

Grab the Winning Edge with an Estimation Tool

GKN



Dave Morgan is the estimating manager for GKN Aerospace Services (GKNAS) in Cowes, Isle of Wight, Hampshire, in the United Kingdom. Morgan and his team of three estimators, plus four others from sites in Munich, Germany, and Yeovil, UK, are given the task of creating highly detailed estimates for cost, effort, time, and schedule that are required on numerous projects for which GKNAS submits bids.

These estimates must be as accurate as possible; anything too high and GKNAS may not win the work, anything too low and it could actually end up costing the company. "Our most important goal is winning profitable work," Morgan says. "Bids need to have a maximum amount of detailed effort produced in a minimum amount of time. There is great pressure to do this."

Until recently, Morgan's team has been using a computer aided planning system to derive estimates. "Our current system's time has expired. It's old and doesn't work very well. We need something with more features and more support," says Morgan. He speaks to John Henson, the estimating manager at another GKN enterprise, Westland Helicopters, who recommends the estimating tools used at Westland, SEER-H (Hardware Model) and SEER-DFM (Design for Manufacturability)

Exploring Two Models



Morgan requests Galorath's International Managing Director, Carl Dalton, show the team both models. They first try SEER-H without any instruction on a known product, an A-380 component, and receive an estimate of £120,000 using only a limited number of inputs and knowledge bases (pre-set parameters for well-known elements of projects).

After Dalton takes them through the model, explaining the array of parameters and their settings and asking them questions about their practices to ensure the

parameters are correctly adjusted, the tool produces an estimate of £46,000, two percent from the actual cost! "That impressed us. Carl didn't know what the actual cost was so we realized right then that SEER was a powerful tool," says Morgan.

The next step is to demonstrate SEER-H and SEER-DFM to Paul Cocker, Group Commercial Director for GKNAS, and his European Commercial Team. The demonstration gives an overview of the SEER Suite of tools, along with the above SEER-H A-380 detailed example, and six other SEER-H samples that had been carried out. Cocker requests a further demonstration the following week at the Farnborough Air Show, for his U.S. Commercial Team.

The feedback from these meetings leads Cocker to conclude that the SEER products would offer a common estimating basis across the whole group, the ability to create top-down parametric estimates in SEER-H, and bottom-up estimates with SEER-DFM. Furthermore, since GKNAS' leading customers are testing SEER products (and in some cases, are in the process of developing enhancements for the SEER products), Cocker is convinced of its benefits and sanctions the purchase of SEER-H and SEER-DFM for use in GKNAS sites in the United States and in Europe.

Training and Implementation

Morgan is assigned the task of overseeing the SEER implementation for GKNAS, Europe. The team needs to learn to use SEER, to calibrate it to their specific projects, and to gain faith in it. Morgan has decided on a tandem approach and set up several check points and processes to help ease in SEER and sunset the existing tool.

The first step is training. Galorath's Senior Consultant, Joe Falque, has trained the entire European team over five days on how to use

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SEER-H and SEER-DFM. He has used specific GKNAS projects during the training so the team becomes familiar with the parameters and how to accurately estimate them. He immediately follows training with three days of SEER-QuickStart consulting, a hands-on, highly intensive consulting package for quickly and effectively getting users up and running to calibrate their projects and learn the finer details, efficiency tips, and customizations of the tool.

"Joe was magnificent," says Morgan. "He took every unique GKNAS component, looked at it, analyzed it, and showed us how to estimate it. That process really helped us hit the ground running."

Morgan's next challenge is deriving a way to enable his team to use similar files, even though they are in three different locations across Europe. The team is split into SEER-H and SEER-DFM user groups. A provisional GKNAS operating procedure is drawn for both SEER systems, classifying when and how to use the SEER models to ensure estimators at each site can use each other's cost models.

Countdown to Launch

SEER-H is fast-tracked ahead of DFM because it's more beneficial to improve the three sites' estimating bidding process. A follow-up SEER-H users' meeting is scheduled in June with a SEER-DFM users' meeting scheduled six months later. The plan is to launch the SEER systems as GKNAS Europe standard estimating processes at the users' meetings.



Knowing the team will be getting together for a two-day check-point meeting, estimators at all three locations start building cost models in SEER-H for each bid they estimated. They calibrate using actuals or estimates. By doing this, they are able to build up families of product types. They plan to have completed 60-80 calibrated GKNAS components (known in SEER as knowledge bases) for the users' meeting. They can do the estimate in one to two hours whereas in the past it took them one to two weeks!

At the users' meeting, the team will go through the work, analyze where they have made changes in SEER-H, and how the changes impacted the estimate. The team needs to agree on the changes, standardize the practice, formalize the operation procedure, and link to each other via GKNAS' internal network.

Already this approach proves to be successful. Five months before the meeting, Morgan's colleagues in Munich perform SEER-H estimates on cross beams. They work together to choose which knowledge bases fit the best and find they can do the estimate in one to two hours whereas in the past it took them one to two weeks! By using the knowledge bases in SEER-H, they are able to come within four percent of their actuals. "We now need to prove we can do this consistently and progressively," says Morgan.

Additionally, Morgan's team is using SEER-H to apply a fresh approach to new bids. By choosing SEER-H files similar to past projects, they are able to

copy the file, change the parameters to fit the new project, replicate the file, and generate the estimate. "Right now we also have to add detailed estimates on top of the SEER-H estimates to support them, which usually takes two weeks. But once we have full confidence in our ability to use SEER-H accurately, that will stop," says Morgan.

After the June check-point, Morgan's goal is to use the SEERH software almost exclusively. He has confidence in it so they don't have to do a "ton of detail" because all the detail is in the model. By June, Morgan feels the team is ready to use SEER-H as its main bidding tool. "Being able to bid accurately on more projects will result in more successful winning of future work," says Morgan.

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