
# COURSE 03: BEP – BUILDING EXECUTION PLAN

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In this detailed lecture, Ignasi Pérez Arnal continues his exploration of the American BIM Execution Plan model, focusing on how to define and prioritize objectives and uses within a project. Drawing from the University of Pennsylvania's methodology, he explains how to identify why BIM is being used, what tools are needed, and what benefits each objective brings—from higher design quality and coordination to productivity gains and error reduction. Pérez Arnal also discusses how BIM objectives translate into specific actions, each requiring tailored uses and technologies to generate measurable value. Through systematic prioritization, teams can connect design intent with operational efficiency, ensuring that BIM serves both immediate and long-term project goals.

**Key Takeaways:**

- BIM objectives must align with clear benefits and measurable project improvements.
- Prioritization helps allocate effort toward the most impactful design and management goals.
- Each BIM use requires specific tools, workflows, and collaboration methods.
- Linking objectives and uses fosters a data-driven, performance-based project strategy.
- Precision and coordination in BIM models enhance safety, quality, and maintenance outcomes.

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**English transcript:**
We continue with the details of the North American BEP model, in which we now move on to a much more advanced phase: how we establish the objectives and uses of BIM. At this point, we've already gone down about three levels — the first level of objectives and uses, the second with all the phases, and now within these phases we reach the objective and the uses of BIM.

Why am I going to use BIM technology, and what tools am I going to use for it? In the "why," it's very important to describe the objective and, above all, to identify the benefit of that objective. The priority, ranked from 1 to 3 as low, medium, or high, is also a very American-style system that allows us to grade each of these concepts.

In terms of tools, it's possible that for each of these objectives we'll need different software tools or hardware technologies, and potential uses of BIM will also appear. Then we move on to another diagram, where the University of Pennsylvania defines project objectives — and again, with priorities

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ranked from 1 to 3, it tells us, for example, that the first priority is to achieve high quality in what we're going to build, or that we're making this BEP because it's a complex project and we want to coordinate as efficiently as possible, or that we want to increase productivity on the construction site, etc.

There are lists where we can find nearly a hundred different uses of BIM, and for each of them, as you'll see in the last column, we can track how they affect different phases, different BIM dimensions — the design phase, workflow management, 4D modeling for temporal format, energy analysis, document reception, and so on.

With this, we'll already have a fairly clear — if not very clear — understanding of these objectives and uses, so that we can move on to a third phase, in which we see how each objective becomes an action to achieve that goal and what benefits we'll gain. Therefore, for these actions, we must define specific BIM uses, which will give us additional benefits. These BIM uses should provide potential value within the project.

To do this, let's now see how this part of uses and objectives develops. According to the same University of Pennsylvania source, they say: first, increase productivity; second, enhance design effectiveness — that is, error-free design; and third, ensure a precise model so that those who will later maintain that infrastructure have no problems and have all the necessary information.

In this way, we have a large number of proposed objectives, which we then move on to evaluate. Again, we use a probability scale from 1 to 3 — with 1 being very important, 2 less important, and 3 the least important — so that the lower the score, the higher the importance. These are the objectives with added value; that is, they aren't temporary goals — they must contribute something to improvement.

For example, I may have a temporary goal because I save financing costs in the project. That means setting an objective and a BIM use in the temporal format to have a tangible benefit from using the model. Therefore, we now have these objectives connected to specific BIM uses.

This second column contains design review, design authorship, design registration, etc., which we can then move to a third phase. In this third phase, we transform these rows into columns next to the objectives and see how each objective often has more than one interaction with BIM uses. This can be made more complex or more precise by adding different uses.

For example, we can address health and safety: if I want fewer accidents on site, then I need a

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higher model accuracy, a greater precision in the model. We'll go one by one, marking and linking these relationships to clearly and in a coordinated way define how the objectives and uses together determine the way each part of the environment will be used.

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