

Project Management 101: Basics of ACC

CS502301

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Productivity in Construction

Teams

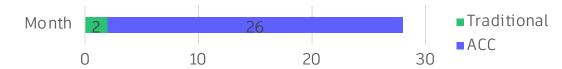
35%

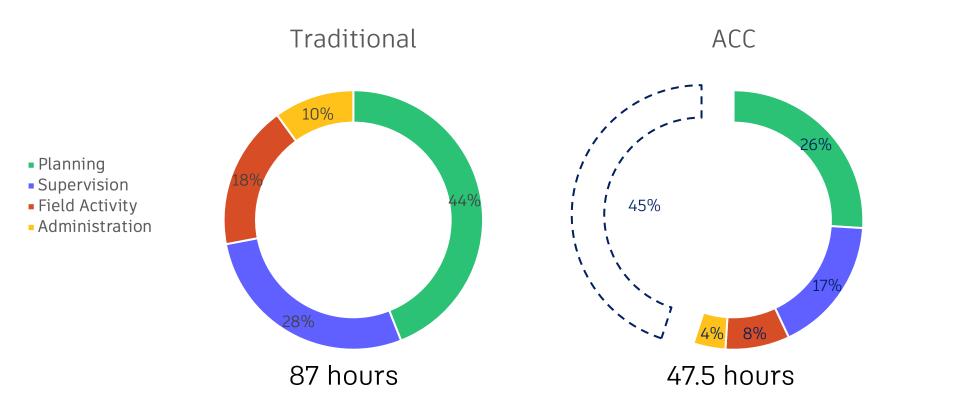
of time is wasted on nonoptimal activities (14+ hours/person/week)



Source: Construction Disconnected - FMI Report

On Site Activities





Agenda

CS502301

- Project Management
- Autodesk Construction Cloud
- Triple Constraint Theory in PM
 - Scope
 - Time
 - Cost





Project Management

Introduction

Breakdown Structures

For a good night of sleep

OBS

 Organization Breakdown Structure

WBS

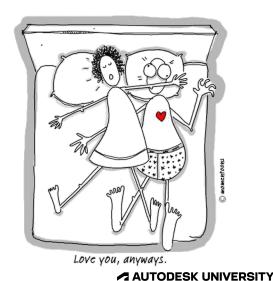
 Work Breakdown Structure

LBS

 Location Breakdown Structure

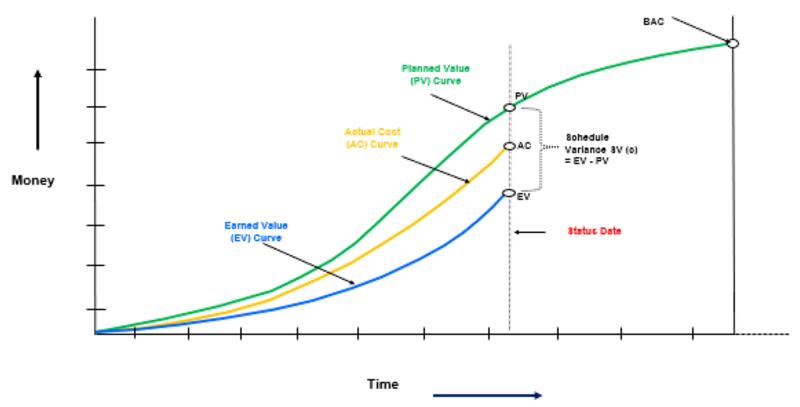






Earned value management

S - Curve



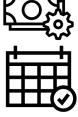
Principles in Construction

How to efficiently handle:

- People
- Materials
- Equipment
- Budget
- Location
- Information

To achieve

- Budget Accuracy
- Scheduled time
- Desired quality level







Autodesk Construction Cloud

Introduction

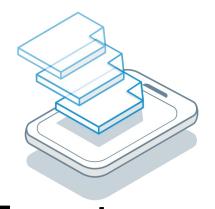
The right tool for the job is...



Adaptable

For changing conditions

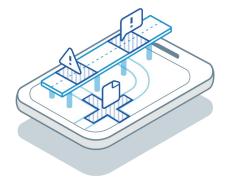
Stronger connections between teams and products allow processes to be more adaptable



Easy-to-use

For all levels of BIM expertise

Intuitive workflows with data available for each phase in a common data environment



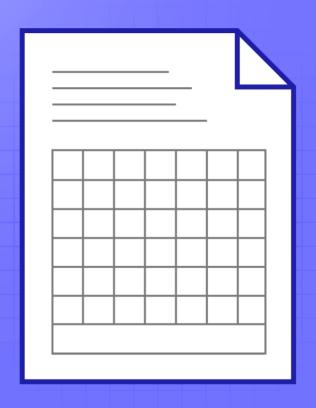
Automated

Removing time consuming tasks

Capture change, clash models, and communicate decisions, assisted by simple automation



01. DIGITIZE02. INTEGRATE03. OPTIMIZE



01. DIGITIZE



Document Management



Collaboration

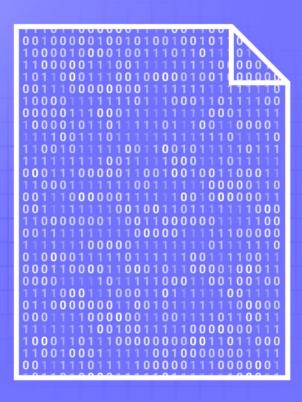


Automated Workflows



Project Management

02. INTEGRATE03. OPTIMIZE



01. DIGITIZE 02. INTEGRATE



Field information



Change Management



Printed formats to mobile devices

03. OPTIMIZE



01. DIGITIZE02. INTEGRATE03. OPTIMIZE

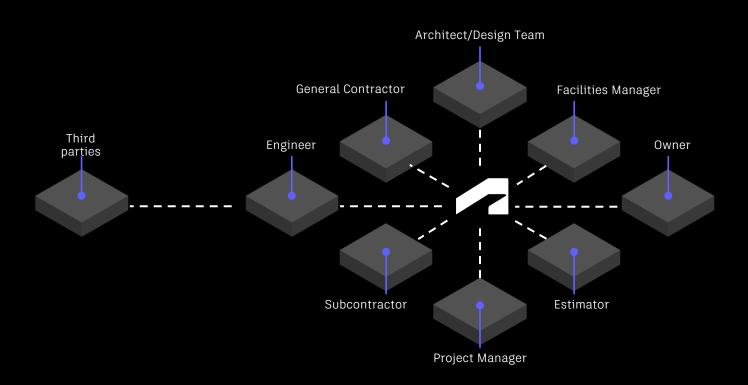


Traceability



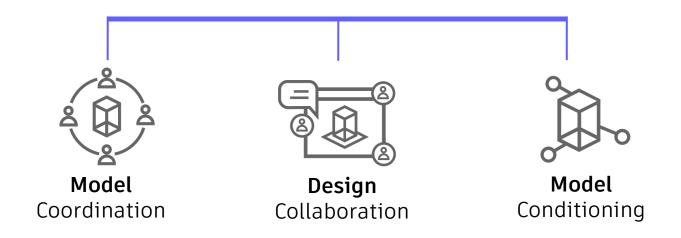
Data Analytics

Common Data Environment

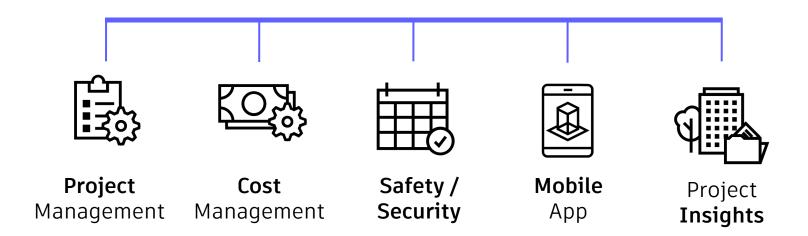


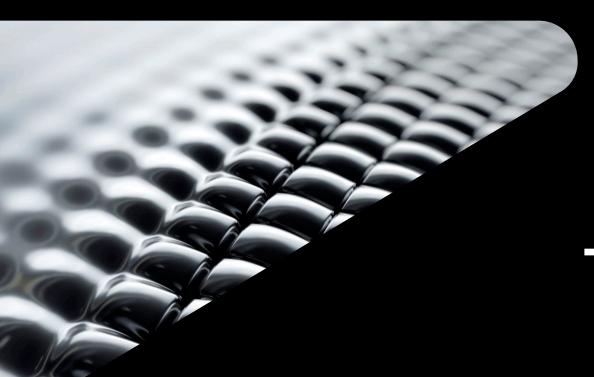






B AUTODESK Build





Triple Constraint Theory in PM

Introduction

Principles in Construction

How to efficiently handle:

- People
- Materials
- Equipment
- Budget
- Location
- Information

To achieve

- Budget Accuracy
- Scheduled time
- Desired quality level





Triple constraint theory





Where we are and Where to go?

















How you got to AU









Scope

Design & Precon

Scope Management during design and coordination

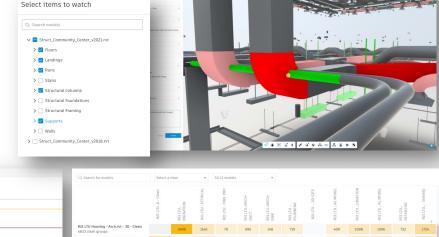


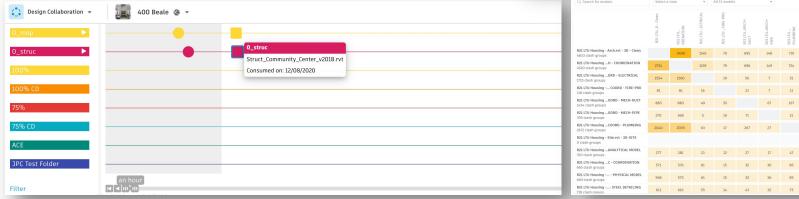
Design & Precon

AUTODESK CONSTRUCTION CLOUD

Scope Management during design and coordination

Changes are the nature of design and engineering.





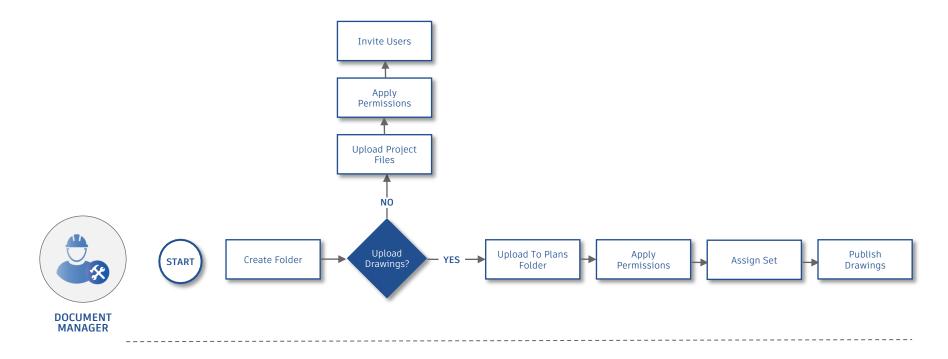
Design & Precon

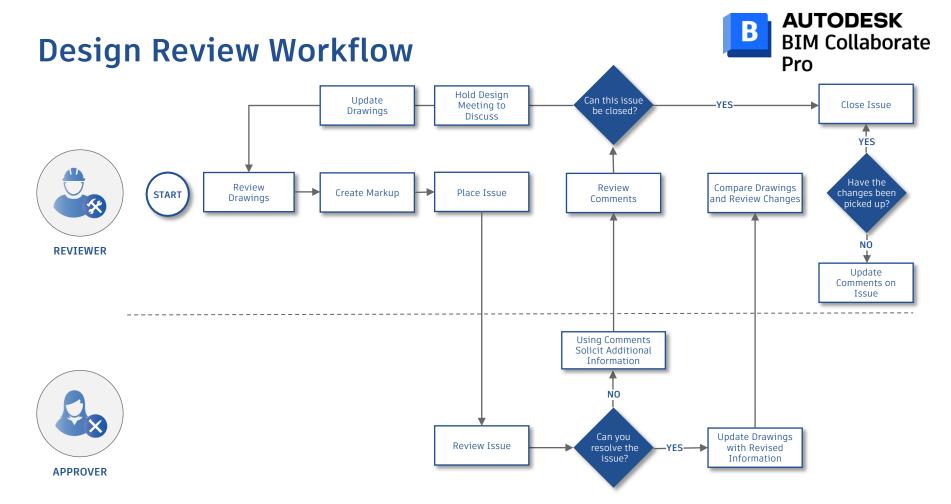
Scope Management during design and coordination



Document Management Workflow

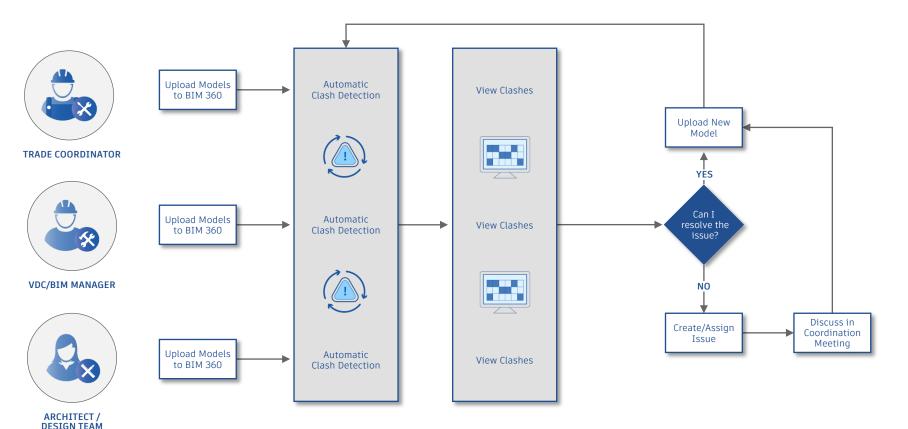






Model Coordination Workflow

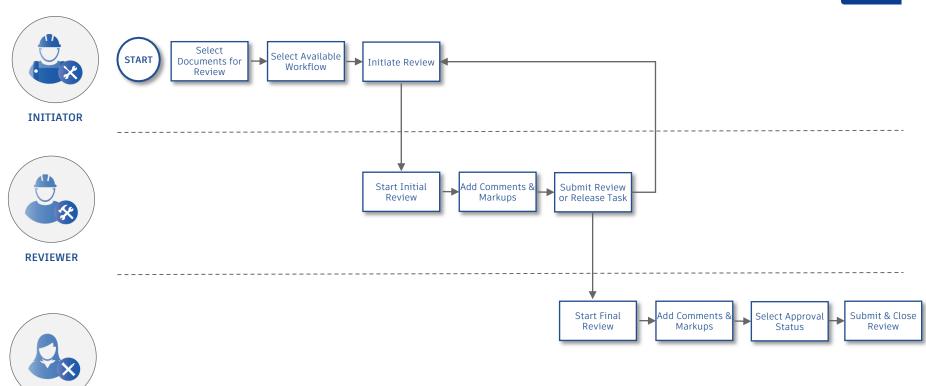


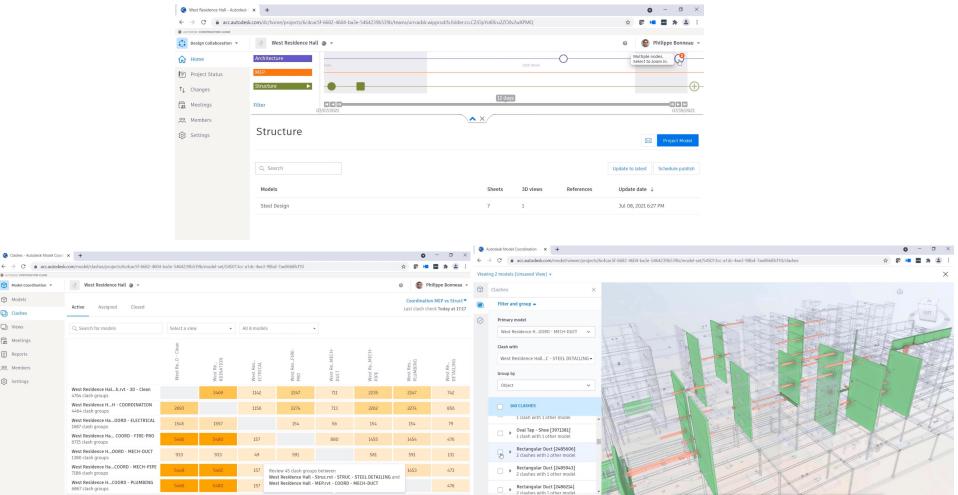


Approval Workflow

APPROVER







204

Model Coordination ▼

Models

Clashes

U Views

Meetings

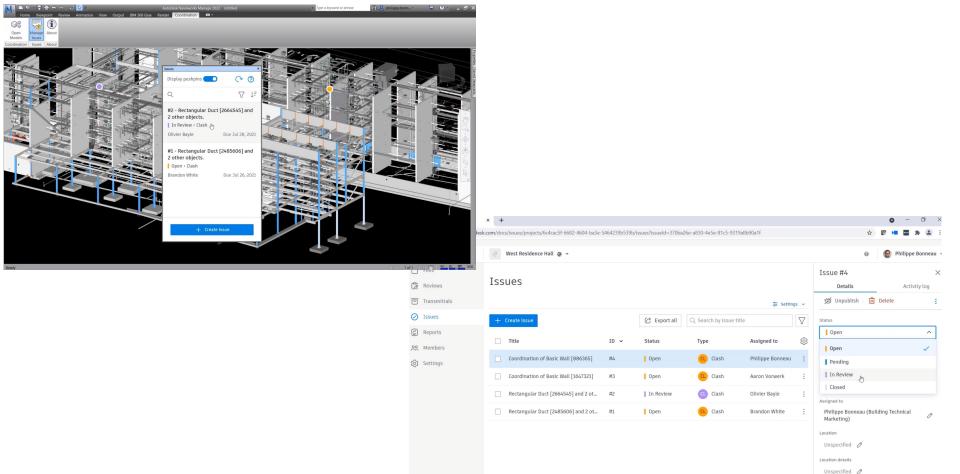
% Members

(c) Settings

West Residence Ha...- STEEL DETAILING

635 clash groups

603

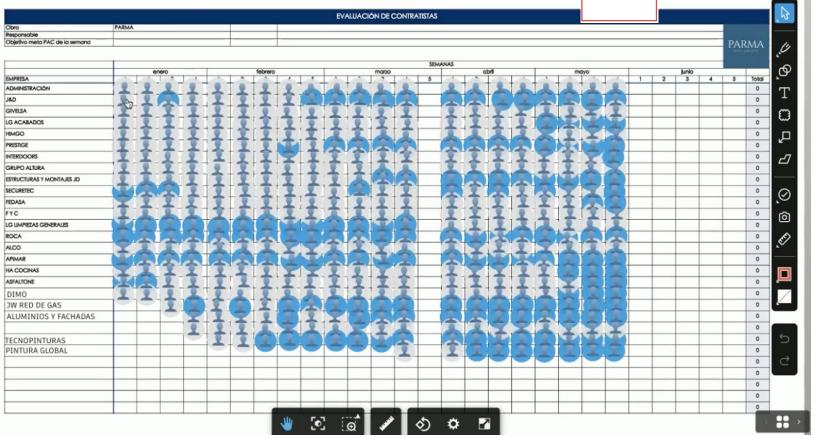


Showing 1 - 4 of 4

Due date

Jul 29, 2021 0

Subcontractors



MUROS Y

Subcontractors







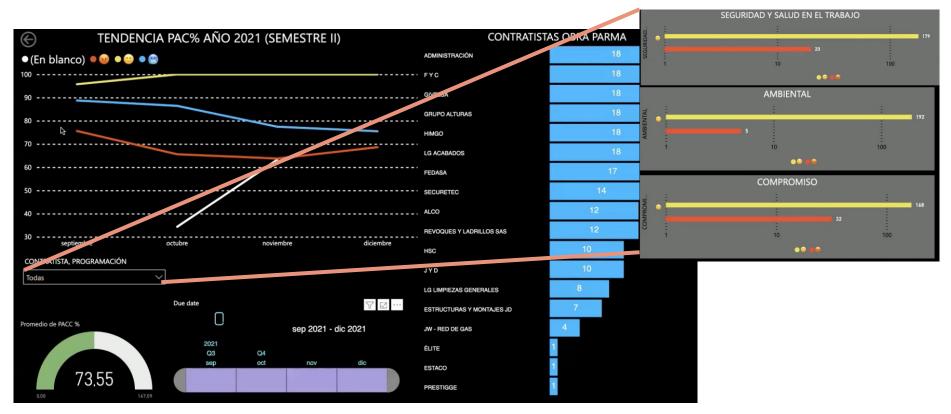


Subcontractors





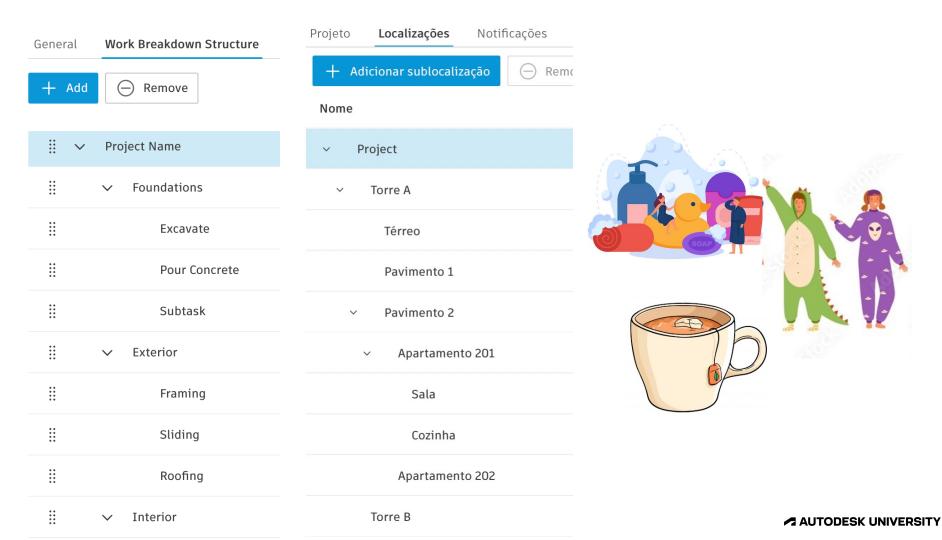






Time

Schedule



Last Planner

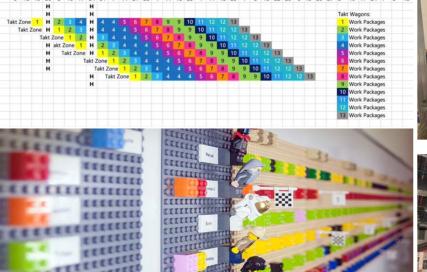
Big Room -

2018











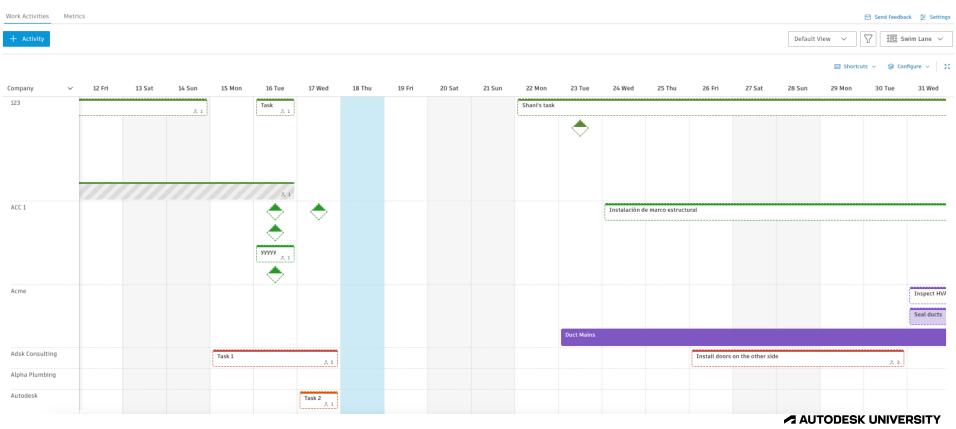
2019



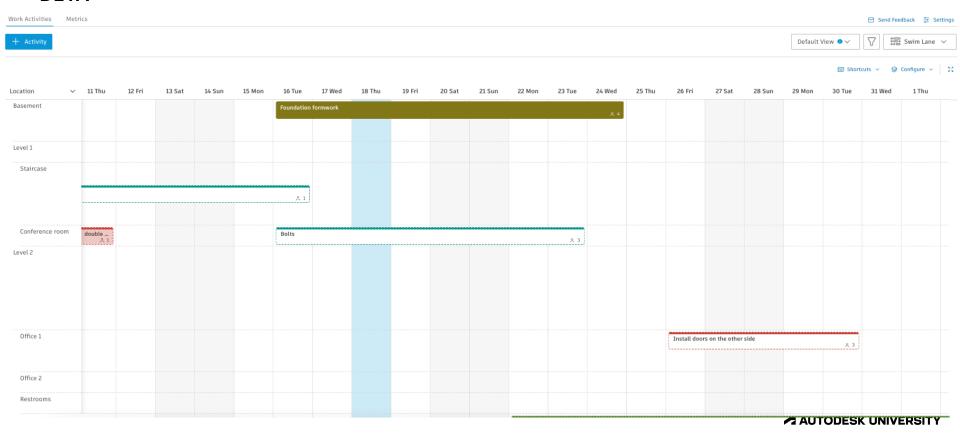




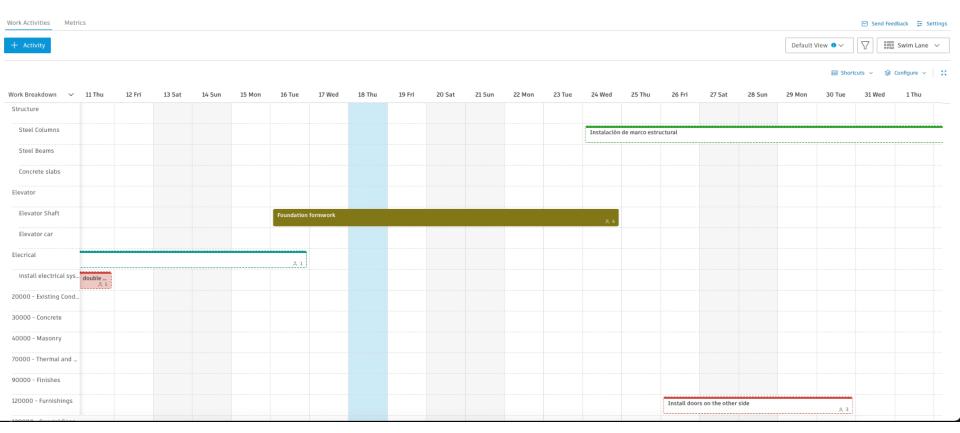
WorkPlan - OBS



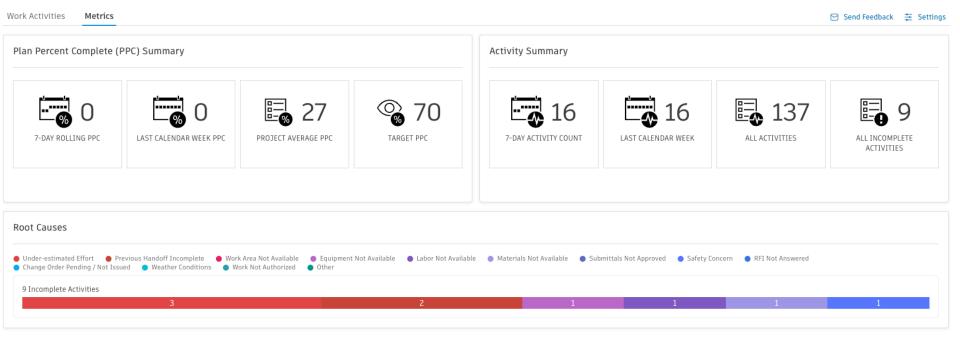
WorkPlan - LBS



WorkPlan - WBS



WorkPlan - PPC





The CDE Single Source of Truth

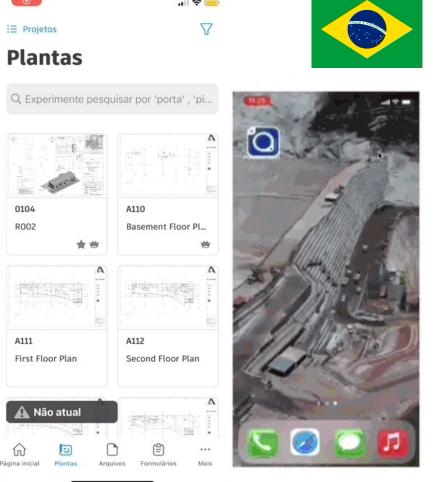
Teams

35%



of time is wasted on non-optimal activities (14+ hours/person/week)

Source: Construction Disconnected – FMI Report













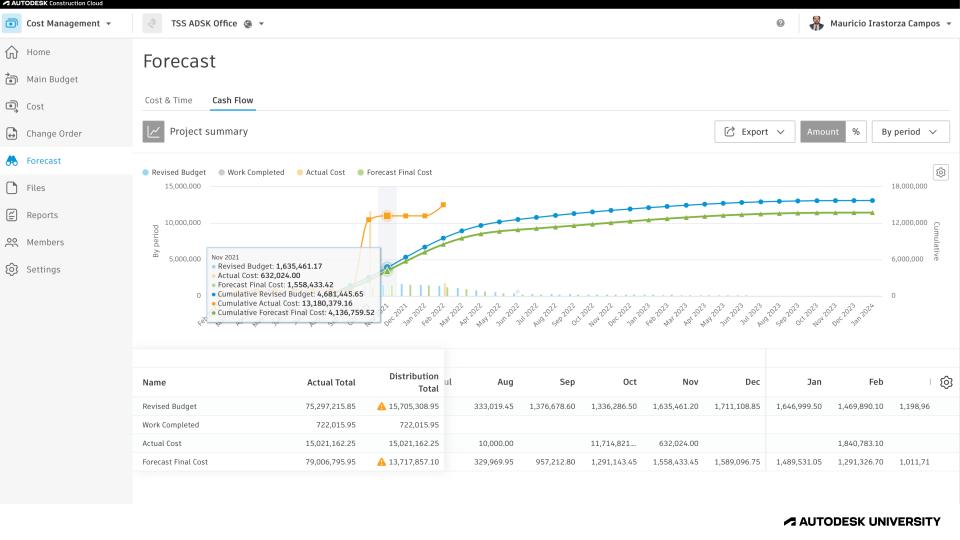




Cost

Budget







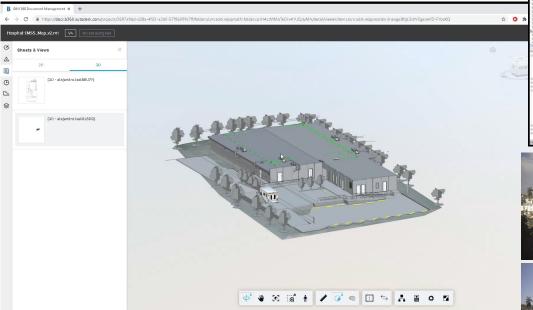


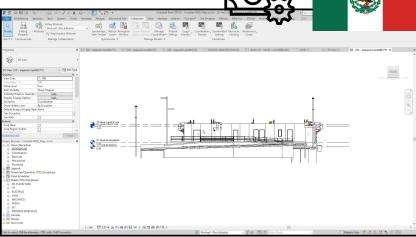
























✓ AUTODESK UNIVERSITY













Conservative: 503 kgCO2e



Converted per Unit: 1 yd3

Details Open -S-



Date of Issue:

EPD Number:

Period of Validity:

September 1, 2017

NRMCAEPD:10012

September 2017 - September 2022









PRODUCT EPDS

Achievable: 262 kgCO2e

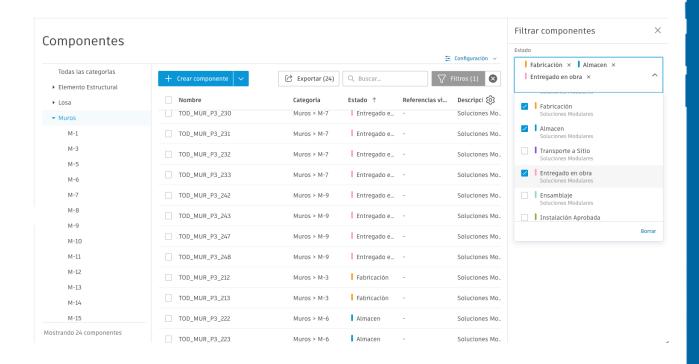
Average: 388 kgCO2e ± 38.5%

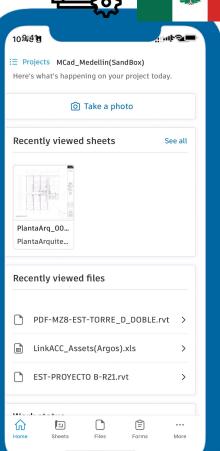
¢ • • + + * ¢ / ∴ ∧ ≅ o ≈ b

							Subcatego	у	~ M	lanufacturer	~ 1F	Plant or Plant Group " 11	✔ Product	t.	✓ Description 11	■ Compressive Strength	↑1 s EC3 / 1 yd3
	Certified Environmental Product Declaration						Ψ	Compare		Compare		Compare	Ψ	Compare	P occupant	Compare	3 00071700
	mental product declaration was conducted in accordance with ISO 14025:2006						ReadyMix		CE	MEX México/CEMEX S	SAB	CEMEX Plant DE26/PD 88: Ar	Concreto STE	EL DECK, 250	Pumpable	3560 psi	295 kgCO2e
Inter	rnal Verification External Verification						ReadyMix		CE	MEX México/CEMEX S	SAB	CEMEX Plant DE26/PD 88: Ar	Concreto Estr	uctural, 350	Structural concrete. Pumpable	4980 psi	310 kgCO2e
							ReadyMix		CE	MEX México/CEMEX S	SAB	CEMEX Plant DE26/PD 88: Ar	Concreto Con	vencional, 250 1	. Conventional concrete. Pump	3560 psi	221 kgCO2e
Declared Product:	This Environmental Product Declaration (EPD) covers thirty (30) concrete mixes						ReadyMix		CE	MEX México/CEMEX S	SAB	CEMEX Plant DE26/PD 88: Ar	Concreto Con	vencional, 200	Conventional concrete. Pump	2840 psi	199 kgCO2e
	produced by CEMEX at the Armas Plant in Mexico City.						ReadyMix		CE	MEX México/CEMEX S	SAB	CEMEX Plant DE26/PD 88: Ar	Concreto DUF	AMAX Autosella	. Durable and Self-repair Concr	3560 psi	371 kgCO2e
Declared Owner:	CEMEX México/CEMEX SAB						ReadyMix		CE	MEX México/CEMEX S	SAB	CEMEX Plant DE26/PD 88: Ar	Concreto Pen	ia, 040	Permeable concrete. Tailgate	580 psi	395 kgCO2e
	52(55)5626-8374						Shotcrete		CE	MEX México/CEMEX S	SAB	CEMEX Plant DE16/PD 63: Cen	Concreto Lan	ado, INGENIA,	Shotcrete. Pumpable	356 psi	327 kgCO2e
	www.cemexmexico.com						ReadyMix		CE	MEX México/CEMEX S	SAB	CEMEX Plant DE26/PD 88: Ar	Concreto STE	EL DECK, 300	Pumpable		386 kgCO2e
							ReadyMix		CE	MEX México/CEMEX S	SAB	CEMEX Plant DE26/PD 88: Ar	Concreto Lige	ro, INSULARIS, 3	. Tailgate concrete	4270 psi	606 kgCO2e
Program Operator:	National Ready Mixed Concrete Association						ReadyMix		CE	MEX México/CEMEX S	SAB	CEMEX Plant DE26/PD 88: Ar	Concreto DUF	AMAX, 250	Durable Concrete. Pumpable	3560 psi	298 kgCO2e
	900 Spring St., Silver Spring, MD 20910						ReadyMix		CE	MEX México/CEMEX S	SAB	CEMEX Plant DE26/PD 88: Ar	Concreto Ultr	Alta Resistenci	Ultra High Strength Concrete	11400 psi	739 kgCO2e
	www.nrmca.org/sustainability	○ CEMEX !	México/CE	ncretos Cruz	□ COMOSA	Α Θ	FORZAC							IAX, 200	Durable Concrete. Pumpable	2840 psi	266 kgCO2e
	NDMO4.													IAX Autosella	. Durable and Self-repair Concr	3560 psi	322 kgCO2e
	NRMCA	1												ctónico, APA	Colored Architectural Concret	2840 psi	256 kgCO2e
														ural, 250	Structural concrete. Pumpable		240 kgCO2e
	Lionel Lemay	1,000 -												036	Permeable concrete. Tailgate		300 kgCO2e
LCA and EPD Developer:	CEMEX through WBCSD CSI-PCA tool of concrete and cement													INSULARIS, 3		4980 psi	574 kgCO2e
	https://concrete-epd-tool.org	900 -												INSULARIS, 2		3560 psi	505 kgCO2e
	Cement Sustainability Initiative												0	ural, 200	Structural concrete. Pumpable	2840 psi	207 kgCO2e
	Alexander Martin Roeder, Sustainable Affair Manager	aco-						•				0		Resistencia,	0 0		649 kgCO2e
	alexander.roeder@cemex.com	W							0			•		Resistencia,	High Strength Concrete. Pum		495 kgCO2e
	Arturo Gaytan Covarrubias, Sustainability Manager	:02e/N										•		Resistencia,	High Strength Concrete. Pum		458 kgCO2e
	arturo.gaytanc@cemex.com Sharon Angelica Vallejo Reyes, Sustainability Coordinator								0	0	0			icional, 250 1	. Conventional concrete. Pump	3560 psi	263 kgCO2e
	sharon Angelica vallejo Reyes, Sustainability Coordinator sharonangelica.vallejo@cemex.com	\$ ∞-							00	0 8				ural, 300	Structural concrete. Pumpable	4270 psi	272 kgCO2e
	Enrique De Hoyos Guajardo, Sustainability and Environmental Advisor	- 000 m		0			0	8	0					ctónico, APA	Pumpable	3560 psi	243 kgCO2e
Independent Verifiers: Product Category Rule:	amie Meil, Research Principal Athena Sustainable Materials Institute 119 Ross Avenue, Suite 100 Ottawa, Ontario, Cananda info@athenasmi.org North American Product Category Rules (PCR) for ISO 14025 Type III Environmental Product Declarations (EPDs) for Concrete, Version 1.1, dated 12/4/2013 (including clarifications #1, #2, and #3) The Carbon Leadership Forum	Conservative Es	·		•	8	0 0000 0 0	•	0			NOOR VENTS SPORT PRINTS CONTROL OF THE CONTROL OF T		Scholard Malanti Embodiod Carbon Petrics Name Structure Colesian General General General	Data From EC3 × Many james; Graves Admin Graves Admin Graves Admin Graves Admin Admin	No. No. Control of Con	and Study
	www.carbonleadershipforum.org	ó	5	10	15	20	25	30	35	40 45	5			Selected Material	Convitance (SCN)	11	20



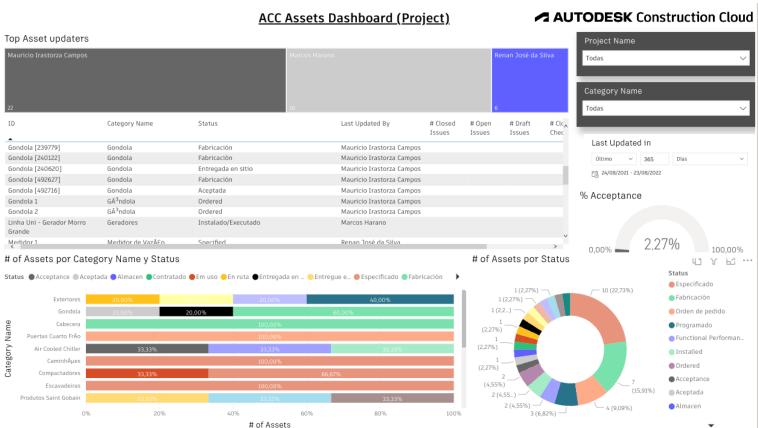
Prefab – Asset Management



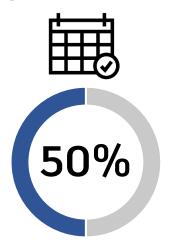


Prefab - Dashboards





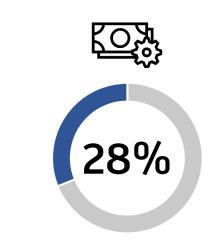
Key Benefits



TIME SAVED

On monitoring and reporting field activities and quality inspections



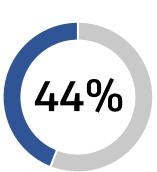


WASTE REDUCTION

By agile change management and asset tracking







AHEAD OF SCHEDULE

25 months of construction vs 36 months planned





✓ AUTODESKConstruction Cloud

Change Order
Payment Aplication
RFIS
Inspections
Submittals
Safety
Security
Forms
Labor
Materials orders
Budget request
Minute
Photo report

