1. State of Clinical Engineering (CE) - Health Technology Management (HTM) – Body of Practice (BOP)

**Healthcare in Peru:**
- Population (in thousands): 31,237
- Life expectancy: 75 years
- GDP in health: 5.14%
- Hospital beds (per 10,000 population): 15.94
- Healthcare facilities: 22,0003 (incl. Hospitals, Specialized Institutes, Health Centers), 60% private healthcare facilities.
- Decentralized health care system (MINSA, EsSalud, private sector, FFAA and PNP)
- DIGEMID – Regulatory Agency and MINSA – Regulatory Body
- SUSALUD: whose function is the supervision of the Institutions Providers of Health Services (IPRESS) and performs it through a “Monitoring instrument for IPRESS” where it mentions that hospitals must have “Evidence of compliance with the schedule of preventive maintenance of biomedical equipment”.
- No law for the incorporation of CE in hospitals

**Advances per Sector:**
- **Public Sector:** main representatives’ hospitals have CE Departments which main activities are the maintenance of medical equipment and also participate in the acquisition process; some examples are Hospital Nacional Cayetano Heredia (HNCH), Hospital Nacional Dos de Mayo (HNDM), Instituto Nacional de Salud del Niño (INSN), Instituto Nacional Materno Perinatal (INMP) among others.
- **Social Security:** main representatives’ hospitals have CE Departments which main activities are the maintenance of medical equipment, also participate in the acquisition process and in projects; some examples are Gerencia Central de Ingeniería Clínica, Hospital Nacional Edgardo Rebagliiti Martins (HNERM), Hospital Nacional Guillermo Almenara (HNGAI) and Hospital Nacional Enrique Sabogal (HNES).
- **Police and Military entities:** according to the information collected, they don’t have a CE Department.
- **Private Sector:** a few private hospitals have a CE Department; the more representatives are the ones who belong to AUNA and Clínica Internacional.

The Peruvian Association of Clinical Engineers (ASPIC) in conjunction with the Biomedical Engineering Degree from Pontificia Universidad Católica del Perú (PUCP) is currently working in a survey to complete and update the information above.

2. How would you suggest to show the Value of and from having CE-HTM program

Every healthcare facility, regardless of the size or complexity, should have people who manage the medical equipment with focuses on patient safety, user satisfaction and profitability / access / optimization of the business / healthcare system.

In that sense, this people must have the proper knowledge, experience and best practice in order to show value to the organization. A highly recommend source of those knowledge and experience would be to have a CE-HTM program.

3. Example of success stories where CE supported patient outcomes

We attach 2 success stories that were sent by our associates.

4. CE Education program available (levels and content) – Body of Knowledge (BOK)

**CE Education:**
- There are 81 universities en Peru recognized by the Superintendencia Nacional de Educación Superior Universitaria (SUNEDU), which is the national entity of Peru that protects the right to receive a quality
university education. From them, only 4 universities have the undergraduate degree in Biomedical Engineering: Universidad Tecnológica del Perú (UTP), Pontificia Universidad Católica del Perú (PUCP) associated with the Universidad Peruana Cayetano Heredia (UPCH), Universidad de Ingeniería y Tecnológica (UTEC) and the Universidad Nacional Mayor de San Marcos (UNMSM). Three of them have CE courses in their curricula.

- 02 universities have the Master Degree in Biomedical Engineering and others: Pontificia Universidad Católica del Perú (PUCP) and Universidad Nacional del Callao (UNAC). They have CE courses in their curricula.

5. CE Association/Society and Credentialing/Certification program if available:
- 01 Peruvian Association of Clinical Engineers (ASPI): nonprofit association that was founded on December 2017 and which mission is to promote activities for the continuous development of Clinical Engineering in Peru, in this way, to contribute with the patient safety and humanization of the healthcare system. Chair: Mery Vidal
- 01 EMBS-IEEE Peru Chapter. Chair: Sandra Pérez
- There is no certification program for CE in Peru yet.

6. CE major challenges (think of 3 subjects)
- Access to knowledge, experiences and best practices in CE in Peru specialized outside Lima (capital city).
- Develop leadership, management and soft skills in order to show effectively CE value to the C-Suite and be part of the decision making table. It is not enough to be one but to appear it. We are technology managers that add value to organizations!
- To have passion, commitment, goodwill and 1000% attitude to be better professionals not only for ourselves but also to contribute with a better society, better country and sustainable planet.

7. What is the most important action you will support to increase CE recognition
- **As Academia**: to continue developing degrees in Biomedical Engineering which have CE courses in their curricula. Also to work very closely to Regulatory Bodies, Ministry of Health, Industry and Associations in order to contribute with the development of the profession and the country.
- **As Regulatory Body and Ministry of Health**: to have spaces to meet all the stakeholders in order to work as a team following a long-term and planned agenda.
- **As Peruvian Association of Clinical Engineers (ASPI)**: to continue promoting and developing CE activities in order to bring access to knowledge, experiences and best practices in CE in Peru. Also to help CE people to show efficiently their added value through the organizations.
- **As Clinical Engineers**: It is not enough to be one but to appear it. We are technology managers that add value to organizations which main focus is the patient safety, user satisfaction and profitably / access / optimization of the business / healthcare system.