



Information is for Life not just for BIM Models

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Abstract

BIM or Building Information Modelling has become fashionable over the past decade but has often been misunderstood in its overall impact on the built environment industry. Commonly it has been viewed as a 3D model used during the design process and been very 'Task' centric rather than understood as a broader systematic approach to the process of the information life cycle of an asset including the gathering, development, delivery and operation stages of life. As such it provides the digital information, the DNA, of an asset and would be better labelled as Asset Information Modelling.

This paper explores the concept of information modelling through the lifecycle of an asset proposing that an asset begins its information life when it is conceived and planned rather than when it is built and handed over for use. All digital information develops and is progressively collected from that point. Hence, we can understand the purpose, functional requirement and technical specification that an asset fulfils and needs to be maintained during operation. Each intervention with an asset, whether it be new or being repaired or modified, should be regarded as an opportunity to capture this data.

It concludes that we need to take a less siloed approach to information and embrace the potential of a systems engineering approach to digital engineering looking at the potential benefits that will accrue by taking this approach particularly when dealing with operational management.

Keywords: Systems Engineering BIM; Asset Management; Life Cycle; Information Centric.

1 Introduction

BIM (Building Information Modelling) has, over the last few years, become a common part of the procurement process for new infrastructure projects with public clients mandating its use on new assets and designers adopting BIM tools to produce construction information. Much has been written about BIM and its promise and many conferences and presentations have promoted its wider use, however, its full potential has yet to be realised. There are many exciting technical developments both in hardware and software which, perhaps, blind us to the fact that at its core BIM is fundamentally centred on information about the assets we plan, design, build and operate. There are many information users across the life cycle of an asset, and each tends to focus

upon their individual viewpoints and information requirements to carry out their own function. Hence, BIM has become very discipline/task centred and siloed in specific tools and systems be they for design, construction, or operational management. The true power of information is realized when we start to join up those tasks into a process and systematically capture, create, edit and use data across the asset life cycle at each intervention point.

This paper proposes that Asset Information Management (AIM) is core to our industry's digital engineering future and that terms like CAD, BIM and GIS are at best a subset of AIM and most likely in fact redundant. In this paper we expand on that proposition and review a Systems Engineering approach to asset information.