



The medical training platform

Why Xerpa?



Xerpa / Sherpa is an ethnic group native to the most mountainous regions of Nepal and the Himalayas.

They are highly regarded as elite mountaineers and experts in their local area, for their hardiness, expertise, and experience at very high altitudes.

Nowadays, the term is used to refer to almost any guide or climbing supporter hired for mountaineering expeditions in the Himalayas.

Because of this usage, the term has become a byword for a guide or mentor in other situations.

We are creating a medical resident's Xerpa.

Our purpose

Create a unified European platform for medical doctors

Collection of standardized data in a user-friendly and simple way

Enable real-time monitoring, evaluation and improvement of medical training

European, National, Regional and Hospital levels

Our purpose

More than an e-portfolio, a platform:

- **Training / Educational material** (lessons, surgical vídeos, slides, recommended readings, ...)
- **Powerful tool to share information** (email/push-notifications) – Events, Congresses, Courses, News, ...
- **Build a strong network** – increase bonds, collaborative multicentric work, ...
- **Tools:** calculators, checklists, protocols, ...

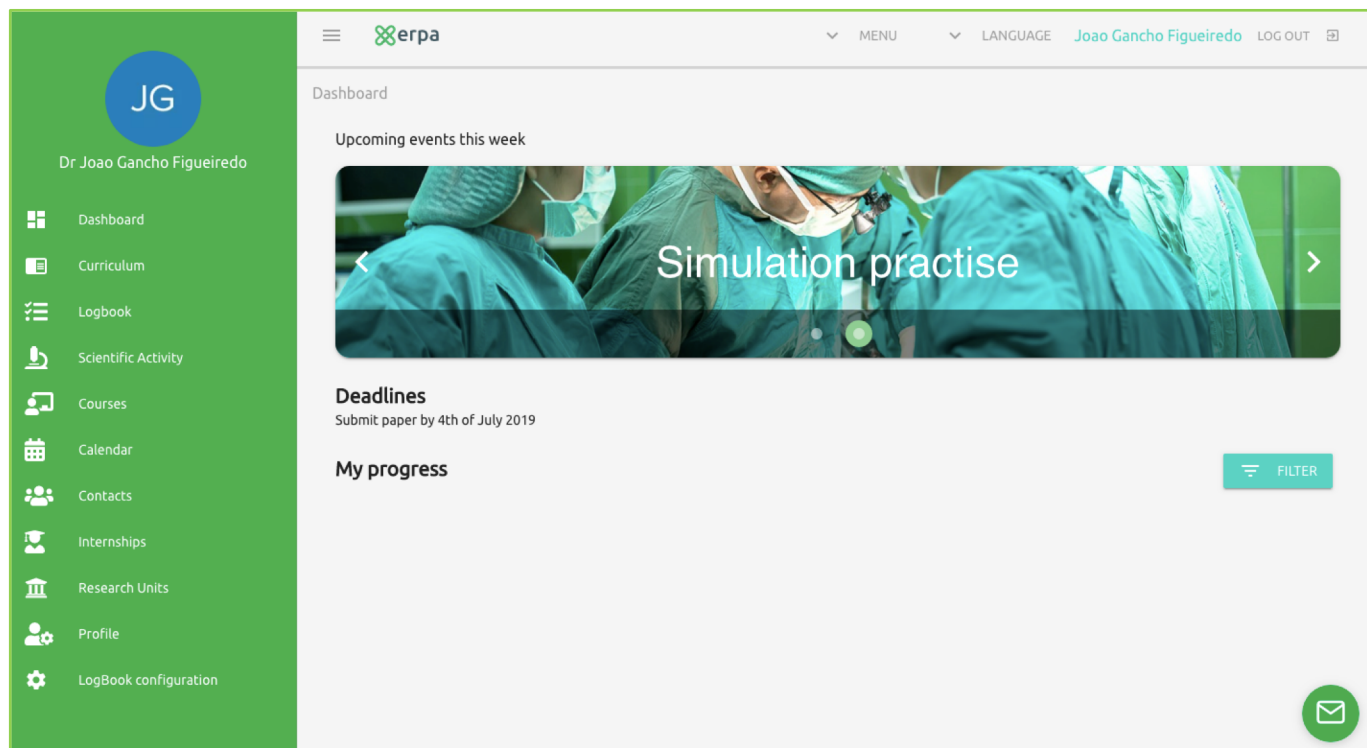
And also:

- Apply the same concept to **Universities and medical students**

The Solution

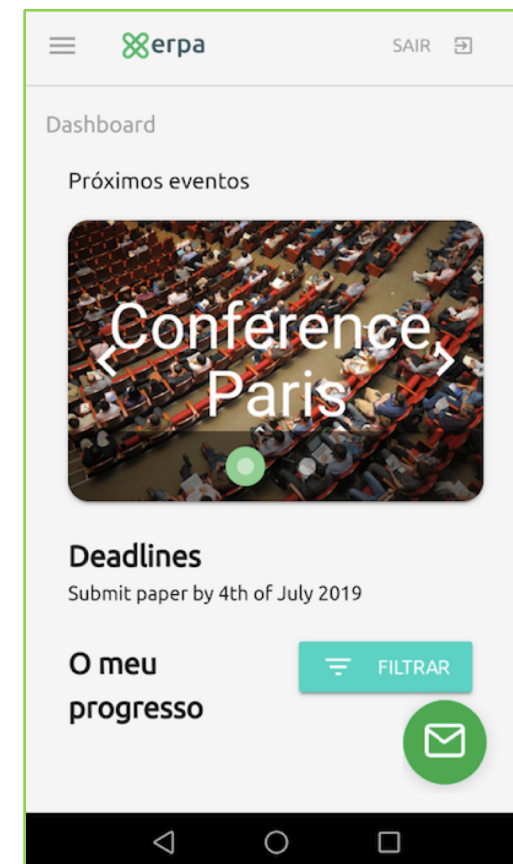
- Cloud based (SaaS)** – always accessible through browser, no need to install on local machines
- Web and Mobile** – accessible in all devices – pc, tablet, mobile
- GDPR compliance** – privacy by default and by design, data minimisation ...
- Safety**
 - HTTPS protocol; certified datacenters; encrypted storage
 - User permissions managed by certified third party: Auth0
- De-identified data**
 - Xerpa is not an Electronic Medical Record
 - Registration of standardized data to enable monitoring, evaluation and improvement

Web view



The web view dashboard features a green sidebar on the left with a user profile for Dr. Joao Gancho Figueiredo (JG) and a list of navigation items: Dashboard, Curriculum, Logbook, Scientific Activity, Courses, Calendar, Contacts, Internships, Research Units, Profile, and LogBook configuration. The main content area includes a top navigation bar with the ERPA logo, a menu, language options, the user's name, and a log out button. Below this is a 'Dashboard' section with 'Upcoming events this week' featuring a 'Simulation practise' banner. A 'Deadlines' section lists 'Submit paper by 4th of July 2019'. A 'My progress' section includes a 'FILTER' button. A green envelope icon for notifications is located in the bottom right corner.

Mobile view

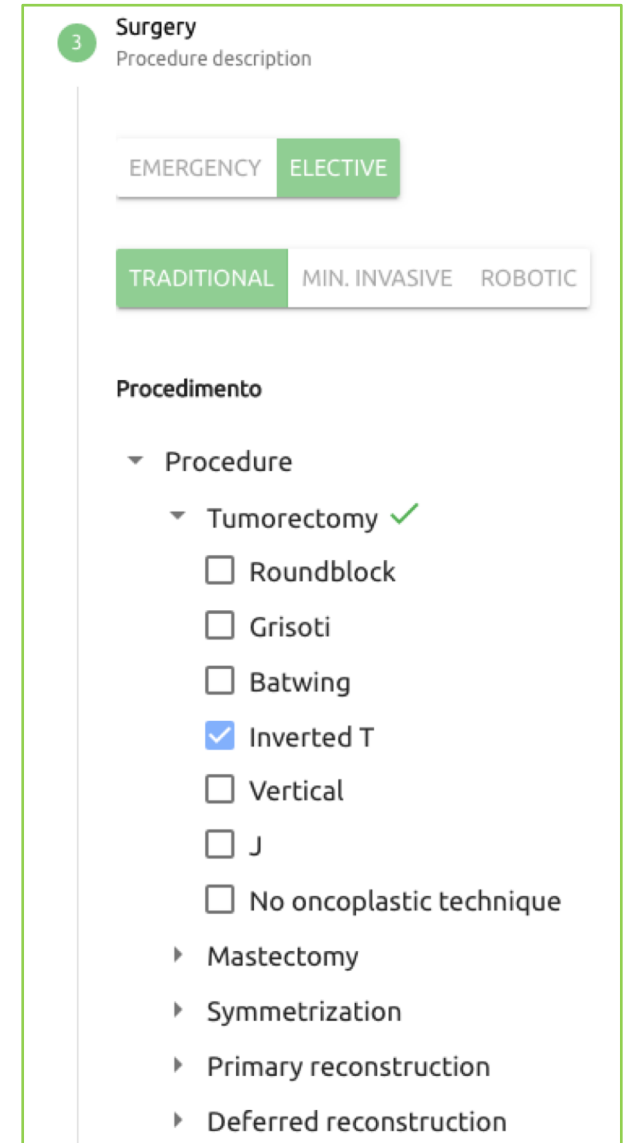


The mobile view dashboard is optimized for a smaller screen. It features a green top navigation bar with the ERPA logo, a menu icon, the user's name, and a 'SAIR' (Log Out) button. The main content area includes a 'Dashboard' section with 'Próximos eventos' (Upcoming events) featuring a 'Conference Paris' banner. A 'Deadlines' section lists 'Submit paper by 4th of July 2019'. A 'O meu progresso' (My progress) section includes a 'FILTRAR' (Filter) button. A green envelope icon for notifications is located in the bottom right corner. The bottom of the screen shows a black Android navigation bar.

- **e-portfolio** (already developed, in a pilot phase)
 - **Clinical** (surgeries, special techniques, ...) Specific for each specialty
 - **Scientific** (publications, communications) Very similar across specialties
 - **Training** (courses, conferences, ...) Very similar across specialties

Clinical (surgeries, special techniques, ...)

- Standard Templates of defined options
 - Where: Year of residency, type of Internship/Rotation; hospital
 - Who: Sex, Age, ASA Score, ... (anonymous patient data)
 - What: Anatomical region; Diagnosis
 - How:
 - Elective/Emergency; Minimally invasive/Traditional/Robotic; ...
 - Surgical Procedure(s);
 - Autonomy (Surgeon/Helper/Observer)
 - How well:
 - Evaluation (assistant <--> resident)
 - Complications (Clavien-Dindo, ...)



3 Surgery
Procedure description

EMERGENCY ELECTIVE

TRADITIONAL MIN. INVASIVE ROBOTIC

Procedimento

▼ Procedure

▼ Tumorectomy ✓

- Roundblock
- Grisoti
- Batwing
- Inverted T
- Vertical
- J
- No oncoplastic technique

▶ Mastectomy

▶ Symmetrization

▶ Primary reconstruction

▶ Deferred reconstruction

Example of Breast surgery procedure registry (part)

Clinical (surgeries, special techniques, ...)

Autonomy:

Possibility to add other users to a log (as surgeon/helper)

- Automatic push notification / email to these users
- Possible actions: Evaluation of activity; addition to their own logbooks

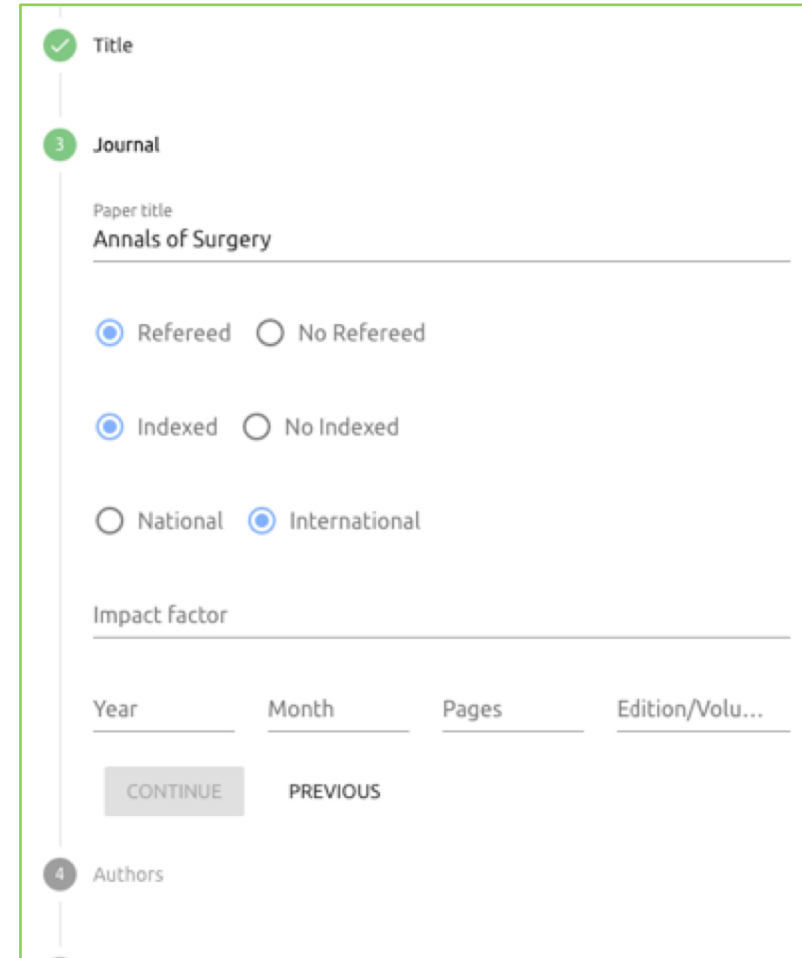
Other possibilities:

- Add a video / image to a log ...

- Scientific(publications, communications)

Publications

- How relevant?
 - Indexation; Peer-reviewing, Impact factor ...
 - Auto-filling through DOI number (Pubmed API)
- When and where?
- Author / coauthor
- File upload

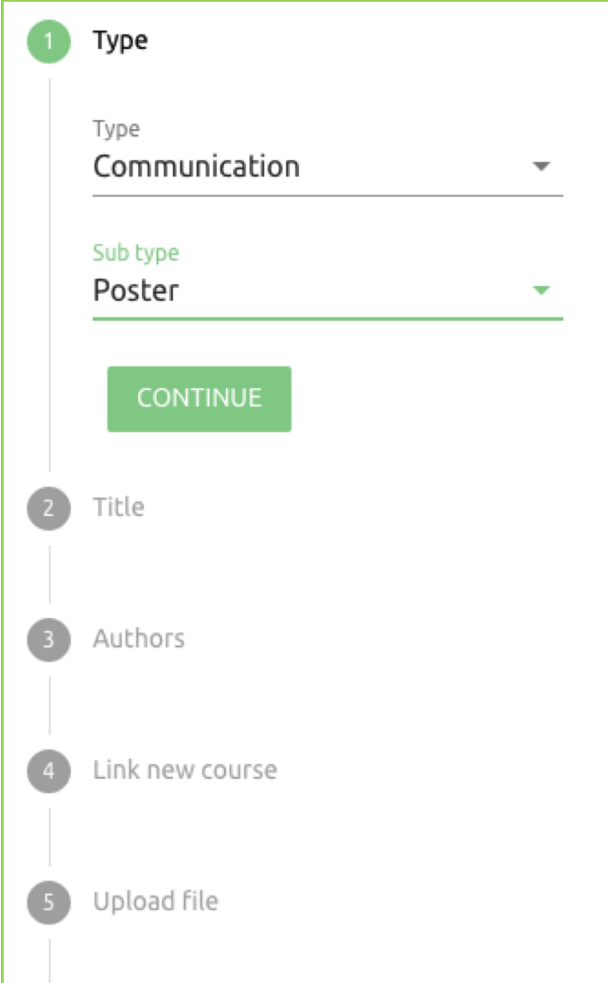


The screenshot shows a multi-step form for entering publication details. A vertical progress bar on the left indicates the current step is 'Journal' (step 3), with 'Title' (step 1) completed and 'Authors' (step 4) next. The 'Journal' section includes a text input for 'Paper title' with the value 'Annals of Surgery'. Below this are three rows of radio button options: 'Refereed' (selected) vs 'No Refereed', 'Indexed' (selected) vs 'No Indexed', and 'National' vs 'International' (selected). There is an 'Impact factor' text input field. At the bottom of this section are four text input fields labeled 'Year', 'Month', 'Pages', and 'Edition/Volu...'. Navigation buttons 'CONTINUE' and 'PREVIOUS' are located below the input fields. The 'Authors' section is partially visible at the bottom.

- Scientific(publications, communications)

Communications

- Type of communication (Oral, Poster, Video, ...)
- How relevant? (Prizes/Awards; ...)
- When and where?
- Author / coauthor
- File upload



1 Type

Type
Communication

Sub type
Poster

CONTINUE

2 Title

3 Authors

4 Link new course

5 Upload file

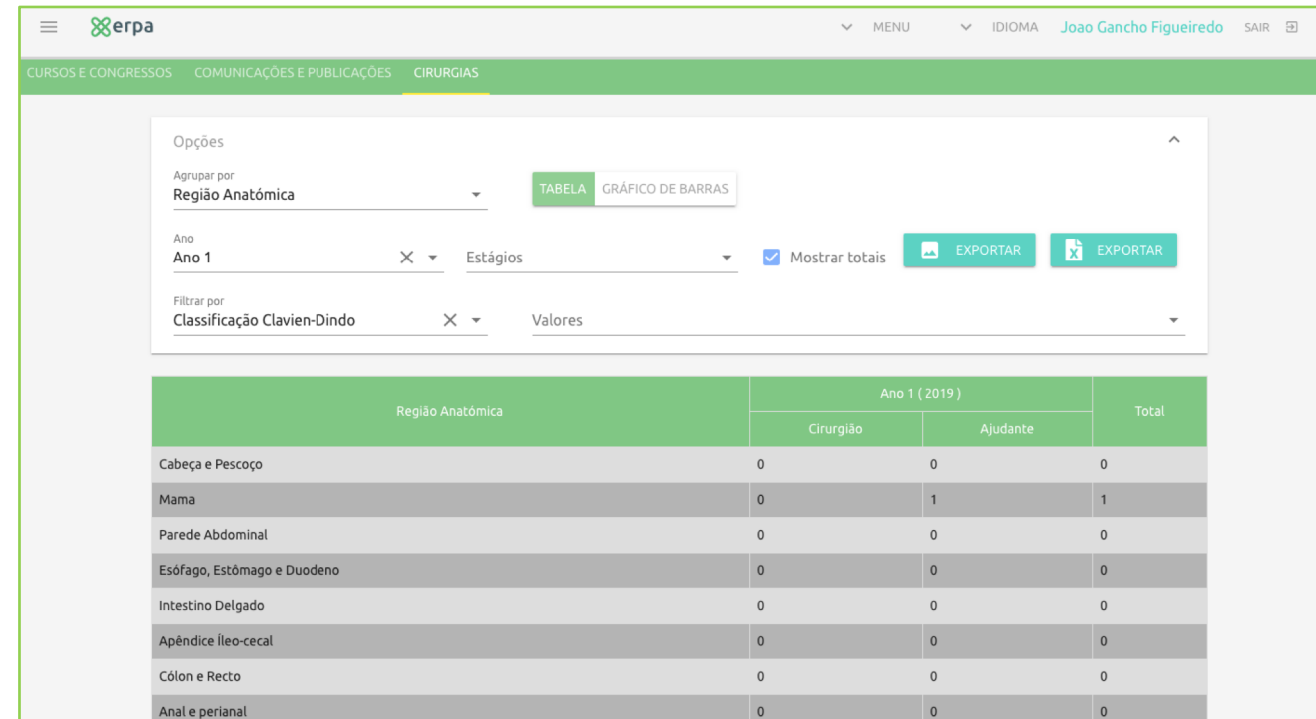
- Training (courses, conferences, ...)
 - Type of course
 - Topic (life-support, per anatomic region, research, ...)
 - Certification (CME points, ...)
 - Where and when
 - Certificate of approval

- **For Residents:**

- Compare with group of peers (quartilhes) – “How am I doing in numbers?”
- Manage own data – filter, export detailed data (.csv), create tables, charts, graphs, ...
- Possibility to integrate with data from other residents -> multicentric studies, ...

- **For Tutors / Hospitals / Boards**

- Periodic reports of resident’s activity (email/app)
- Definition of thresholds and automatic alerts
- Timely intervention on underperformers
- Evaluation and comparison of programs
- ...



The screenshot shows the erpa web application interface. At the top, there is a navigation bar with the erpa logo, a menu icon, and user information: "Joao Gancho Figueiredo SAIR". Below the navigation bar, there are tabs for "CURSOS E CONGRESSOS", "COMUNICAÇÕES E PUBLICAÇÕES", and "CIRURGIAS". The main content area displays a data table with the following filters and options:

- Opções: Agrupar por Região Anatómica (dropdown), TABELA (selected), GRÁFICO DE BARRAS (button).
- Ano: Ano 1 (dropdown), Estágios (dropdown), Mostrar totais, EXPORTAR (button), EXPORTAR (button).
- Filtrar por: Classificação Clavien-Dindo (dropdown), Valores (dropdown).

The table below shows the data for "Ano 1 (2019)":

Região Anatómica	Ano 1 (2019)		Total
	Cirurgião	Ajudante	
Cabeça e Pescoço	0	0	0
Mama	0	1	1
Parede Abdominal	0	0	0
Esófago, Estômago e Duodeno	0	0	0
Intestino Delgado	0	0	0
Apêndice Íleo-cecal	0	0	0
Cólon e Recto	0	0	0
Anal e perianal	0	0	0

Our proposal and challenge

Join us, and shape Xerpa together!



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