The Evolution of Technology in Big Data Management for Construction Industry

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Geospatial Technology in the Digital Era Ecosystem
GIS / Spatial Analytic
Global Navigation Satellite Systems & Positioning

GLONASS  BeiDou  GPS  Galileo
Earth Observation & Remote Sensing
Scanning

BIM APPLICATION

DIGITAL FACTORY

TOPOGRAPHIC MAPPING

CULTURAL HERITAGE

Substation Inspection

Transmission Line Inspection

Urban 3D modeling

Survey Photogrammetry

Topographic and DEM/DSM/DOM/DLG

Volume calculation and Heap monitoring
BIM Benefits & How Can we Integrate into BIM

Increased collaboration
- Multi-disciplinary project coordination
- Sharing model with all stakeholders

Increased understanding
- Visualization for presentations, decision making and marketing
- Less resistance, better solutions

Decreased risks and conflicts
- Detect and manage risks virtually earlier
- Remove conflicts between disciplines

Decreased costs and time usage
- 5% - 15% lower project cost
- Faster production and information access
5% - 15% Lower Project Cost

• Design conflicts found during construction cause extra costs

• With BIM conflicts can be eliminated

• Faster construction with lower cost

• The analysis shows 75% decrease in construction change orders when BIM is used
5% - 15% Lower Project Cost

• Typical construction change orders are about 5% - 20% of total costs
• By using BIM about 40% of change orders can be avoided
• Even 15% lower project cost

• Everybody benefits from BIM
  • Owners get project in lower cost
  • Engineers get more work
  • Contractors win projects with lower price
  • Even 500% return on investment
When Virtual Reality & Augmented Reality is now a reality
GIS Project with VR & AR Solutions
Co-Inspection of Supervisor & Maintenance crew learning about the new aided device & technology

Maintenance crew trying out the technology which include online support of Remote Expert
Whether indoor/outdoor, AR/VR + High Precision Location in every aspect of Construction, CIM/BIM would definitely add value to every project.
THANK YOU