



Quantifying Savings and Calculating ROI of Cloud-Based BIM Collaboration Michael Moran, Dipl.-Ing. BSc. MSc.





- Introduction (15 min)
- Interactive Discussion: Populating a hypothetical ROI calculator
 - Project Data input
 - Productivity Improvements
 - Schedule Improvements
 - Quality Improvements
- Conclusions and Wrap Up (5 min)





How to **measure** and **maximize** benefits of using cloud based BIM tools?





- Explain how BIM in the cloud improves productivity, schedule & quality
- Use project data to quantify the benefits and cost savings of these tools
- Evaluate ROI and build business cases supported by real metrics
- Track metrics to maximize benefits and improve project performance

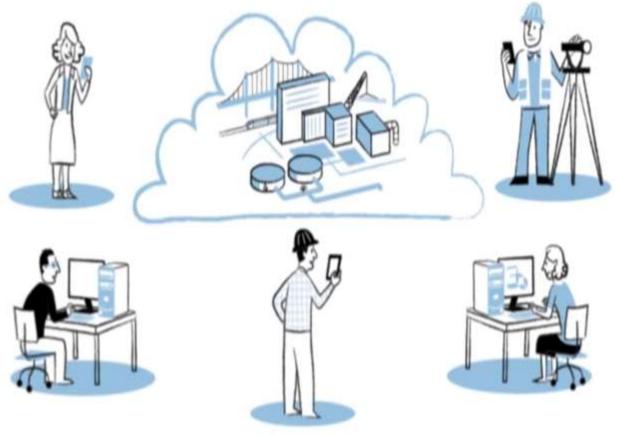




Introduction







Cloud-based BIM tools give the project team access to accurate, up-to date information, wherever they are, whenever they need it





BIM in the cloud







Task description	Benchmark	Improvement
1 Inspecting quality of construction on site	15	20
2 Walking site with owner/inspector/designer	10	12
3 Documenting new issues and creating notifications	8	4
4 Following up on status of existing issues	3	1
5 Conducting meetings with subcontractors regarding issues	5	2.5
6 Coordinating with subcontractors for next week's activities	4	6.5
7 Meeting with the construction management team	2	2
8 Updating information in the BIM	2	1

9.5 hours reduction in time spent on **non-value adding** activities





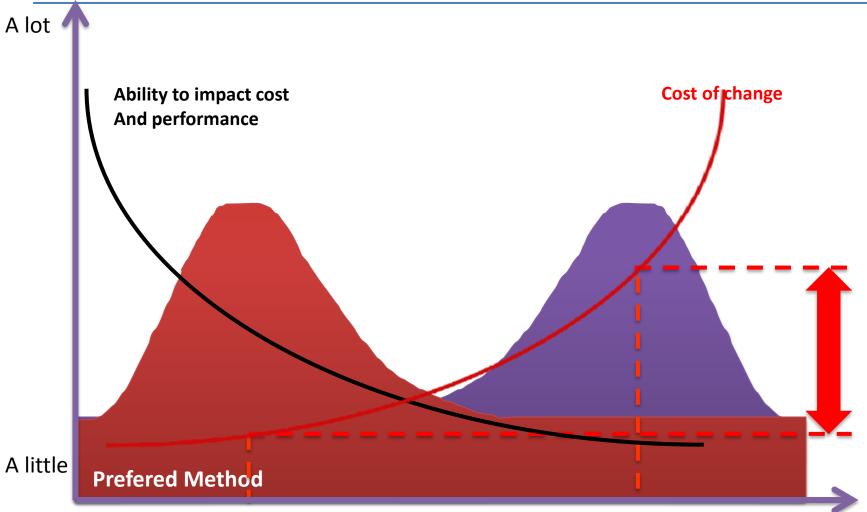
- Elimination of bottlenecks and non-value adding work
- Tasks can finish and start earlier

Task	Duration					
Prepare	1					
Install	3					
Finish	3					
Inspect	3					
Total	10					

Task	Duration					
Prepare	1					
Install	3					
Finish	3					
Inspect	1					
Total	8					







Time





Metric:

Project

Data:

Average efficiency gains per user

×

Total users

×

Total time in use

×

Labor costs per user

Average days saved per month

X

Total time in use



Average project overhead costs/day

Average reduction in rework costs

X

Average budget allocated for rework



Total direct costs

Cost Savings:

Personnel costs saved

Cost savings due to accelerated project delivery

Cost savings due to improved quality