Survey Flipbook:
Model-Based Cost Engineering™

How Does Your Organization Stack-up?

Compare against the industry, based on the Latest Industry Estimation Capability Analysis (ECA) conducted by PRICE® Research.

State of the Industry

In these challenging times, decision-makers find the impacts of their financial decisions coming under **increasing scrutiny levels**, both internally and by government organizations.

However, since **decision makers** do not generate the cost information that drives their decisions, how can they be confident of that cost information quality?

By evaluating the **cost engineering** capability of your organization with best practices and industry peers, the most effective path forward is identified for your organization to generate data-driven cost estimates to increase decision maker confidence.

The latest edition of the Industry Estimation Capability Analysis (ECA) conducted by PRICE® Research attempts to diagnose the state of estimation health within industry bidding on government opportunities. A diagnosis looks at six organization dimensions to draw conclusions: people, process, technology, data, culture, and stakeholders.

Are the six dimensions healthy enough to consistently produce high-quality estimates? If not, which dimensions appear to need the greatest attention and in what way?

Drawing definitive conclusions from a survey is risky for several reasons, including the timing and exposure of the survey. By sustaining the survey with periodic updates, universality and relevancy are expected to improve, thereby increasing credibility of survey findings.

This survey iteration found:

By a factor of **4 to 1** estimation relies on a core of subject matter experts (SMEs) nearing retirement and believe by a factor of **5 to 1** that time is the largest obstacle to the people doing the estimating.

Current estimation processes are consistently viewed as unduly time consuming and cumbersome; by a factor of **12 to 1**, those expressing an opinion call the process excessive in terms of time; by **3 to 1**, the process is considered inefficient; twice as many believe an overly long approval process negatively impacts estimates.

By a factor of **4 to 1**, organizations agree that they depend upon proprietary estimating tools implemented in Microsoft Excel by SMEs, most likely the core of the first bulleted item. There is high use and high confidence (by **3 to 1**) in these home-grown tools.

Data is the weakest dimension of the estimation health diagnosis; **10 times** more respondents agree than disagree that technical data is neither assessable nor consistent; **4 times** more agree than disagree that technical and cost data are not aligned and that technical data is not understood; over twice as many agree than disagree that technical data is unreliable and that historical performance data are not understood and unable to be assessed.

Executive leadership demonstrate high confidence in organization estimate quality by **2 to 1**. The confidence does not translate into lowering bid amounts to improve win rate, however. **12 to 1** see improved win rate through better integration of historical data (cost, technical, and performance) into the organization bid process.

Decision makers are finding financial impacts of their decisions coming under increasing scrutiny by shareholders, corporate and customer oversight organizations.

16.42%

16.42%

25.37%

23.88%

17.91%
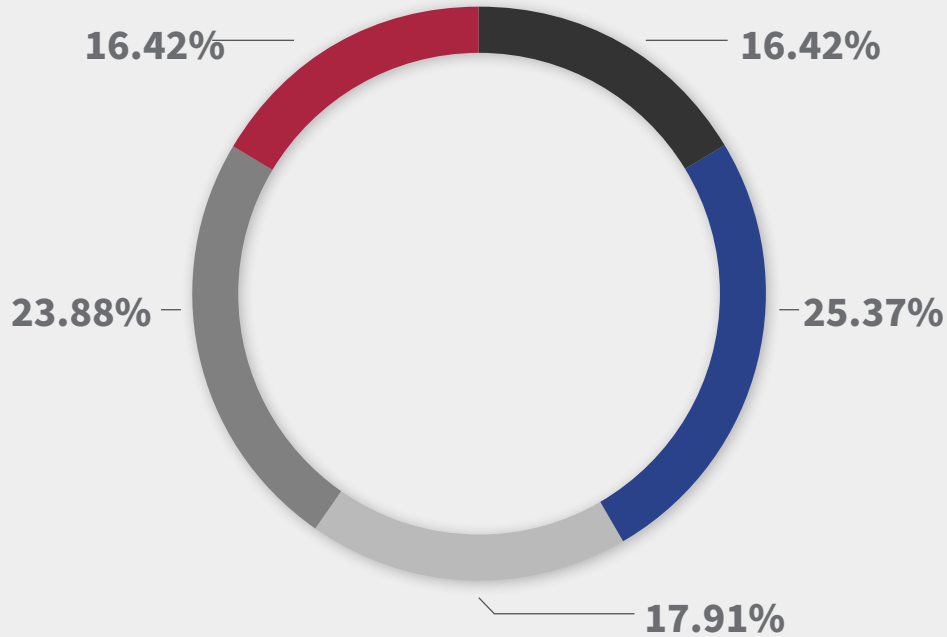
Unless everything about the program remains static, estimation doesn't end with bid submission. Static never happens. Every change, no matter how minor, should trigger an updated estimate with the best existing current information; it's an ingredient of the accuracy characteristic of a high-quality estimate. Since EVM or something like it will be used as a monitoring yardstick, both the value of work completed and the estimate to completion should always be linked within the estimation process.

40.3% agree that they are under increased scrutiny.

■ Strongly agree　　■ Somewhat agree　　■ Neither agree nor disagree　　■ Somewhat disagree　　■ Strongly disagree

My organization is strongly dependent on the tribal knowledge of a core of subject matter experts (SMEs) which are nearing retirement.

2.99%
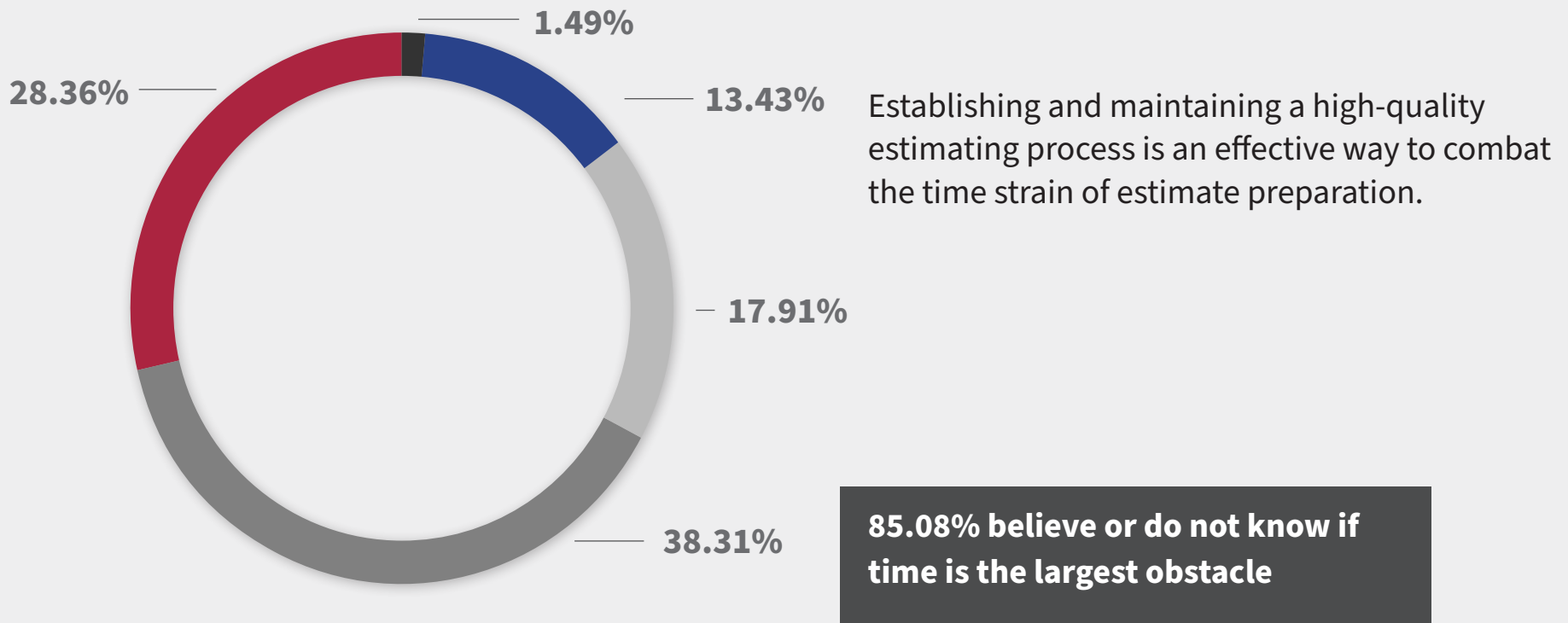
14.93%

32.84%

13.43%

35.82%
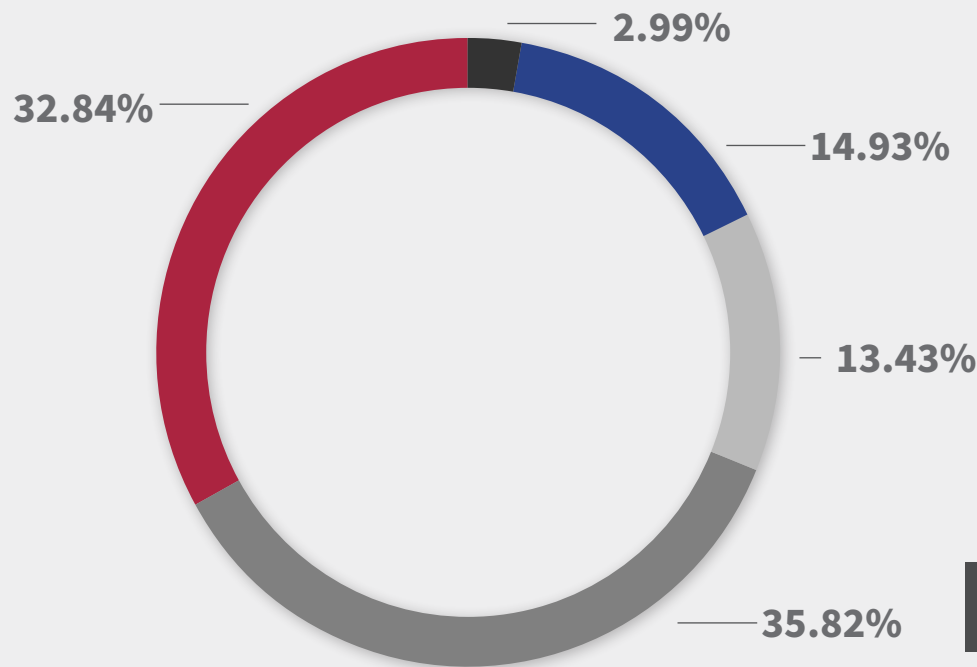
Over 70% of respondents have a strong dependence on the tribal knowledge of an aging core of SME's. This presents short- and long-term risk to the business and customers.

81.89% agree or don't know

■ Strongly agree   ■ Somewhat agree   ■ Neither agree nor disagree   ■ Somewhat disagree   ■ Strongly disagree

Time is the largest obstacle for people in the estimating process.

1.49%

28.36%

13.43%

Establishing and maintaining a high-quality estimating process is an effective way to combat the time strain of estimate preparation.

17.91%

38.31%

85.08% believe or do not know if time is the largest obstacle

| ■ Strongly agree | ■ Somewhat agree | ■ Neither agree nor disagree | ■ Somewhat disagree | ■ Strongly disagree |

My organization knows how much our estimates cost in terms of time and money.



- 11.67%
- 10.00%
- 30.00%
- 25.00%
- 23.33%
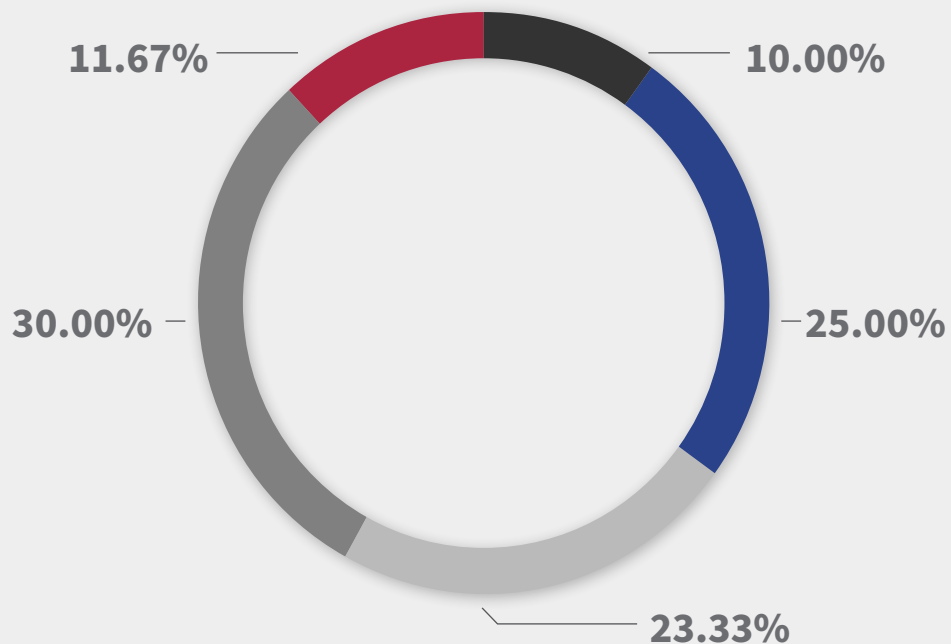
Most organizations use time-keeping systems to record work performed. Proposal work will be among the categories for time/cost accounting. The questions are how far down does the system define charge codes and what quality measures are employed to ensure reasonably accurate recording? Like any other task, estimating is a multidimensional consumer of resources. Even though the customer will dictate allowable time for estimating via the submission deadline, a proposal is more than an estimate. Building a model of the estimating process and using that model to ensure adequate resources are applied to the allotted time affords the best chance of success.

41% agree or do not know

■ Strongly agree   ■ Somewhat agree   ■ Neither agree nor disagree   ■ Somewhat disagree   ■ Strongly disagree

My organization is heavily dependent on Microsoft Excel and proprietary models that are developed and maintained by SME's.

5.56%

29.63%

12.96%

16.67%

35.19%
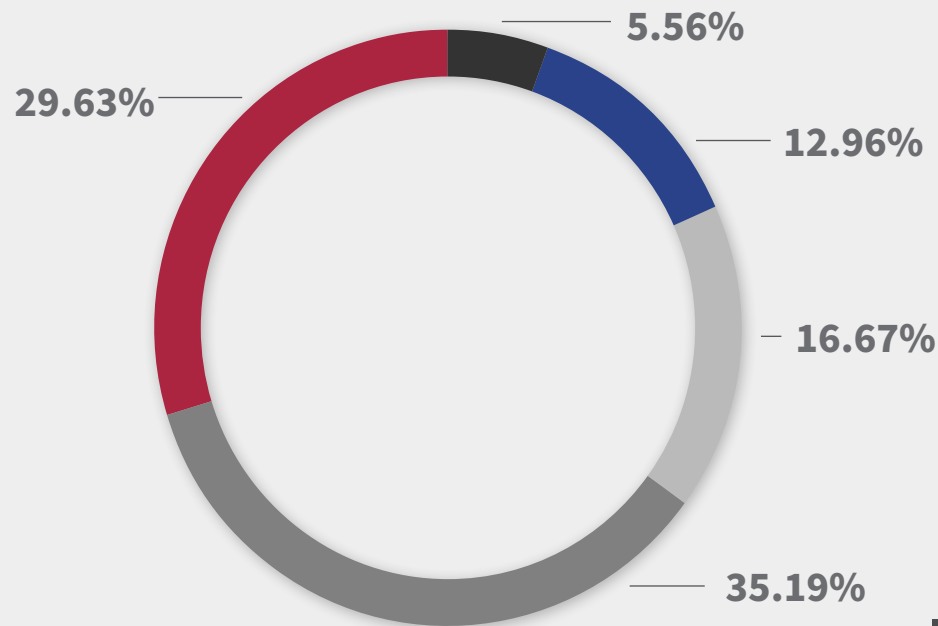
SME developed and maintained tools, as a class of homegrown tools, are likely to be even more parochial. For instance, they may only deal with software design and not the other activities of software development like implementation/programming, requirements analysis, integration, and test, not to mention management functions. Who better to design a model of a product than an expert in the field? But, the scope of the Excel tool, its sustainment history, and relationship to other estimating tools must be clearly understood.
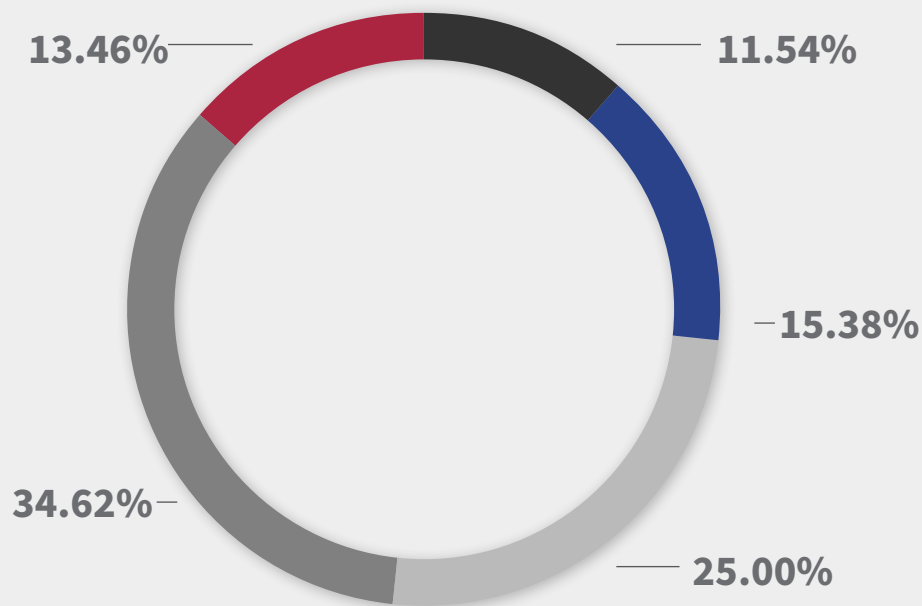
81% agree or do not know

■ Strongly agree　■ Somewhat agree　■ Neither agree nor disagree　■ Somewhat disagree　■ Strongly disagree

My organization has substantial historical project data, but it is not effectively mined and transformed into a fact-based, cost/schedule/risk decision support information.

13.46%

21.15%

19.23%

Fact-based estimating system produces the most credible result possible.

7.69%

59.61% agree

38.46%

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree
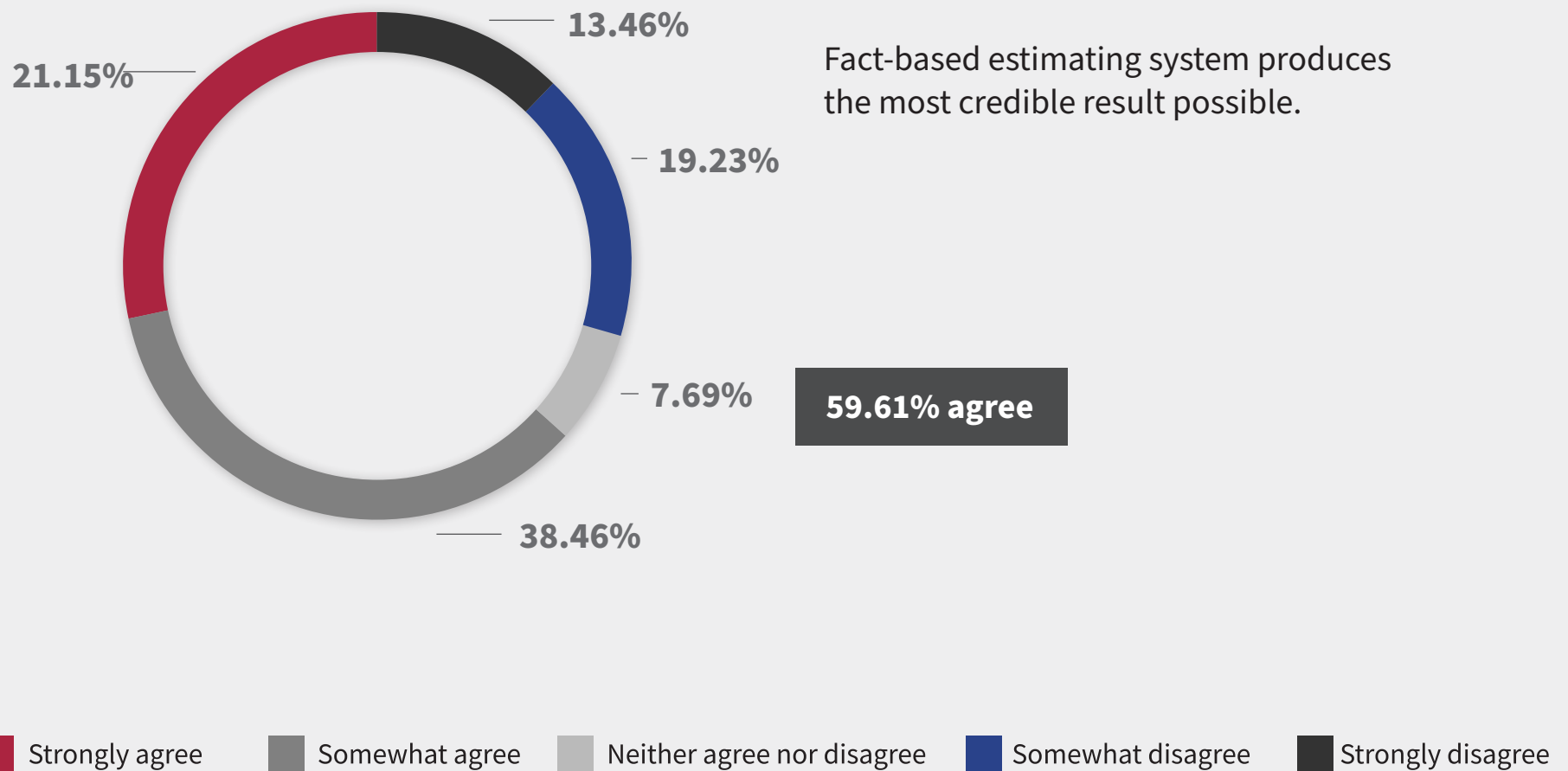
My organization has financial records from previous projects that may be extremely useful in estimation, but no standard PBS-WBS-CBS relationship exists.

13.46%

11.54%

15.38%

34.62%

25.00%

A WBS is a product/project breakdown showing interfaces and relationships among components. It shows the allocation of effort, cost, and time for each component, parent of integrated components, and parents of parents. Every organization should have a standard WBS that is used constantly across all projects.

48.08% agree

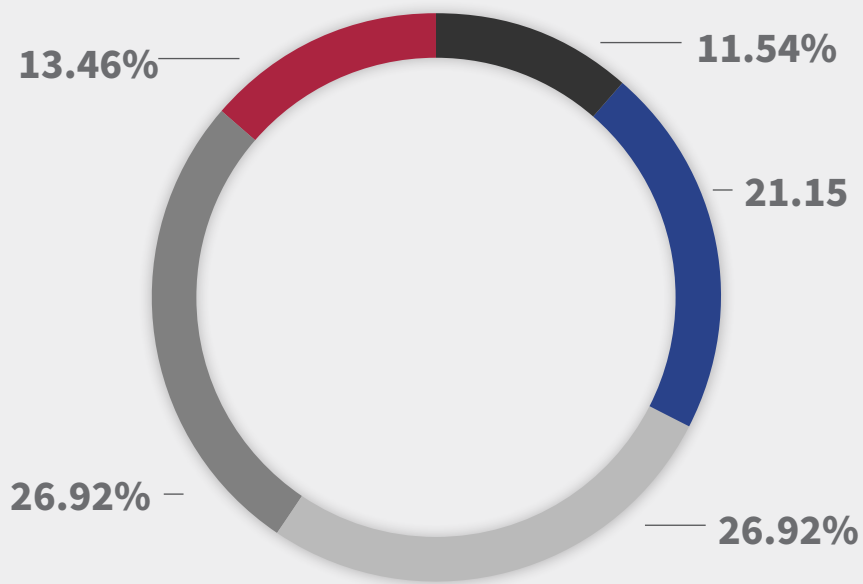■ Strongly agree   ■ Somewhat agree   ■ Neither agree nor disagree   ■ Somewhat disagree   ■ Strongly disagree

My organization could improve its win rate if we better understood our historical performance data.

30.77%

11.54%

11.54%

25.00%

21.15%
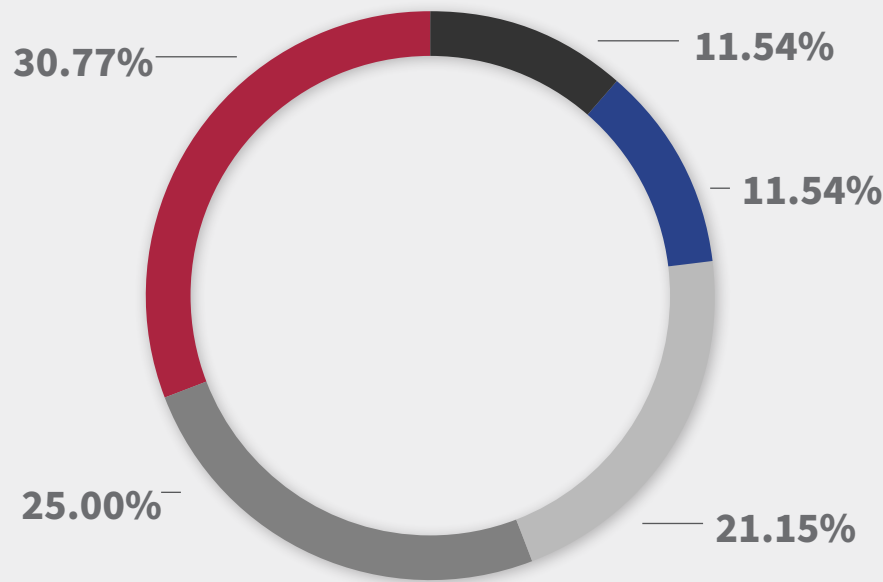
Whether the organization's data has been formally cultivated or left to reside in the desks and minds of the people responsible for its creation is another matter that usually is the real explanation for the no data position.

57.77% agree

■ Strongly agree   ■ Somewhat agree   ■ Neither agree nor disagree   ■ Somewhat disagree   ■ Strongly disagree

Basis of Estimate is consistently supported by contract actuals of prior projects.


13.46%

11.54%

21.15

26.92%

26.92%

Data analysis of the information/data is what transforms it from the raw state to the trends, behaviors, and findings an estimator uses to apply the data to a new and related product.

40.38% agree

■ Strongly agree   ■ Somewhat agree   ■ Neither agree nor disagree   ■ Somewhat disagree   ■ Strongly disagree

By better integrating historical data into my organization's bid process, it will improve our win rate.

1.96%

3.92%

41.18%

21.57%

31.37%

72.55% agree
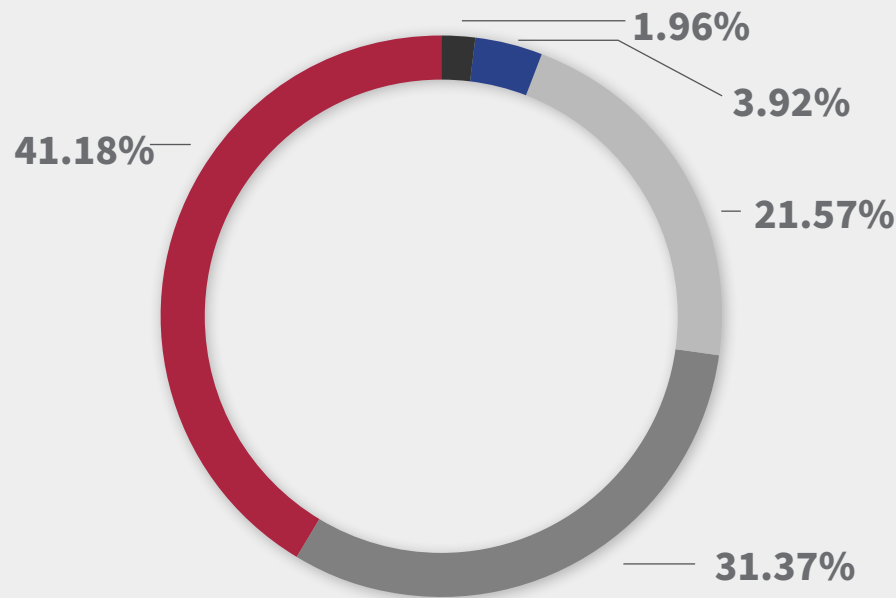
Credible technical solutions at an affordable and believable cost should almost always result in a competitive bid. Pricing fairness is a business practice. Proposal credibility comes from evidence and evidence comes from performance history. Capturing, analyzing, and understanding what that history says through quantitative findings makes the best evidence. These are essential ingredients to an effective and efficient high-quality bid and proposal process.

■ Strongly agree ■ Somewhat agree ■ Neither agree nor disagree ■ Somewhat disagree ■ Strongly disagree

Model-Based Cost Engineering™ Survey

Take the MBCE™ survey allowing you to quickly determine your current cost estimation methods' strengths and weaknesses— knowledge that is critical to streamlining your estimation process to create a data-driven Basis of Estimates (BOE).

LEARN MORE ⊙

PRICE®

PRICE® Systems has been the leader in cost estimation technology and research since 1975. Our solutions instill confidence in complex projects, budgets, and bids with faster, more accurate cost estimation intelligence and process integration. PRICE® serves to develop defensible estimates with speed, accuracy, transparency, and standardization.

About PRICE® Research

PRICE® Research is a team of analysts with over 700 years of cost research experience who continually improve our PRICE Cost Analytics™ technology to integrate within our customer's estimating processes. We develop supervised, predictive models and thought leadership to guide aeronautics, space, and defense customers in the acquisition, extraction, and transformation of their corporate history.

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