COURSE 01: BEP – BUILDING EXECUTION PLAN

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In this session, Ignasi Pérez Arnal breaks down the essential parts of a BIM Execution Plan (BEP), comparing international models from ISO 19650, the University of Pennsylvania, and frameworks from Australia, New Zealand, and Singapore. He explains how, despite differences in structure and terminology, all BEPs share the same core objective: to ensure complete, coherent, and collaborative project development. Pérez Arnal details each section of a BEP—from contextualization, project information, and team roles to coding standards, data exchange, and quality control—emphasizing the need for shared language, technological alignment, and integrated contracts. The result is a roadmap for achieving efficient, transparent, and data-driven construction processes through BIM.

Key Takeaways:

- BIM Execution Plans differ in structure but share common goals and information standards.
- Consistent taxonomy ensures clear communication across all disciplines in a BIM project.
- Quality control and data management are central to reliable digital collaboration.
- Integrated contracts align all stakeholders toward shared objectives and timelines.
- A well-planned BEP guarantees clarity from design to construction and long-term operation.

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English transcript:
Well, let's now move on to analyze each of the parts of a BIM Execution Plan. We call them parts or categories, sometimes phases, but we'll be going through each of these subdivisions that a BEP, or a BEP, has. The first thing we should know is that each of the models advocates for a list of these different parts. The first one is the ISO 19650 model, recently approved in 2018, with three or four of the five chapters already perfectly developed, and which has eight actions, as you can see here. We won't read each one of them — you can study that yourselves — but what's important is that we remember this number 8. In contrast, the American model, the one coming from the University of Pennsylvania, if we look at it, we count up to a total of 14 different parts. And if we look at the British model, we see that there are from the 1st to the 9th part. Does this mean that these BEPs are different? Well, it would mean that the classification and the chapters are different, but the information they must contain inside, in reality, should be the same.

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From the North American model, from the University of Pennsylvania, these models derive that have advanced a lot in the Asian and Oceanic context. That would be the Natspec of Australia, which also has a chapter structure, as you can see, of ten parts with two appendices. In contrast, the one from New Zealand develops that same chapter structure and reaches 11 chapters. Meanwhile, the one from Singapore, developed by the BCA, an association that promotes BIM for the entire island of Singapore, also reaches 10 chapters. Again, does this mean they contain different types of information? Well, they shouldn't. The idea is that there may be a different chapter structure, a different way of approaching this BIM Bible, but that all of them should contain all the necessary information so that the development of the BIM model can be carried out completely. Therefore, let's go back to that diagram we saw in the previous chapter, which, very well structured by the University of Pennsylvania, divides the four phases into plan, design, construction, and operation. Therefore, the BEP, to function properly, should draw from these four agents, from these four needs of each of the parts that will intervene in the construction process.

Now then, if we analyze each of the packages of these categories, to make a common approach for all of them, we'll see that we first have a general vision of the BEP. Therefore, we must provide the context, the contextualization for launching this digital BIM model and for its uses. Then we'll talk about the project information, then move on to the key contacts — who's involved — and also with names, emails, phone numbers, etc. From there we move to the BIM objectives and uses. What do we want to use BIM for? Well, this is the documentation section for each of the project's general and specific objectives. Then we'll move on to teams and roles. For each team, we'll determine whether they are going to be informed, participate, or execute parts of this process. And then, just as we design a BIM model, we'll also design the BIM process. Therefore, we'll talk about how, depending on the objectives we have, we're going to develop the model. Then we'll move on to the model coding. Why coding? Because we need to ensure that what we call a door, someone else doesn't call DOOR, and another person doesn't call it entry space. Because if this happens, when we go looking for elements that make up the digital BIM model, we won't find the right information. Therefore, this semantics, as it's called, or this BIM taxonomy, means that each part of the BIM — the eye, each one will call it eye, eyelashes, eyebrows, forehead, nose, lips — in the same way and with the same vocabulary so that we can then extend it to any search we make.

And continuing with this process, we arrive at the required data — we call them for the facility manager, the person who is going to operate and maintain what we have inside a real estate asset or infrastructure. For this we'll also apply and understand the collaboration procedures — how we'll exchange this information among ourselves, what platforms we'll use. And what must follow this

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process is quality control — how we'll verify this information, in what way, what strategy we'll use to have what's called a QS, a QA, a quality audit both for the project that's generated and for the construction we'll carry out afterward. After this quality control, we move on to the needs of technological infrastructure. What computer do I have? What hardware does another person have? What software will we use? What mechanisms will we establish? And how will we exchange communication among ourselves? Then we'll move on to the model structure.

A model structure so that the architect, the engineer, the calculators, the builders can introduce the way in which this model will be divided. And already moving on to the final phases, we reach the project deliverable — that is, whether we have to produce plans or not, what quantities, when this must be done, schedule it, and what information we can obtain from the digital BIM model. This will ultimately give us the agreements and disagreements among all parties to reach the contract strategy. The more integrated this contract is and the more agents we have within the same package, the better, because we'll be more aligned.

And finally, we'll close the BEP with the annexes — a series of documents we can provide, like what we mentioned — protocols, a guide, or as an owner, I can share through my experience with the group of professionals and companies that will work with us. Therefore, here we already have a general overview where, as you can see in the lower left part, the North American model explains it very well — the procedure of a BIM Project Execution Planning. Here it already mixes the entire concept of how planning is a procedure for planning the execution of a project. And somehow it visualizes it very well. We have the uses, we have the design part, the development, the exchange of information. Each of these blocks is repeated in the other BEPs, but each one establishes and places them over time in a different way. The important thing is, as this diagram shows, to have in the end a document that we can call a planning for the execution of our BIM project, of our BIM construction.

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