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inDemand: Demand driven co-creation for public entities

CHALLENGE 4: HEAT (HEAlthcare Training management platform)

Pitch

An online platform to help in the planning, monitoring and evaluation of specialized healthcare education delivered in hospitals, with greater security, convenience and efficiency than the current paper-based approach.

Motivation and description

The Specialized Healthcare Training (*SHT*) programme in Servicio Murciano de Salud manages medical residents that pursue their medical specialization (the MIR programme). *SHT* is based on the Spanish official training programme that specifies an *Individual Training Plan* for each resident, with the needed activities each resident must perform.

Activities are planned and incorporated in a schedule, that also include the days worked on-duty. The schedule configuration, follow-up and evaluation are usually subject to incidents that require restructuring among the multiple actors involved: residents and their teaching agents (services, tutor, teaching collaborators, Teaching Unit, Teaching Commission, Regional Health Authority and National Health Authority).

Residents must register their activities in a *Resident's Book,* that collects information based on the *Transversal and Complementary Resident Program*, as well as on their participation in courses, conferences, and research projects. The evaluation of the residents is done periodically through assessment from teachers and tutors, and from exams or tests. The evaluation outputs are incorporated in the *Resident's Book.*

All this chain of actions, changes and incidents represents a communication, confidentiality and efficiency challenge that delay and hinder the process.

Main objective

1. This project aims to develop instruments to manage the specialized training process within the scope of each teaching commission (of teaching centre and teaching unit).
2. In addition, it will allow the development of all instruments for the management of the records of specialists in training and that of tutors and teaching collaborators.

Pilot functional scope

Compulsory requirements

1. On-line registration and management of users depending on roles (student, tutor, administrator, etc). It should be able to store role-specific data like template-based profiles and curriculums.
2. The system must be able to intuitively upload, download and access user relevant information. It also must track, show progress and certify activity over time.
3. A repository of learning resources in different formats, to be accessed via browsing and searching.
4. Management of the planning of the training activities at regional, hospital, service or individual level. The planning usually requires the setting up of activities together with its supervision and evaluation, with different granularity at each level. Possibility to manage later incidences and changes.
5. Administrative console to manage the training program at different levels depending on role.
6. Secure communication exchange mechanism, e.g. messages or reminders, addressing different groups of users.
7. Scalable design and short response times.

Desirable requirements

1. Possibility to create templates to collect information, including tests and surveys. Easily assess and manage this information at group or individual level.

2. Legal validation/certification mechanisms for the upload of information that are convenient for end users.
3. Easily create, duplicate and modify workflows over time. The system should be very flexible and configurable by the users with the required permissions.
4. Analytical capabilities to extract relevant information at different levels, for statistical and improvement purposes.
5. Intuitive design and multi-device access (e.g. by responsible design or a specific app)

Pilot set up (requirements and compliance)

A total of 83 users will be recruited by the Challenger before starting the pilot: 29 residents and 54 teachers. At the very beginning SMS will identified the key users representing all of roles of users to be part of co-creation team involved in design of solution.

Clinical and Ethical and Data Protection

The approach of the pilot must be previously validated by an Ethics Committee of the Servicio Murciano de Salud. The Committee will pay special attention to the protection of personal data, observing the requirements established by the new European data protection Regulation (EU 2016/679) and the Spanish law. Among others an Impact Analysis document, with identified risks and proposed measures, will be required to the Solver.

If deemed necessary, the Solver will be asked to anonymize the data according to mechanisms established by the Challenger. At any case, the Solver cannot exploit or make use of the data for different purposes than the ones agreed with the Challenger and, after pilot end, all copies of the data must be transferred back to the Challenger or deleted.

Technological

The systems needed can be hosted by the solver. If the complexity of the connections were too high or the personal data could be at risk, the systems should be hosted in local servers of the Servicio Murciano de Salud. This will be established in a technical session at the beginning of the project.

The solution will notify the SMS systems about certain events and situations. Ideally via ´HL7´ messaging, but web services could be an option. Anyway, the solver will provide mechanisms to guarantee that the Servicio Murciano de Salud can exploit the data

Expected impact and KPIs

Satisfaction:
- The perceived quality of the different users will be measured through satisfaction surveys before and after the intervention. The goal will be a 30% increase between both scores.

Efficiency:
- Online evaluation percentage = Number of evaluations carried out online / Number of scheduled evaluations. Goal: 80%
- Number of evaluations made in less than 1 week after the end of the rotation / rotations scheduled during the intervention period. Goal: 80%

Business opportunity

To give an idea of potential users, only in the Region of Murcia there are a total of 959 residents of Health Sciences in Spain there are 29,546 residents for 58 specialties (Source: Annual Report of the National Health System, 2015), together with their trainers and administrative staff.

A solution that demonstrates success in the planning, resolution of incidents, evaluation and monitoring of the Specialized Health Training would be highly replicable, since it could be applied in all specialties of Health Sciences (doctors, nurses, psychologists, biochemists, biologists, pharmacologists and radio-physicians) and in other regions since their requirements are similar and come from the Ministry of Health, Social Services and Equality.