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How to make better “buy or build” decisions when choosing administrative software

Buying or building a large software system is an investment in time, money, and resources. The decision process most institutions go through when deciding what to buy or whether to build software is often somewhat arbitrary. In this guide, we present some suggestions for making better decisions about buying or building software.

First, get agreement on major uncertain factors that will influence the outcome

Putting together a list of the major costs and benefits involved in setting up and running the software will help you to make a more informed decision.

To start, round up your team and brainstorm a list of all the time, money, and resources that could be involved in setting up the software. Consider factors like development time (if you’re building), training costs, etc. Then, brainstorm a list of the benefits and costs involved in actually using the software. You should try and do this for each stakeholder. For example, what time savings will administrators achieve with this system? What new things will they have to do to that might offset the savings? What benefits will different deans achieve with the new reporting capabilities? The lists you get from these brainstorm sessions is your list of factors for

making your decision.

Now, **choose the factors that you think will have the greatest impact on the outcome of the decision and are the most uncertain.** It is critical to get agreement on these factors now – this list will serve you well as a data point to avoid bias later in the decision process.

Work to identify thresholds for the factors beyond which the decision is easy. For example, you might say that you have \$100,000 to build the software internally – this means that \$100,000 is a threshold. If the budget for the project is going to be more than \$100,000 you’ll need to evaluate another option.

Measure to reduce uncertainty on critical factors

Now you need to measure the factors against the thresholds you came up with above. In his excellent book on measurement, *How To Measure Anything*, author Douglas Hubbard says that the value of measurement is to reduce uncertainty. This is your goal. All you are trying to do is **determine whether or not one of the factors you’ve chosen is likely to come close to a threshold.**

In the example above, you won’t be able to get an exact number for the costs of the software project, as this is pretty much impossible to



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calculate. But, with a small amount of effort you can probably discover if the project is likely to cost substantially less than \$100,000. Do this for each factor and you'll quickly see a better picture of the risks with different options.

Start small and work to test assumptions ... don't work to see if it works

Once you're armed with a list of factors, and a solution that meets your acceptable levels for those factors, you're ready to implement, right? Not so fast! Hidden in those factors and measurements are assumptions about how things will work out. If possible, start the project in a small way and verify that your assumptions are correct. This could mean asking your vendor for a trial period, for example, or building a prototype product internally. Your goal during this phase is to ensure the solution meets your needs and that you weren't wildly wrong in your measurements. Good luck!