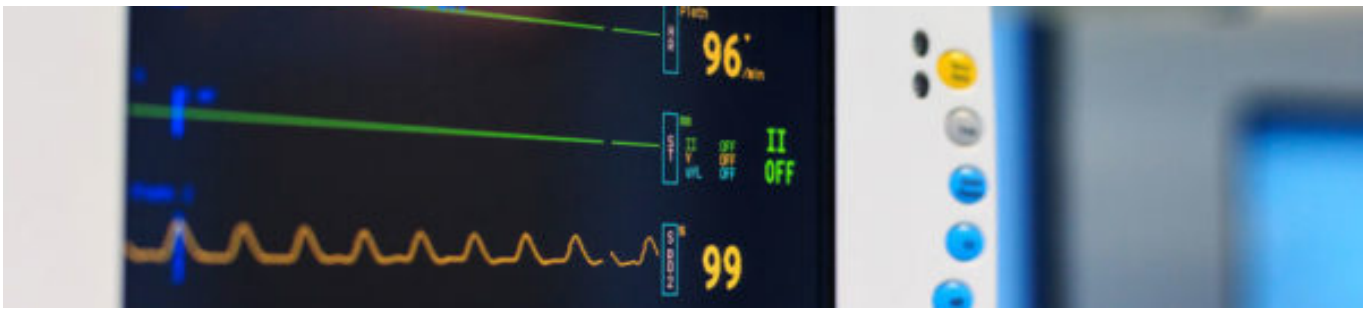

Connecting biomedical equipment: 4 questions to discover project management templates

What project management template should you consider when you want to start connecting biomedical equipment? Biomedical expert, Guillaume Gaudel, fills us in on all the details. Getting projects off the ground: which facility worker are you in close contact with? Ideally, we dialogue with the facility's project manager. For this kind of situation, it gives us [...]

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Getting projects off the ground: which facility worker are you in close contact with?

Ideally, we dialogue with the facility's project manager. For this kind of situation, it gives us one single point of contact within the establishment who manages the project from start to finish. We really recommend doing this to lay the foundation of efficient organisation before launching these kinds of projects.

This is happening more and more. Most of the time, our contact has a background in IT (e.g. an applications manager) because the end game is all about automatically collecting vital patient data in business applications like electronic patient records (EPRs) or specialised care records.

However, other establishment professionals have to be integrated into the project too. In the first framework meeting, other players will need to be added into the mix because connecting biomedical equipment is a multi-disciplinary project.

What kind of team is needed for a template project like this?

You have to integrate the IT management and an applications manager who will be

in charge of answering questions about integration and presenting information to physicians.

The network manager must be present because, depending on where the device is located and how mobile it is, we have to be able to connect it up to our software solution which is often in the institution's LAN. We also need to be able to access the servers.

During the audit, the biomedical equipment, patient wards and care units must be inspected to see what different connections and outlets are available.

This equipment is often not in the LAN, but security measures such as dedicated sub-networks for biomedical devices are present to avoid overloading the network, especially as the volume of data is very large. Moreover, the type of connection may vary: sometimes it is possible to link up to an RJ45 wall socket, device connections, a binary or serial connectivity, a WIFI connection, etc.

One consultant per care unit – if a project includes devices in the recovery room or accident and emergency department, it is essential to have an expert advisor (e.g. an IADE or the care unit's supervising doctor) as needs & expectations will be different. This is a priority because data is transferred to patient records and only the department consultant can say what data needs to be transferred first (and how often) to monitor patients, depending on its medical significance.

We will also define the device's usage workflow with these experts. When equipment is fixed in one place, patients are connected to monitors and their data is transferred automatically. However, when devices are mobile, several issues need to be addressed:

- Do users, i.e. physicians, have to log into the device?
- What is the device used for?
- Are patients tagged with their Permanent Patient Identification (PPI) or hospital visit number?
- Etc.

Biomedical engineers are present to provide the equipment listing, version and frameware, and the device serial numbers, to ensure that these devices can be traced. We mostly rely on Computerised Maintenance Management Systems (CMMS) which is also important when testing out equipment connections for configuration and validation. Biomedical engineers will also validate whether dongles need to be added or not.

Are devices more often connected to Electronic Patient Records or Specialised Care Records within the project?

Most of the requests for our projects today are about supplying EPRs, but we can of course supply specialised care records too. For a facility in Cagnes/Mer, we connected different equipment to both the Expertis patient records and the Emergency Terminal specialty records. In Libourne, we integrated vital data into Métavision specialty records and the Maincare EPR.

Our solution can manage transferring data to any application. If anyone knows how to do it, it's us.

How long do projects generally last?

It depends on the type and number of different devices, as well as the care units

involved. Some projects lasted 2 months from receiving the request to actually putting it into action. Others are more complex with different device models, different manufacturers (over 30), 8 different care units, different applications and sometimes even changes during the projects. Some can last up to a year and be implemented on a step-by-step basis.

Connecting biomedical equipment: what type of medical devices are you able to connect to patient records?

Screens, syringe pumps, ECGs, EEGs, thermometers, infusion pumps, nutrition pumps, monitoring stations, incubators, scales, CTGs, blood gas heaters, beds, blood pressure readers, ventilators, respirators, dialysis machines, etc. The list goes on and on… 😉

What advice would you give to make sure projects are successful?

- Facilities need expert advisors who can organise and manage the project
- A strong link between the biomedical department and the EPRs for this type of project
- Teamwork between physicians, biomedical engineers and the IT management
- Prioritising needs ahead of time – do so on a step-by-step basis if need be
- Choose the ENOVACOM Patient Connect biomechanical interoperability platform which can connect any type of device to any type of business application 😉
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The benefits of this type of project

- Identity vigilance is guaranteed with ENOVACOM Patient Connect – the right device is linked up to the right patient
- Time spent on admin is spent treating patients instead because vital signs are transferred automatically
- Data quality is guaranteed, no more input errors
- Devices can be traced
- Facilities are able to mine data by integrating patients' vital signs into analyses