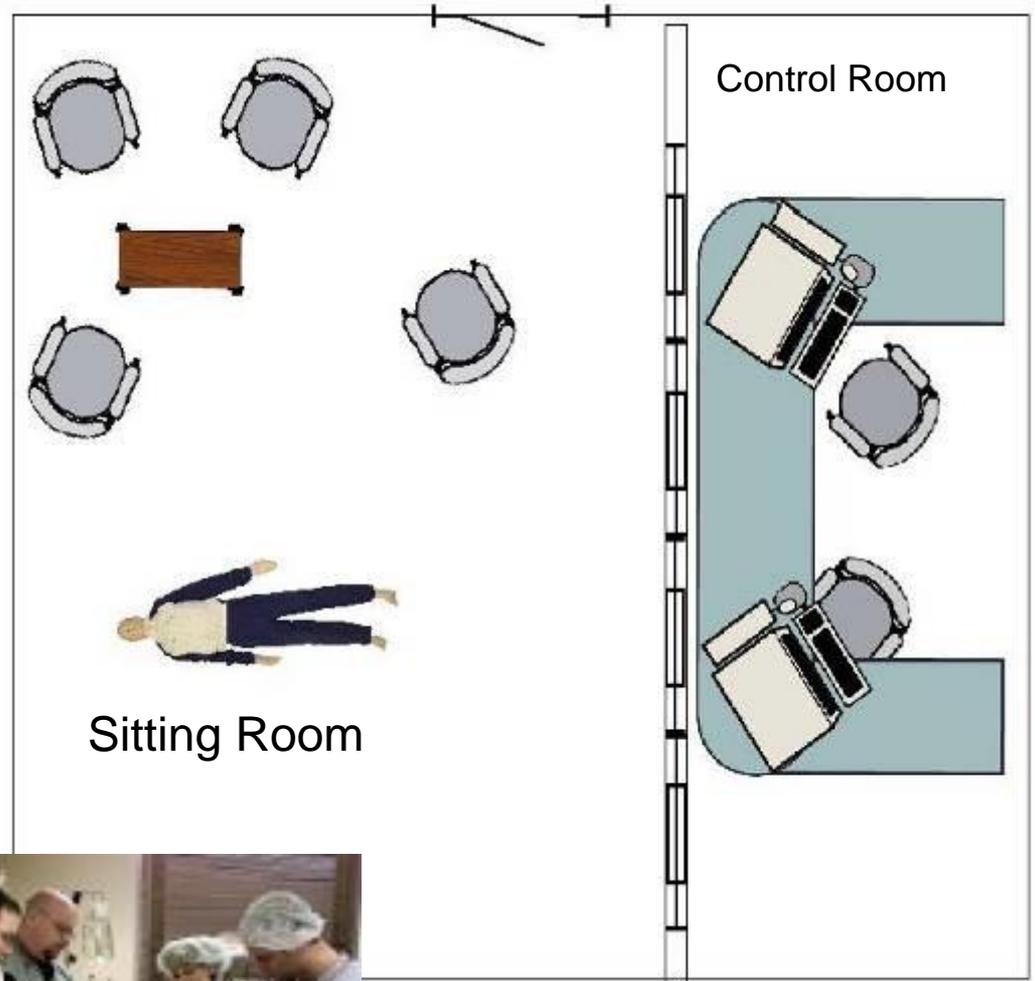


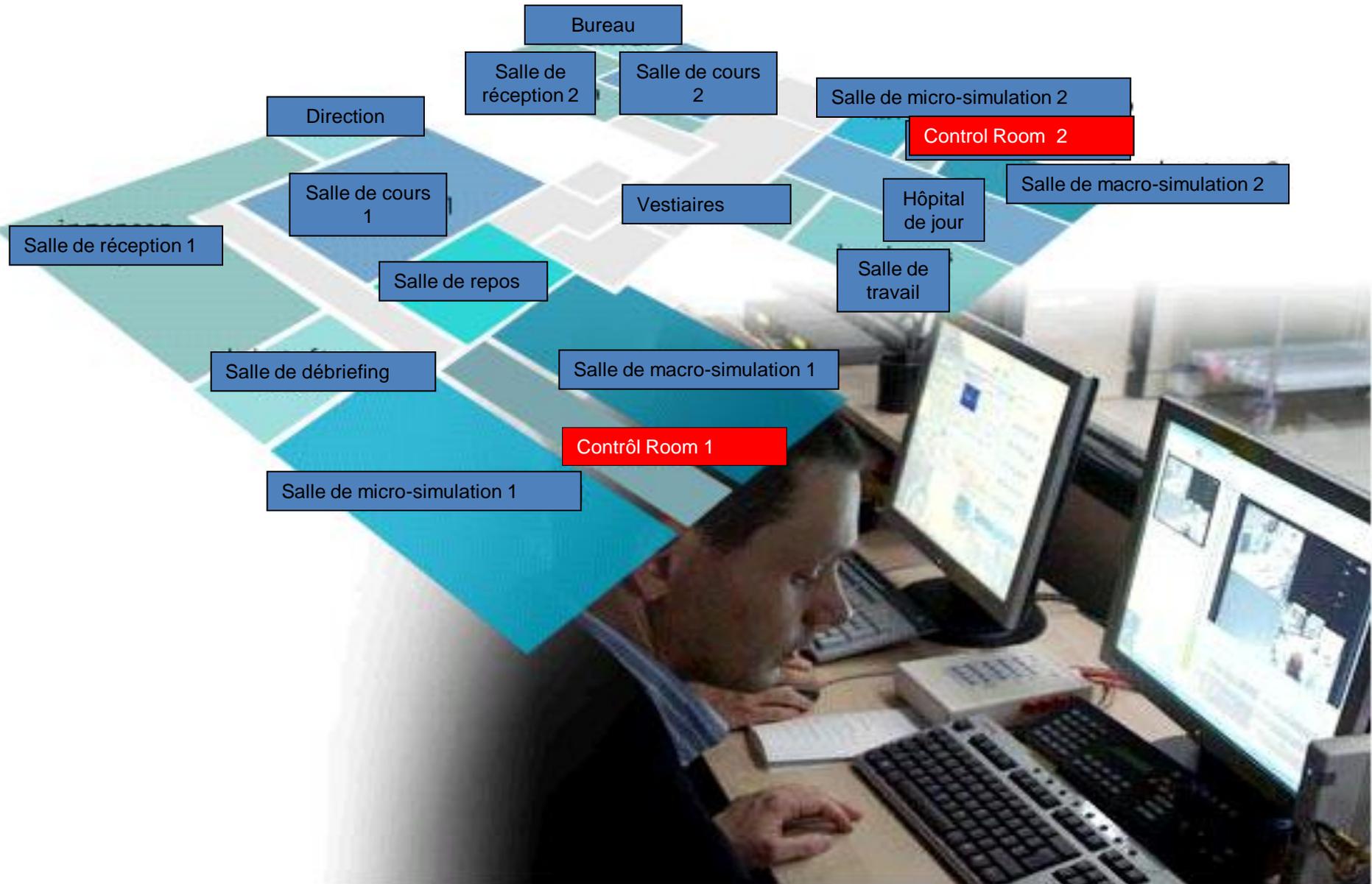
Different scenes

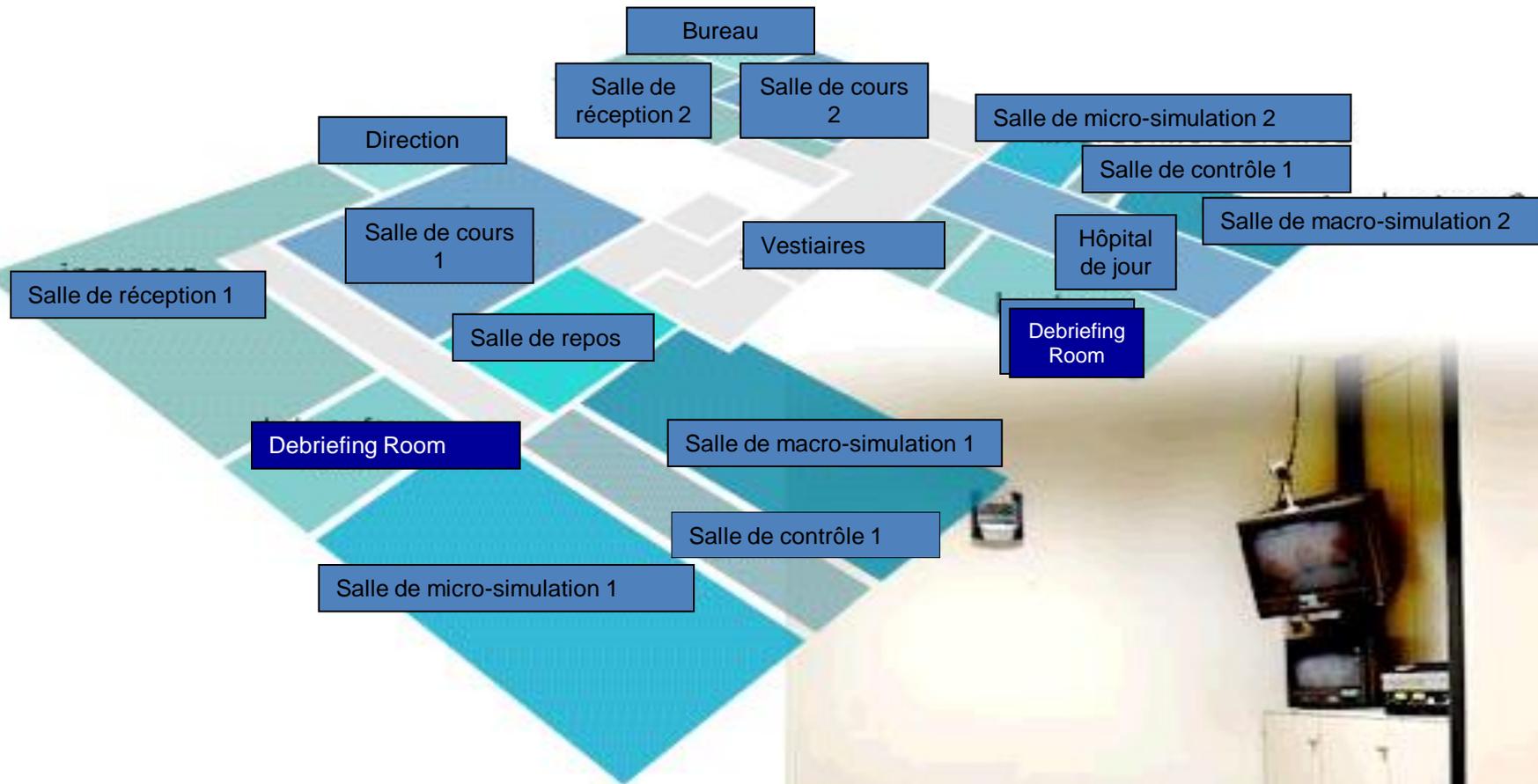
Operating Room

Appartment....









Rooms

- Simulation rooms:
 - Hospital ER, OR, street?...
 - Simulated apartment, ambulance, chopper?
 - Clinical skills laboratories (Wet and dry).
 - Dissection laboratories
 - Screen-based or virtual reality training suites
- For learners : Observation (passive learners), Debriefing room /Lecture rooms, break room
- For Faculties : Control rooms, Offices, Staff break room, Storage rooms (IT, AV, cold room, ...)
- General services: Reception, Waiting area, toilets, changing rooms

Duality between space and functionality

- Storage is essential
- Education is essential

Brost, Thiemann, Belda, & Dunn, 2008

How to spare square meters?

- Give ideas to decrease the size of your simulation center, improving pedagogy...



Flexibility

- Multipurpose room
- Multiaccess rooms
- Sliding mobile walls (Alinier, 2007a)
- Raised floor with movable tiles
- Shared control room?
- Improve storage

Storage

- 10 to 30% of the total area
- Rooms?
- Cupboards?
- Racks?
- Fixed?

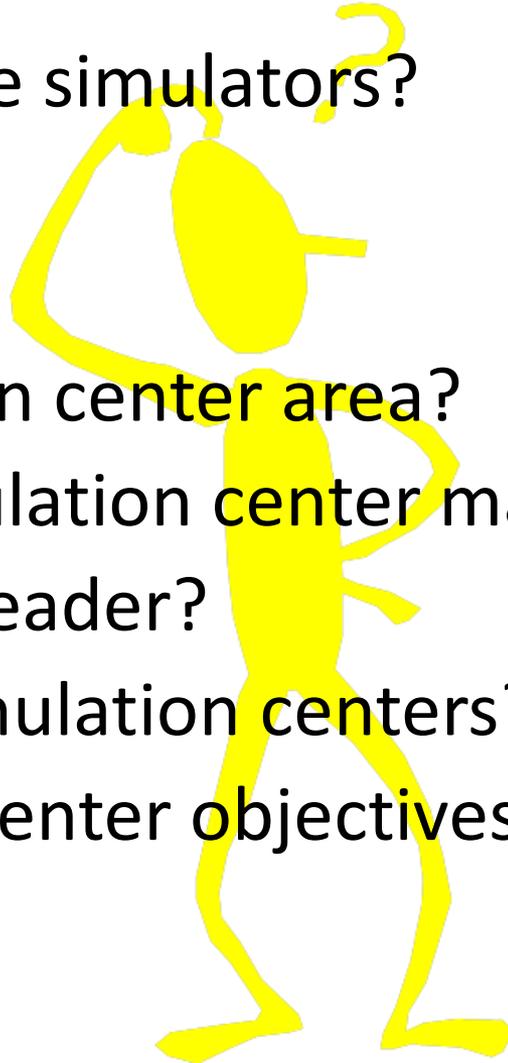
The beginning?

- The first steps to create a simulation center



The beginning?

- Buy one or more simulators?
- Train teams?
- To find money?
- Select simulation center area?
- To create a simulation center map?
- Choose a teamleader?
- To see other simulation centers?
- To define your center objectives?



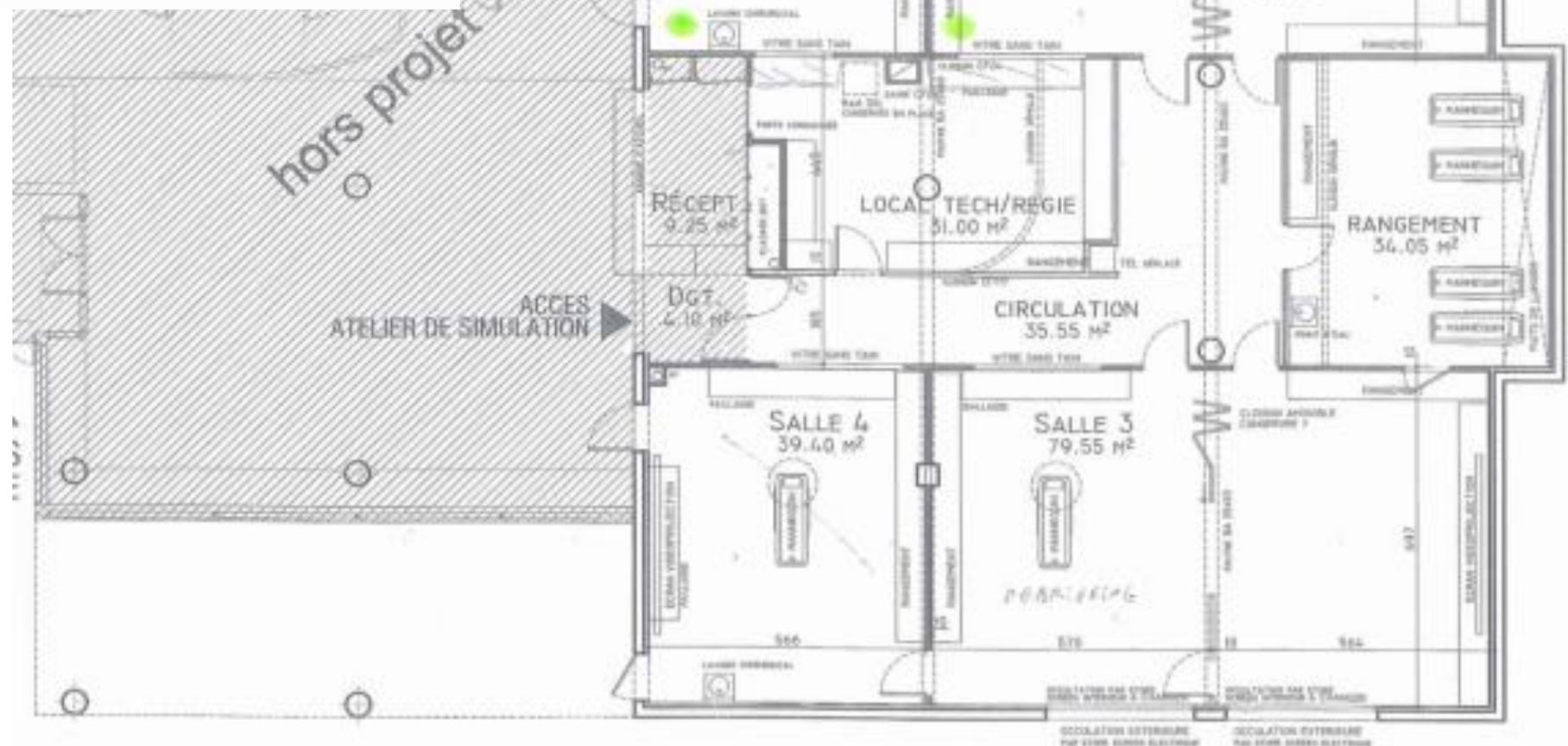
To define a team and a team leader

- Hard Core
- Interprofessionnal team
- Political and economical leaders
- High visibility and expertize
 - In pedagogy,
 - In simulation
 - Other : AV...
- If you don't have it : ask it

To evaluate your needs

- What is your mission ↔ who will be your Students?
 - Human resources
 - Material
 - Rooms (number, location...)
 - Money
 - Beginning
 - Every year
- ⇒ Business plan

Tableau des surfaces	
Nom	Surface
local tech/regie	31.00 m ²
circulation	35.55 m ²
Dgt.	4.18 m ²
Récept.	9.25 m ²
salle 1	39.90 m ²
Salle 2	80.35 m ²
rangement	34.05 m ²
Salle 3	79.55 m ²
Salle 4	39.40 m ²
	331.20 m ²



Architect

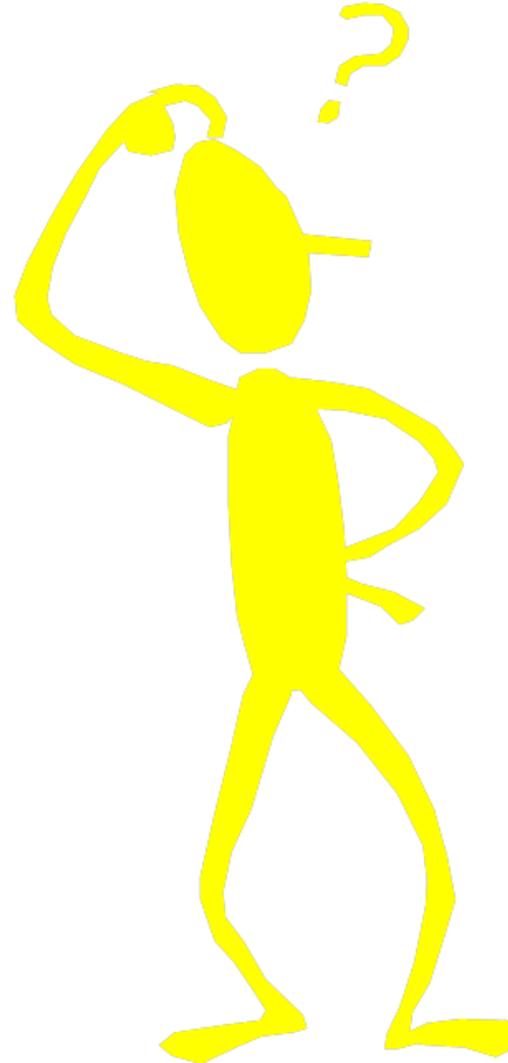
Not easy to find...

Simulation center map

Content of each room

- physical dimensions (need double-door?)
- power rating of each device and pieces of furniture, fixed or mobile,
- water, drainage, and medical gases, network points
- total ceiling height (false floor? false ceiling?)
 - Air conditioning?/ hide ventilation ducts and cabling rails
 - wall finish, type of ceiling/flooring

Other issues?



AV system

- Number of cameras
 - Analogic
 - Numeric
 - Own server
 - Building server
- One way glass
- Control room
- Storage for IT

Acoustic issues

- Floor
- Walls
- Simulation room/control room
- Simulation room/debriefing room
- Offices/corridors
- Offices/breakrooms

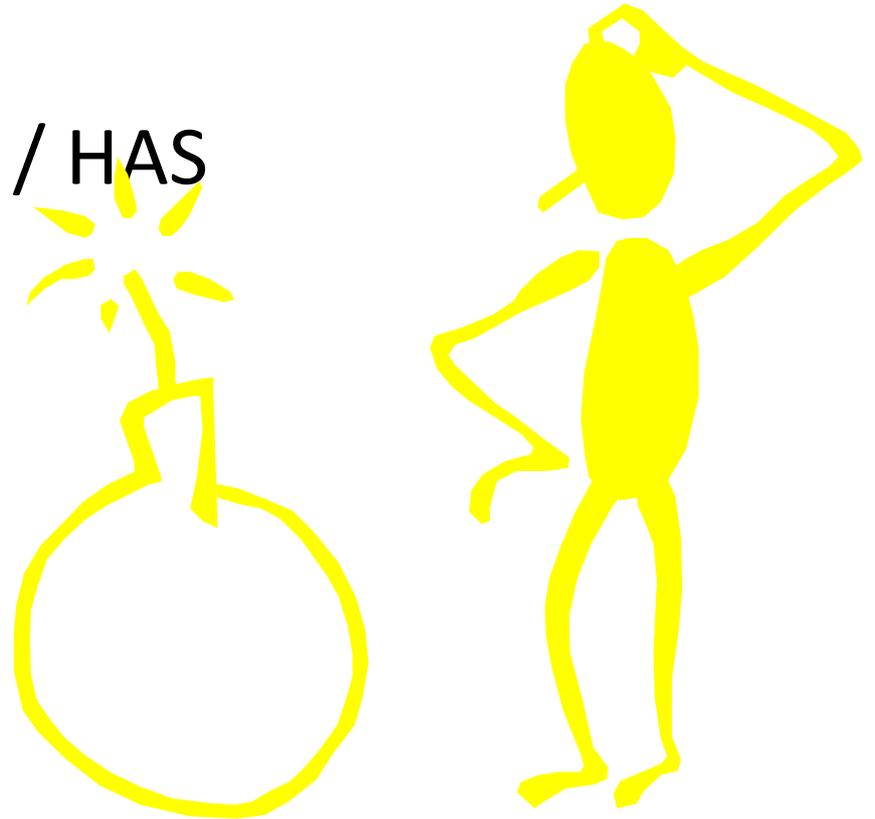
Gas issue



- Standard alarm panels and shut off valves
- Shut off valves for each room?

Last but not least...

- Security issues
- Accreditation SSH / HAS



Realism

- Daily material in a daily setting
- Simulation is a technique not a technology
- Pedagogical impact / risk of failure
- Face validity = Psychological fidelity
- Simcenter : in situ simulation basis

Simulate to better make simulation

- Challenge your map thinking to a normal day :
 - Students
 - Teachers
 - Preparation
 - Breaks

- Future activity
 - OK at 1 year
 - Very difficult at 5 years

Conclusion

- Very efficient multidisciplinary team
- Please search people who know and ask them
- Flexibility/money/objectives
- Anticipate to better simulate