## Contents

	Foreword	xiii
	Introduction	xv
Chapter 1	BIM and Construction Management	, 1
	The Value and Potential of BIM TechnologyBIM: A Primer BIM and the Team	2
	Existing Delivery Methods  Design-Bid-Build  Design-Build  CM-at-Risk	5 6 11 16
	A New Concept of Delivery	20
	A New Concept of Process	23 24 25
	Ten Steps for Successfully Implementing BIM  Step 1: Identify a BIM Manager  Step 2: Develop an Estimate of Cost and Time to	26 27
	Implement and Use BIM Software Step 3: Develop an Integration Plan Step 4: Start Small	28 30 30
	Step 5: Keep the Manager Trained Step 6: Support the Manager by Starting a Department Step 7: Stick to the Plan but Remain Flexible	31 32 32
	Step 8: Create Resources Step 9: Analyze Implementation Step 10: Monitor New Software Proposals and Industry Trends	32 33 33
	Conclusion	35
Chapter 2	BIM and Preconstruction	37
	Planning a BIM Project	38
	Contracts	
	Defining Responsibilities and Ownership	45 48 50

	Digital Information Transfer Standards	52 53 54 55
	Estimating	57 58 61 64 71
	Site Coordination	79 79 82
	Conclusion	88
Chapter 3	BIM and Construction	89
	Scheduling	90 93 94
	Constructability	106 111 113 121
	Trade Coordination	127 128 129 133
	Conclusion	139
Chapter 4	BIM and Updates	141
~	Overview of BIM and Updates	142
<b>Y</b>	BIM and Prebid	145 147 149
	BIM and Estimate Updates	152 157
	BIM and Model Updates	159 161 163
	Clash Detection Updates	165 173
	BIM and Budget Management	176
	Conclusion	178

Chapter 5	BIM and Construction Administration	179
	Overview of BIM and Construction Administration Existing Process New Process	180 181 183
	BIM and RFIs	184
	Training the Superintendent	193 198 203
	Setting Up the Job Trailer	209 212
	BIM and Site Coordination	215 217 220
	BIM and Punch Lists	223
	Conclusion	227
Chapter 6	BIM and Sustainability	229
	Overview of BIM and Sustainability	230
	USGBC and LEED.	231
	Green BIM and Preconstruction	233 235 241 242 246
	Sustainable Construction.  Sustainable Construction Goal Setting  Job Site Surveillance  Material Management	248 248 255 258
	Salvaging and Recycling	259 259 262
	Conclusion	262
Chapter 7	BIM and Facility Management	263
	Costs of Maintaining a Facility	264
	Owners and BIM	267
	Record BIMs	270
	One BIM = One Source of Information	273
	Information in a Record RIM	276

	How to Maintain a Model	279 280
	Investment and Logistics for FM BIM	282 284 286
	Conclusion	287
Chapter 8	The Future of BIM	289
	What Will BIM Be?	290 292 293
	BIM and the Future from the Past	294
	BIM and the New Construction Manager	297 298 300 302
	BIM and the New Team	304
	BIM and the New Process	306 307 308
Appendix	Applications Supported by Navisworks	311
	Index Residence of the second	329
3	KTO:	