

# **IT in Construction**

Lecture #1

## **Introduction to IT in Construction**

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**Construction Engineering and Management**



# Outline

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- IT and Construction Management
- Example1: Reporting
- Example2: Project Planning System

# IT and Construction Management

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- **Definition:** Information Technology (IT) refers to anything related to computing technology, such as networking, hardware, software, the Internet, or the people that work with these technologies. (TechTerms.com)

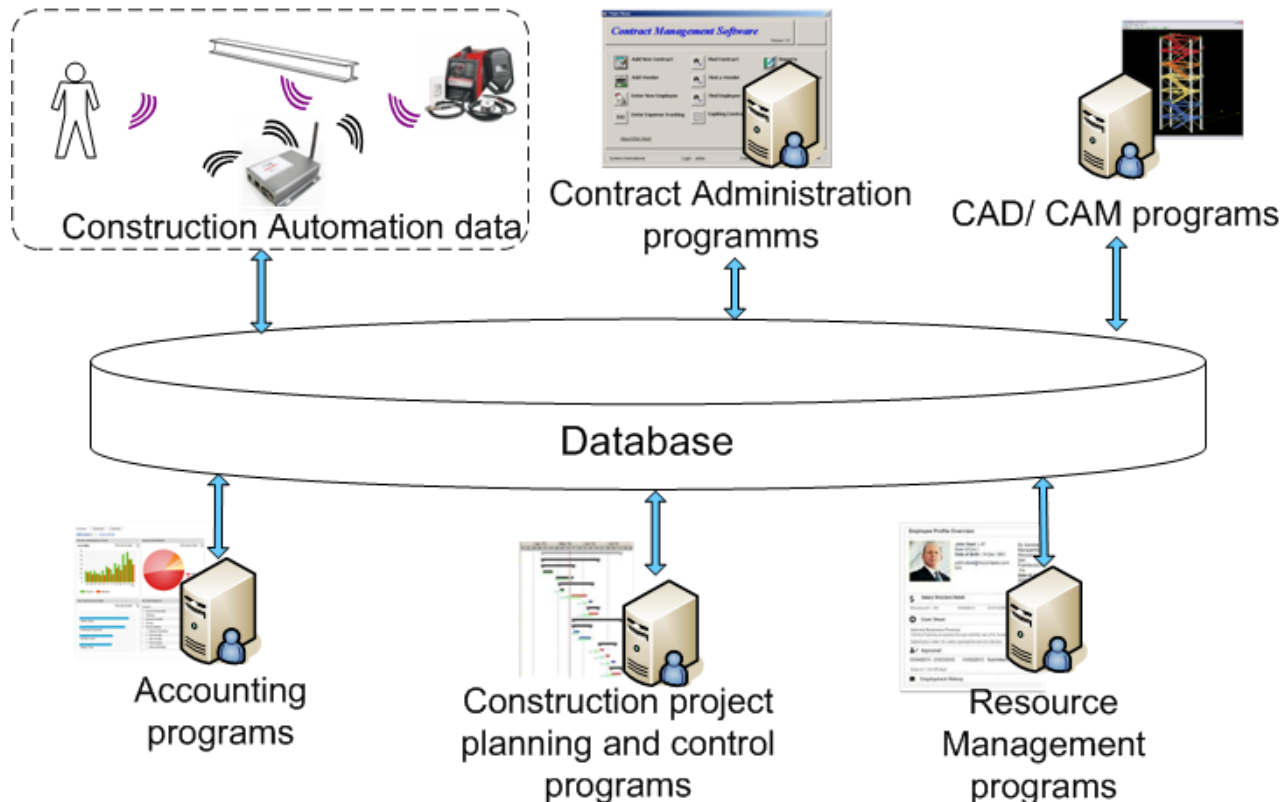


**Question:** Why do construction engineers and managers need to have a good IT knowledge?

# IT and Construction Management

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- Computer programs have penetrated in every aspect of construction industry, to be able to manage a construction based business, you need to have a good knowledge of computer software, specially information systems which stays at the middle and links different programs!



# Example1: Simple progress reporting

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- Simple aggregated data-tables

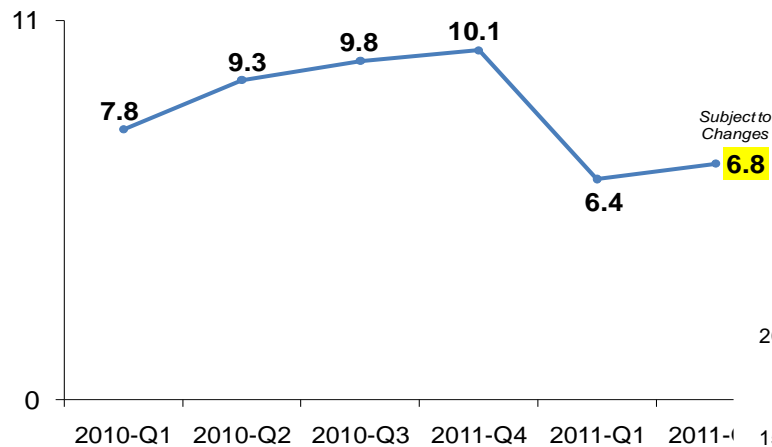
NCR #	Crew Responsible	NCR Was Discovered Where?	MaterialCosts	LabourCosts	OtherCost	Apply What Cost?	Apply Costs To Crew:
11-377	01	Shop Detail	\$140.00	\$65.00		\$140	
11-435	01	Shop Detail	\$13.00	\$130.00		\$13	
11-445	01	Yard	\$275.00	\$390.00		\$275	
11-449	01	Shop A&B Welding		\$260.00		\$0	
11-467	01	Shop	\$390.00	\$65.00		\$390	
11-480	01	Yard	\$70.00	\$130.00		\$70	
						<b>Total Potential Costs</b>	<b>\$1,928</b>
						<b>Total Applied Costs</b>	<b>\$888</b>
11-440	05	Shop D	\$100.00	\$195.00		\$100	
11-441	05	Shop A&B Fitting		\$130.00		\$0	
						<b>Total Potential Costs</b>	<b>\$425</b>
						<b>Total Applied Costs</b>	<b>\$100</b>
11-359	06	Welding Foreman		\$520.00		\$0	
11-389	06	Welding Foreman		\$195.00		\$0	
						<b>Total Potential Costs</b>	<b>\$715</b>
						<b>Total Applied Costs</b>	<b>\$0</b>
11-442	Shop Team	Foreman	\$60.00	\$260.00		\$60	Shop Team
11-443	Shop Team	Foreman	\$90.00	\$520.00		\$90	Shop Team
11-483	Shop Team	Foreman	\$675.00	\$195.00		\$675	Shop Team
11-439	Shop Team	Shop Detail		\$130.00		\$0	Shop Team
						<b>Total Potential Costs</b>	<b>\$3,070</b>
						<b>Total Applied Costs</b>	<b>\$925</b>
		<b>Total for 57 NCRs</b>	<b>\$1,813.00</b>	<b>\$3,185.00</b>	<b>\$0.00</b>	<b>\$1,813.00</b>	
						<b>Total Potential Costs</b>	<b>\$4,998.00</b>
						<b>Total Costs Applied</b>	<b>\$1,813.00</b>

# Example1: Simple progress reporting

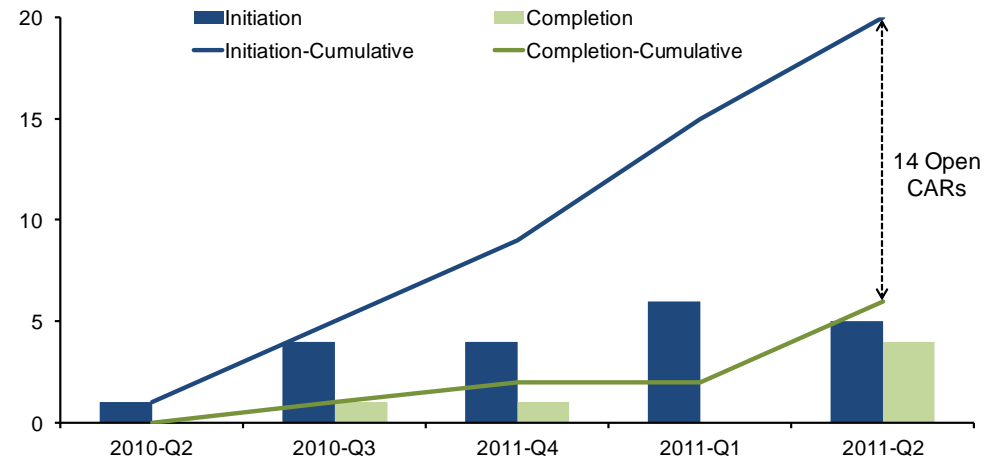
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## □ Simple and compound graphs

Number of NCRs Per Hours Sold (# / M\$)



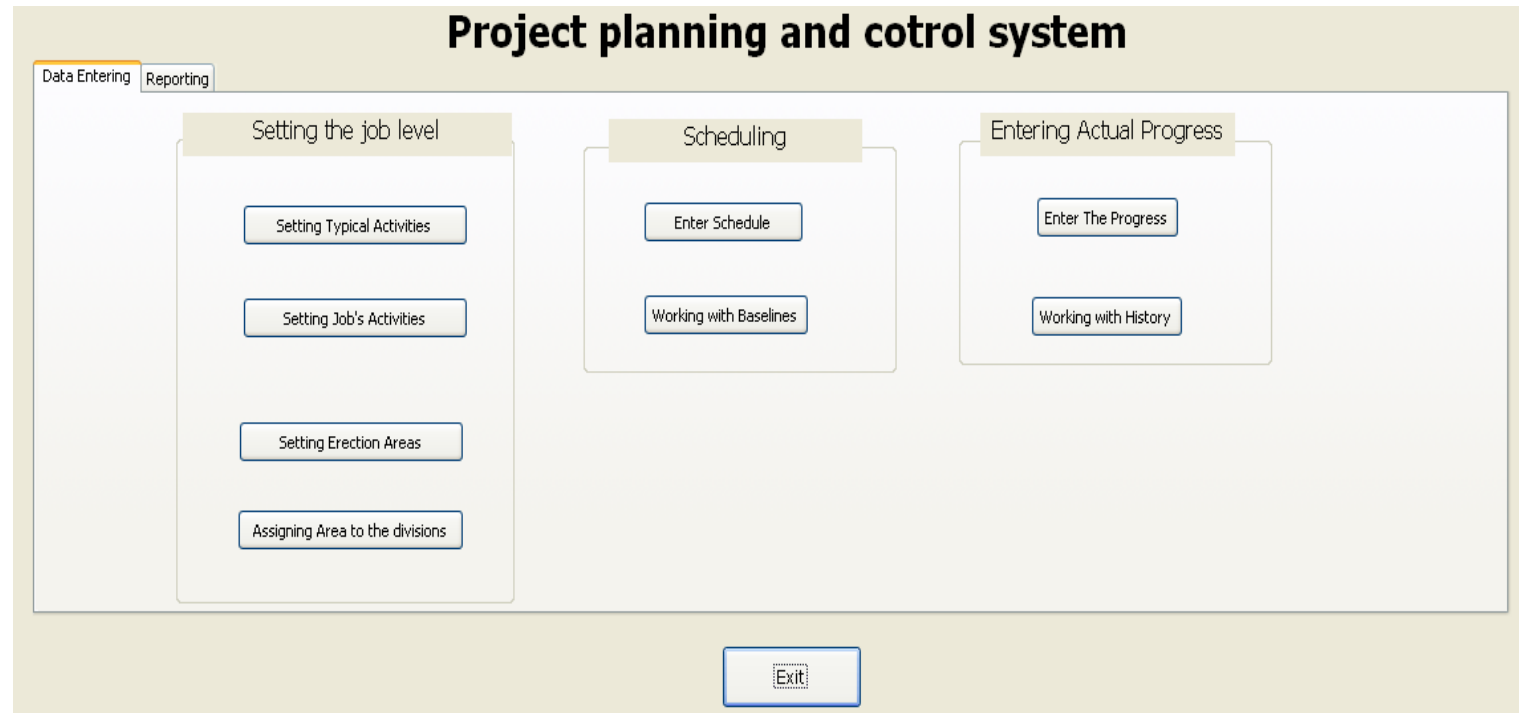
Corrective Actions Initiation Vs Completion



# Example2: Project planning system

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- Custom built project planning and control system





**Thank you!**