AUTODESK. UNIVERSITY

The ROI of Technology

David Francis

CTO/Co-Founder Innovative Construction technology

About the speaker

David Francis

- Co-Founder / CTO of ICT
- 35 Years in Construction
- Has held positions with some of the top mechanical contractors as Foreman, General Foreman, Detailer, Plant Manager, Constructability Manager, Site Project Coordinator, BIM/VDC Manager.
- Has been using technology in all his positions since her started using cad in 1986
- Introduced and involved with Lean Construction in 2001
- AGC BIM Forum MEP Group National Chairperson and MEP LOD Committee lead

Who is ICT

- ICT: Innovative Construction Technology
- Co-Founders Tim Duncan and David Francis.
- Developers of construction technology for use on job sites
- ICT Tracker is the first of the innovations
- Uses 3D models to capture installation status with augmented reality and Free Flight modes and delivering detailed real-time reporting data
- ICT is leading the march in construction as it works towards finding digital solutions that will increase productivity and profits

ROI In Technology

- One of the biggest challenges is to understand the value of certain technology and the cost benefits.
- Technology is not a physical tangible item like a tool, so it is hard to get people to see the benefits.
- The goal of this presentation is to discuss all the facets of technology cost and understanding how to identify and push technology within your company.

Learning Objectives

- Actual software vs labor costs
- Presenting value in efficiency gains
- ROI charts and using the right numbers
- Cost of training and learning curve
- Cost of customization and maintenance
- Documentation and in-house training
- IT Managers vs technologists
- How companies handle technology costs
- Owning vs. leasing technology
- Influencers vs decisions makers vs blockers
- Making it Their Idea

Goals of Technology

STREAMLINE PROCESSES TO REDUCE LABOR

PROMOTING EFFICIENCY

OFFSETTING LABOR SHORTAGE

LEAN TECHNOLOGY

Actual software vs labor costs

- **Understand the total cost of software**
  - The Software is typically the least of the cost!
- **Software training**
- **Cost of customization and maintenance**
- **Documentation of process**

Presenting value in efficiency gains

- How to identify value in technology?
- How to measure success?
- What are the bottlenecks?
- Use of ROI: Return on Investment

ROI charts and using the right numbers

- **ROI charts identify the intangible benefits**

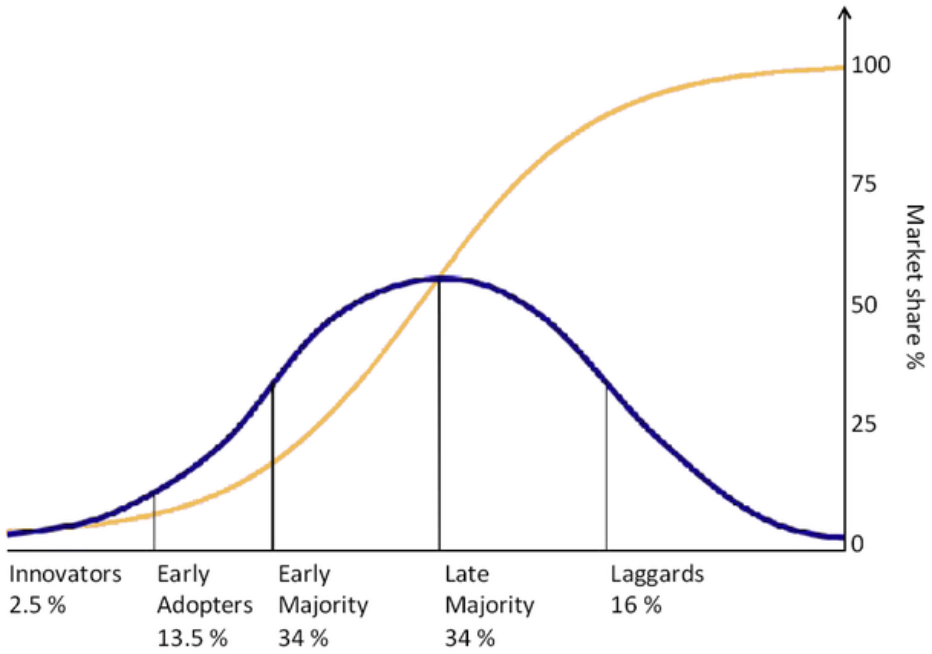
- **Do you have all the costs?**
  - Training and your labor to be trained
  - Implementation
  - Customization

Hourly rate vs package rate vs crew rate

- **Hourly is what they see on a check**
- **Package rate is true cost to company**
  - Medical Benefits
  - Vacation/Holiday
  - Taxes
  - Burden
  - ESOP/401k
  - Bonuses/Perks
- **What is your crew rate?**

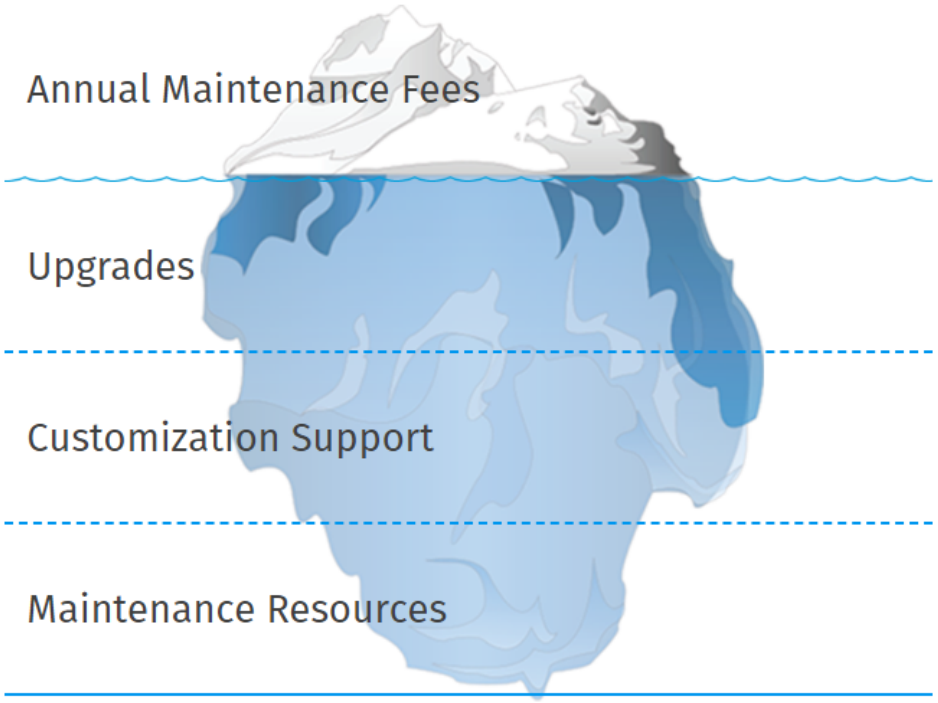
The cost of training and learning curve

- Understand true training costs
- Be realistic on the learning curve
- Technology is always changing



Cost of customization and maintenance

- Nothing works right out of the box
- Continue to sharpen the saw
- Every software is beta



Documentation and in-house training

- Give employees time to learn
- Keep documentation simple, make it visual
- Internal vs External Training
- Use A3 format for training

IT Managers vs Technologists

- **IT Manager**
  - Company standard for infrastructure
  - Not intimate with all technologies

- **Technologist**
  - Tech is about humans
  - Eliminate silos of data
  - Thinks strategy before implementation
  - Solve issues with process

Understanding your companies' actual costs

- Technology is an overhead cost
- What is your technology budget?
- Who is paying for it?
- Who all does it affect?

How companies handle technology costs

- Burden rate
- Project rental
- Leasing
- DAAS: Desktop as a Service

Owning vs leasing technology

- **Technology changes every two years**
  - Moore's Law
  - Nope it is more like 6 months
- **Leasing Equipment**
- **Renting Equipment**

Example: Calculating computer rental cost

- Don’t forget software cost
- Don’t forget tech support cost
- Don’t forget labor

Operations Computer

Qty	Description	Purchase Price	Sub Total	Labor Time	Labor / Hour	Labor Total		Total Cost
1	Dell Precision 5510	$ 2,150.00	$ 2,150.00	3	$ 150.00	$ 450.00		$ 2,600.00
1	Docking Station WD15 w/	$ 165.00	$ 165.00			$ -		$ 165.00
1	Mouse / Keyboard	$ 35.00	$ 35.00			$ -		$ 35.00
2	Monitors	$ 235.00	$ 470.00			$ -		$ 470.00
							Total Cost	$ 3,270.00
						Ops Monthly Computer Rental		$ 109.00

VDC Computer

Qty	Description	Purchase Price	Sub Total	Labor Time	Labor / Hour	Labor Total		Total Cost
1	Origin Computer	$ 4,049.00	$ 4,049.00	3	$ 150.00	$ 450.00		$ 4,499.00
1	Docking Station	$ 165.00	$ 165.00			$ -		$ 165.00
1	Mouse / Keyboard	$ 117.00	$ 117.00			$ -		$ 117.00
2	Monitors	$ 400.00	$ 800.00			$ -		$ 400.00
							Total Cost	$ 5,181.00
						VDC Monthly Computer Rental		$ 215.88

Standard Software

	Description	Purchase Price	Licenses / Users	Price per User	Monthly License / User	Annual Subscription	Monthly Subscription / User	Total per User
	Egnyte		235	$ -	$ -	$ 56,700.00	$ 20.11	$ 20.11
	Microsoft Office		235	$ -	$ -	$ 35,417.00	$ 12.56	$ 12.56
	Procore		235	$ -	$ -	$300,000.00	$ 106.38	$ 106.38
	Viewpoint Vista		235	$ -	$ -	$ 45,582.60	$ 16.16	$ 16.16
	Visual Planning		235	$ -	$ -	$ 14,940.00	$ 5.30	$ 5.30
	Predictive Solutions		235	$ -	$ -	$ 8,800.00	$ 3.12	$ 3.12
	Bluebeam		220	$ -	$ -	$ 8,700.00	$ 3.30	$ 3.30
	RDS		17	$ -	$ -	$ 3,510.00	$ 1.24	$ 1.24
	Timberline		10	$ -	$ -	$ 10,823.00	$ 3.84	$ 3.84
	On Screen Takeoff		9	$ -	$ -	$ 11,253.00	$ 3.99	$ 3.99
	SmartBid		9	$ -	$ -	$ 7,500.00	$ 2.66	$ 2.66
	Primavera P6	$ 82,912.50	45	$1,842.50	$ 9.80	$ 18,240.75	$ 6.47	$ 16.27
						Added Software Rental		$ 194.93

IT Support via Managed Service Provider

	IT Tech Support (per user)				$ 140.00	$ -	$ -	$ 140.00

Added Software for VDC

	Autodesk BDSU		5	$ -	$ -	$ 20,000.00	$ 333.33	$ 333.33
						Added VDC Software Rental		$ 333.33

No Mark Up >>>	Ops Computer Rental	$	443.93
	VDC Computer Rental	$	884.14

Markup	Grand Total	
0%	$	443.93
0%	$	884.14

INFLUENCER: THE ONE THAT PRESENTS THE IDEA TO MANAGEMENT

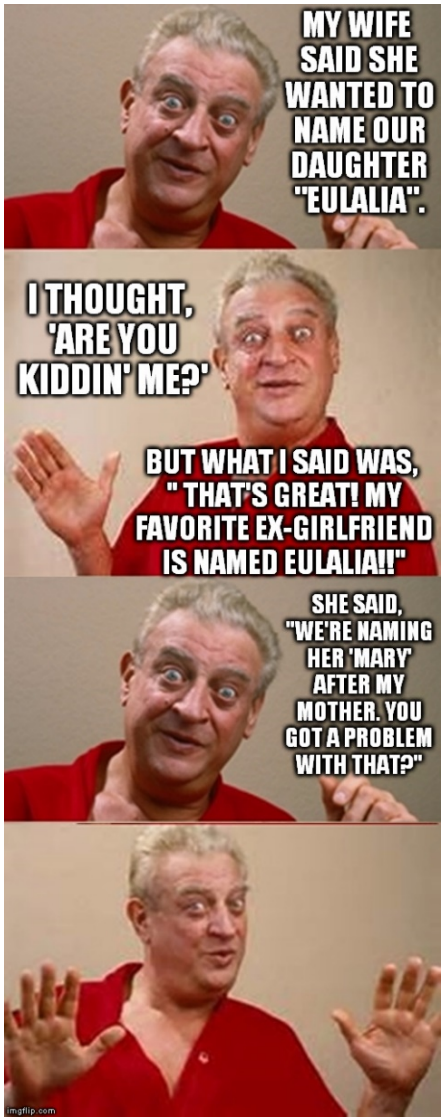
DECISION MAKER: PERSON IN MANAGEMENT THAT APPROVES

BLOCKER: PERSON IN MANAGEMENT THAT PREVENTS OR INHIBITS THE DECISION

Influencers vs Decisions Makers vs Blockers

Making it their idea...

- Selling it to management
- Empower them to make the decision
- Answer their questions




Get Tracking!
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