

Lessons Learned From Implementing Project Controls Systems

Sara Fargher, Project Controls System Specialist, MTIA
James Crowell, Senior Industry Consultant, Hexagon



About the Speakers

Sara Fargher, Project Controls System Specialist, MTIA

Sara is a Project Controls professional with 11 years of system implementation experience in major infrastructure projects globally (rail, mining, water & sewage, and oil & gas).

Currently, she is the Project Controls Systems Specialist at MTIA, managing the Project Controls system and the interfaces for the LGRP, MRPV, NELP, RPV & WGTP projects.

Sara has extensive cost control experience with a comprehensive understanding of the complete end-to-end lifecycle and the applications of project controls methodologies.

She enjoys working with multidisciplinary teams to capture and implement end-to-end processes to achieve visibility and value for the project teams.

James Crowell, Senior Industry Consultant, Hexagon

James empowers organizations to unlock the potential in their data. He meets companies wherever they are on their digital transformation journey to transform key processes or the entire project lifecycle and helps automate where it matters most to support sustainable economic growth.

James is a certified project management professional with international experience implementing project management systems.

He has a proven track record of working with leading project delivery companies to eliminate disparate spreadsheets and point solutions in favour of an enterprise project performance system that provides a consistent platform to standardize processes and boost project outcomes.



Hexagon + MTIA



HEXAGON is a global leader in **digital reality solutions** that are empowering an autonomous, sustainable future by putting data to work



MTIA is the Melbourne Transport Infrastructure Authority created on 1st January 2019

MTIA is part of Victoria Big Build (SRLA & MTIA), which is delivering \$90 billion of transport projects, which includes 165 major road and rail projects and employs over 18,000 people

Rail Projects Victoria (RPV)

Level Crossing Removal Project (LXRP)

Major Road Projects Victoria (MRPV)

West Gate Tunnel (WGTP)

North East Link (NELP)



Why Use a Project Controls System



Why Use a Project Controls System

Excel crashing due to large data sets and an array of formulas

More time is spent maintaining data at the expense of analysing the data

Problematic manual integrations

Difficulties enforcing good Project Controls practices

Poor data integrity leads to loss of confidence in reporting



The MTIA Project Controls System

- EcoSys was first implemented in 2016 by the RPV & LXRP Project Offices and by MTIA 2020/21
- The aim of the MTIA implementation was;
 - The onboarding of the MRPV, NELP & WGTP Project Offices
 - New integrations with the Oracle & Unifier, which are the Finance & Contract systems
 - Where possible, create alignment across the Project Offices
- The challenge was to provide a system that allowed Project Offices, with different project & contract types, to achieve their unique and sometimes same reporting requirements, while having shared modules, like the forecast, budget, resource modules

MTIA Modules Implemented

Project Structures (WBS/CBS & Alternative Structures)
Budgeting (Baseline, Current, Funding & Reporting)
Actuals, P.O. & Contracts (Oracle & Unifier integrations)
Forecasting
Resource & Grade Rate Registers
Change (Contract & Budget)
Risk & Issue Management
Month-End & Snapshot Modules
Reporting – EcoSys, Dashboard & PowerBI
Data Warehouse Integrations

Implementation



Getting Started

- A Business Sponsor & System Champion
- An understanding of reporting requirements
- An understanding of the capability within the team
- Pick the right requirements team
- An understanding of the data
- Defining the terminology



Reporting Types

The type of reports being built, is dependent on functionality and performance capabilities. MTIA Project Controls reporting have 3 reporting types;

- EcoSys Reports – screens, reports & graphs
- EcoSys Dashboard Report – Complex Report
- PowerBI Reports via EcoSys API's & the Data Warehouse

RAILROAD PACKAGE 1 SEPTEMBER 2022

IDENTIFIED AS 'OF CONCERN OR TOP REQUIRED'

Start Completion dates not used as per the Contract documents to be reviewed to determine if completion will impact Program Works update table by 15 calendar days pending agreement for Partial Completion (PC)

to 11 new comments

Completed 15 of 4 (35%) of set of the

WIP	LXP	AIRP	PTV	FTO	Total
0	0	0	0	0	303
1	5	8	0	0	308

Road Regime Package

WIP	WIP	Final	WIP	WIP	Final
RA1	RA2	RA3	RA4	RA5	RA6
NA	NA	NA	NA	NA	NA

CRITICAL MILESTONE VARIANCES

WIP	WIP	Final	WIP	WIP	Final
RA1	RA2	RA3	RA4	RA5	RA6
NA	NA	NA	NA	NA	NA

PERFORMANCE RAILROAD REGIME - PROGRAM

WIP	WIP	Final	WIP	WIP	Final
RA1	RA2	RA3	RA4	RA5	RA6
NA	NA	NA	NA	NA	NA

WIP SUMMARY

WIP	WIP	Final	WIP	WIP	Final
RA1	RA2	RA3	RA4	RA5	RA6
NA	NA	NA	NA	NA	NA

COMMENTS/NOTIFICATIONS

15/09/22 10:00 AM: Update on the completion of the program works...

SAFETY

Hours period:	48,477 mhrs	Cumulative	12 Month Avg
Total hours:	1,487,806 mhrs	T.P.E.P. 3.3	T.P.E.P. 4.8

PROGRAMMED ACTIVITY PERFORMANCE

WIP Summary Table

WIP	WIP	Final	WIP	WIP	Final
RA1	RA2	RA3	RA4	RA5	RA6
NA	NA	NA	NA	NA	NA

Summary Table

Date	Actual	WIP	Final	WIP	WIP	Final	% Duration	% Duration	% Duration	
Date	Date	Contract	Target	Forecast	Contract	Forecast	Target	Forecast	Target	
31/03/22	20/01/20	18/05/22	18/05/22	28/05/22	840	840	800	48	48	50
							5%	5%	10%	



HEXAGON



Project Controls
EXPO
Melbourne, Australia

Operations



Training

End users will require access to training materials

The training we provide:

- New user inductions
- In person or online training
- Open Houses – unstructured training sessions that allow users to gain support with

EcoSys Learning Pathways

Welcome to the EcoSys Learning Pathways page.

This page contains all the training materials relevant to EcoSys. You can access the materials by scrolling down or using the Quick Links on the right.

If you require further support, please visit the [EcoSys Support Page](#).

ACTUALS & FORECASTS

(Video) Actual and Forecasting Introduction

(Video) Actuals and Forecasting Workshop 1

(Video) Actuals and Forecasting Workshop 2

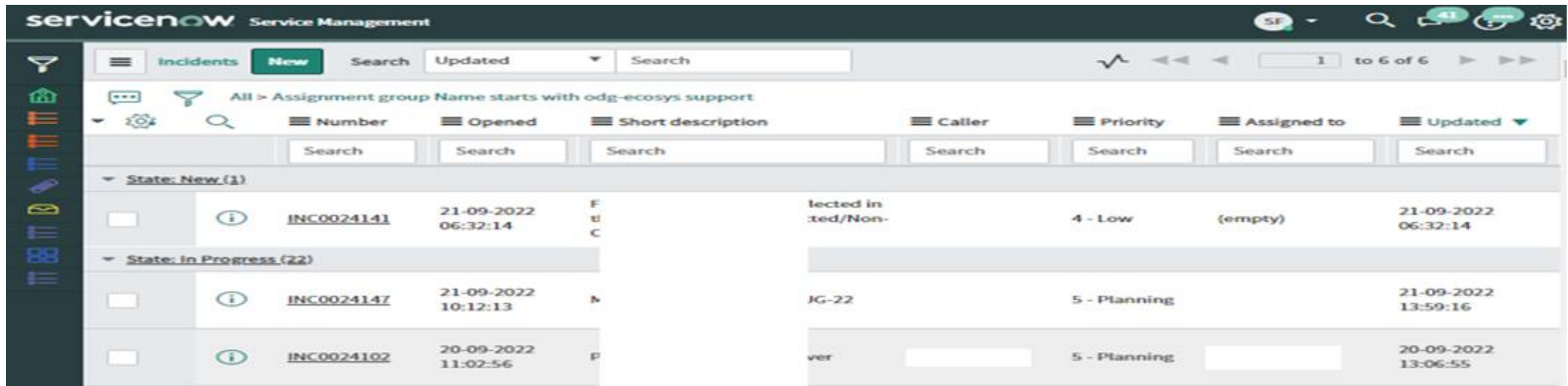
SEP 20	SEP 20	SEP 21	SEP 22
Induction New EcoSys User Induction	Open House Open House Finance	Training Setting Up & Approving Baseline/Original Budgets	Open House Open House - Cost & Risk Teams
Tue, 20 Sep, 9:30 am Teams	Tue, 20 Sep, 11:00 am Teams	Wed, 21 Sep, 9:00 am Teams	Thu, 22 Sep, 11:00 am Teams

Ticketing System

Incidents – issues with systems

Requests – new requirements or changes to existing systems

Data used to understand end-user training needs and system enhancements

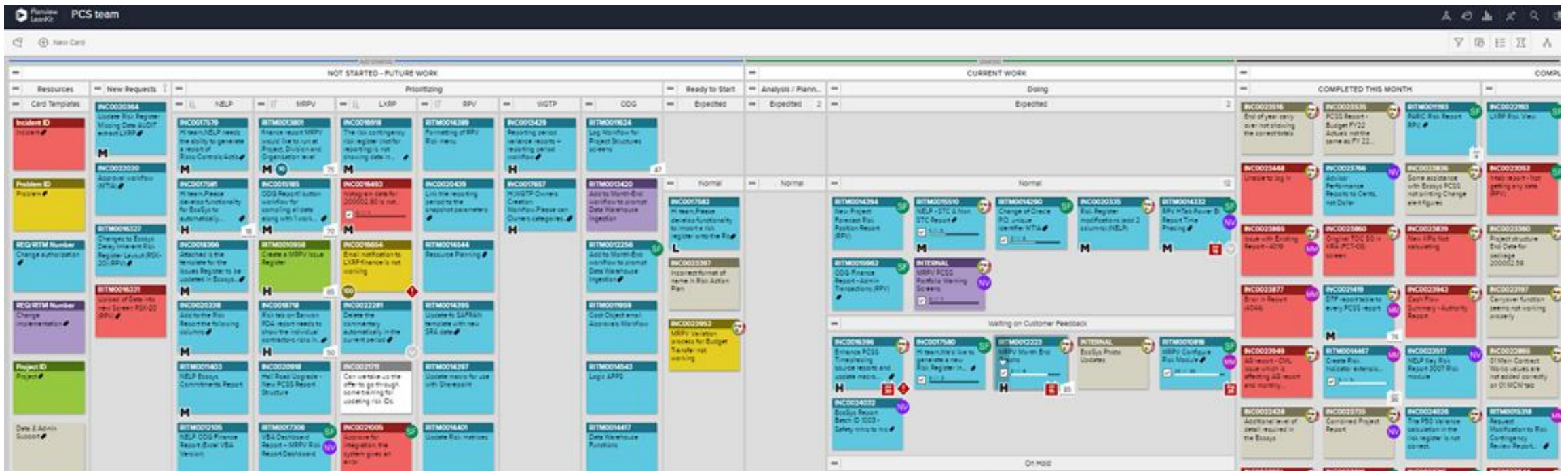


The screenshot displays the ServiceNow Service Management interface. The top navigation bar includes the ServiceNow logo, a search bar, and navigation icons. The main content area shows a list of incidents with columns for Number, Opened, Short description, Caller, Priority, Assigned to, and Updated. The incidents are grouped by state: New (1) and In Progress (22).

State	Number	Opened	Short description	Caller	Priority	Assigned to	Updated
New (1)	INC0024141	21-09-2022 06:32:14			4 - Low	(empty)	21-09-2022 06:32:14
In Progress (22)	INC0024147	21-09-2022 10:12:13		JG-22	5 - Planning		21-09-2022 13:59:16
In Progress (22)	INC0024102	20-09-2022 11:02:56		ver	5 - Planning		20-09-2022 13:06:55

Planning Tools

- Used to help prioritise operational and roadmap activities
- Gives key stakeholders visibility on progress and the ability to prioritise activities





THANK YOU

