Software Quantity **Surveying**

A quantity surveyor or QS, is a respected professional who consults on projects ranging from the development of office blocks, infrastructure developments (such as railways, roads and bridges), oil and mining developments, and shipbuilding and engineering works. These projects are not without risk and their funding would not be granted, and indeed their compliance plans would not be approved, without the considered opinion and signoff of the QS as a member of the project board.

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Strive for agility

In the world of software delivery, development teams strive for agility to satisfy the evolving needs of their business sponsors, engaging in projects whose costs reach seven or eight digits, but they typically lack the role of a QS. While software delivery does not depend of traditional bills of material, it does rely on effective cost management in the achievement of economic value for the sponsors

CEOs of companies undertaking significant IT projects should be acutely aware of the risks. According to a recent article in the Harvard Business review, "it will be no surprise if a large, established company fails in the coming years because of an out-of-control IT project. In fact, the data suggest that one or more will." Bent Flyvbjerg and Alexander Budzier of Saïd Business School at Oxford University who have researched many IT projects found that average cost overrun was 27% – but that figure masks a far more alarming one, a large number of gigantic overages with one in six of the projects we studied being a black swan, with a cost overrun of 200%.

Chief culprits

Projects are regarded as failures if they are delivered late, overrun their budget, don't meet their quality targets or don't deliver a usable product. Flawed estimation or poor business decision-making at the very outset of the project are some of the chief culprits. Other contributors are ineffective scope management, lack of project measurements and poor supplier monitoring.

Software professionals need to embrace the principles of quantity surveying underpinned by objective measurement, to overcome the challenges that software projects face.

One of the most important measures is project size. Size is often synonymous with utility required or indeed its functional richness or complexity. It is calculated using an international standard called a Function Point Count, which now is ISO certified. How can you manage a project if you don't know how big it is? How do you know what it should cost if you don't have a grip on its size?

Reliable metrics?

Some failed projects result in arbitration or litigation and these processes are often challenging due to lack of hard evidence from disputing parties. Without reliable metrics and the professional opinion of a software QS, the resolution of such disputes is contingent on the skills of the lawyers where the expertise of a QS for software can provide objectivity.

Organisations in the public sector, banking, airline and telecommunication industries are using Function Points as the basis for their (outsourced) software development contracts. In tech-savvy emerging markets, such as Brazil, the popularity of this practice has been encouraged by a government directive for state owned agencies.

By using sensible software metrics across the innovation or project portfolio, software spend can be optimised and return on project investment more effectively realised. ■