



Dynamics 365 Project Operations - Resource Management

Presenters:

Andreea Bunduc

R&D Solution Architect

Mathieu Binaisse

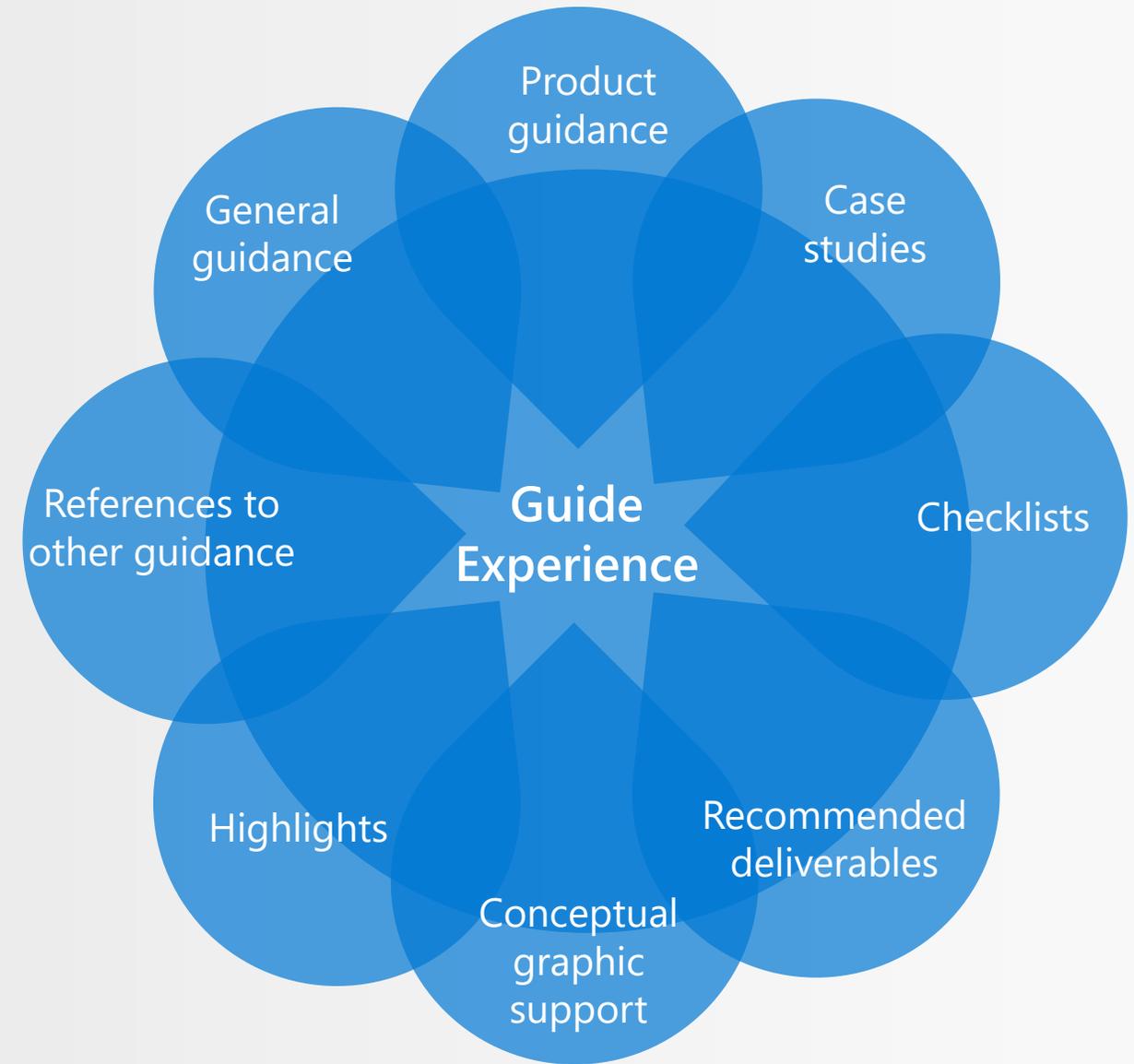
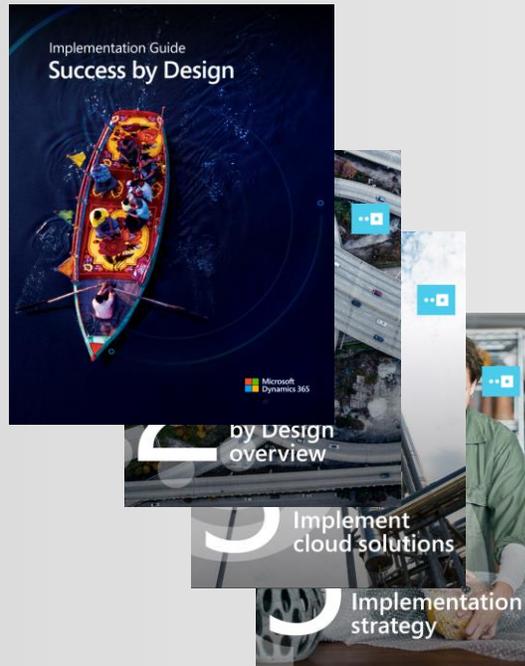
Senior R&D Solution Architect

Martin Walker

Senior R&D Solution Architect

Dynamics 365 Implementation Guide

Collective experience gained through
thousands of Dynamics 365 implementations



Available at: <https://aka.ms/d365implementationguide>



Objectives of this TechTalk

1. Resource Management concepts in Project Operations*
 2. Resource Management processes in Project Operations*
- * for lite and resource/non-stocked based scenarios deployment types

What it doesn't cover

1. Deployment considerations
2. Detailed aspects of Data Migration/Integrations
3. Comparison with other Dynamics 365 Customer Engagement Apps
4. Licensing considerations
5. Technical details

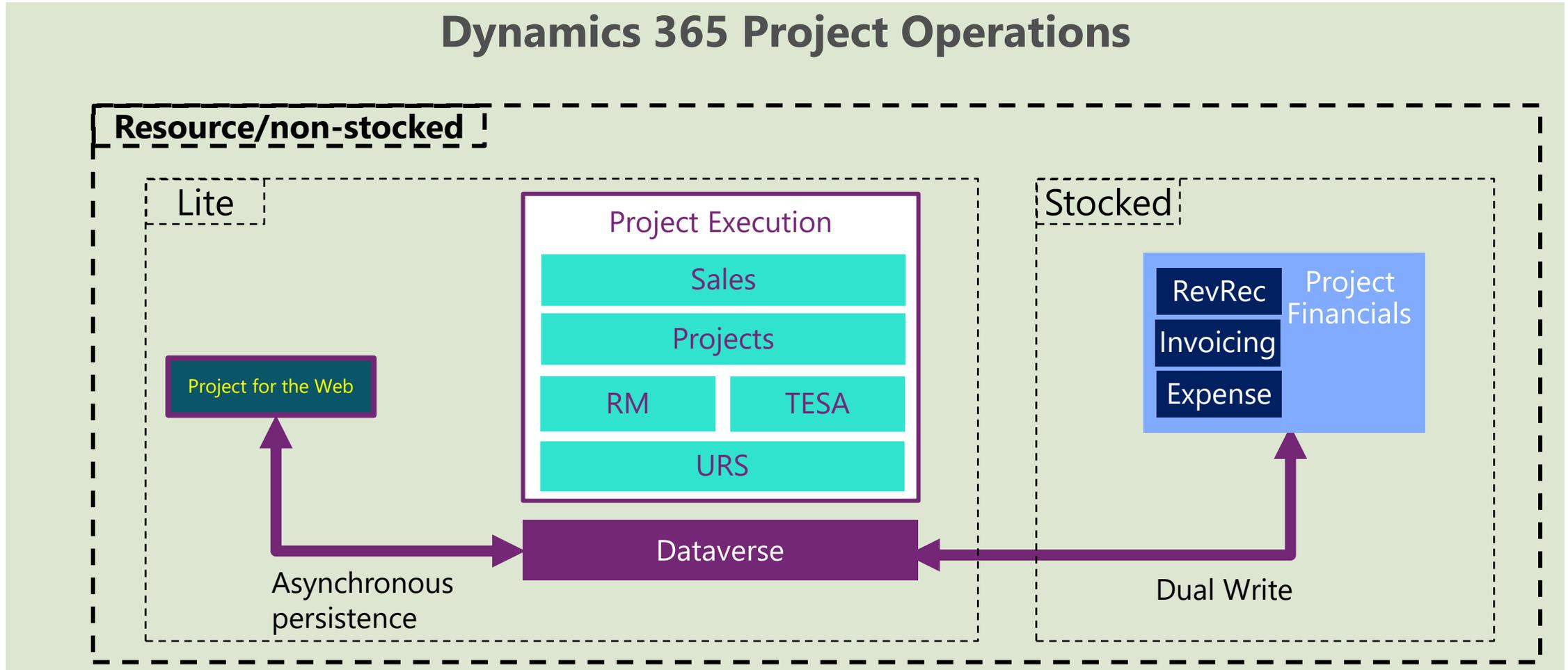
Agenda

-
1. Before we start
 2. Core concepts
 3. Resource management
 4. What's coming
 5. Resources

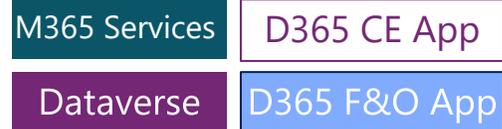
Before we start

Architecture

Dynamics 365 Project Operations

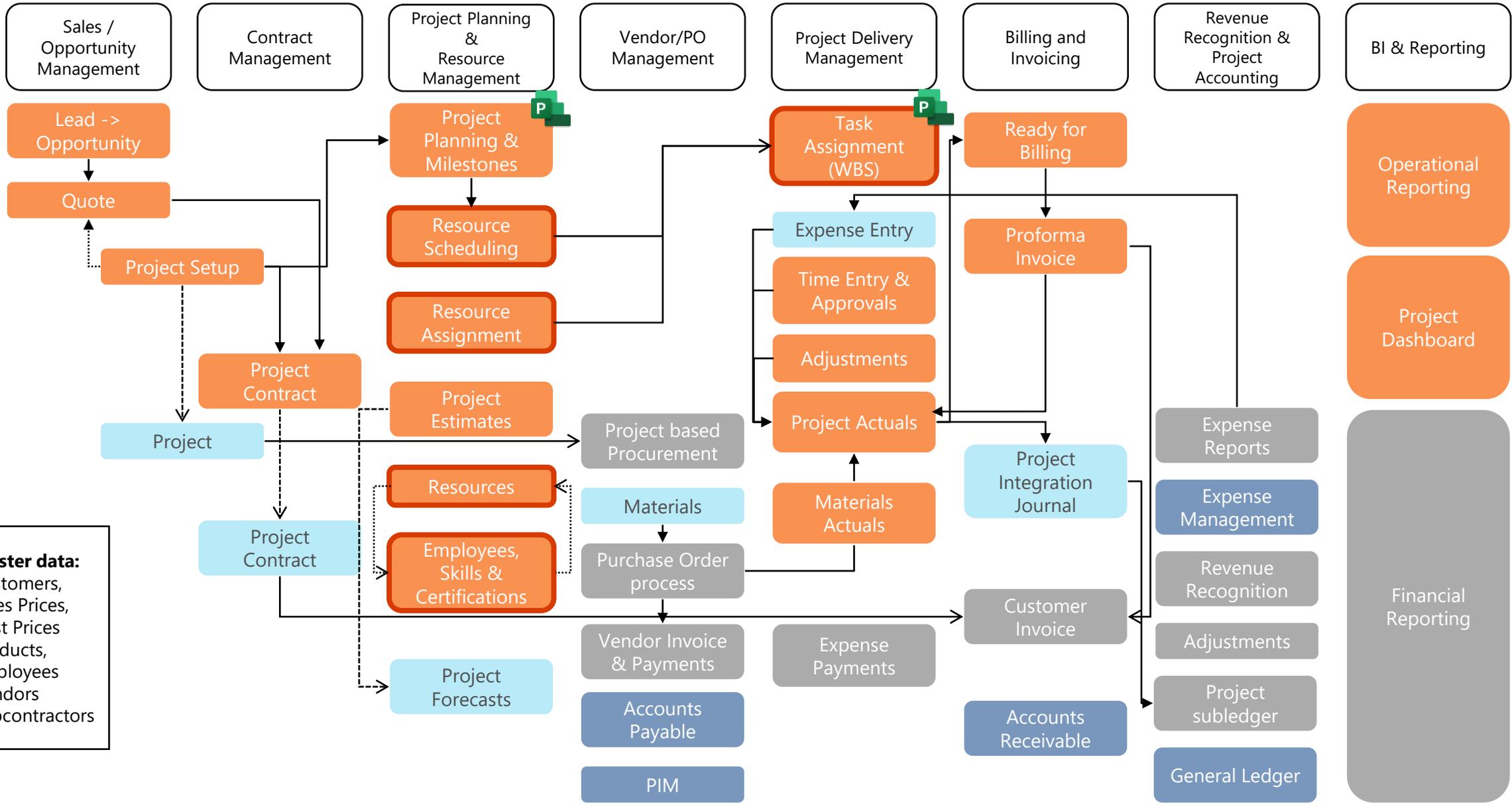


Key

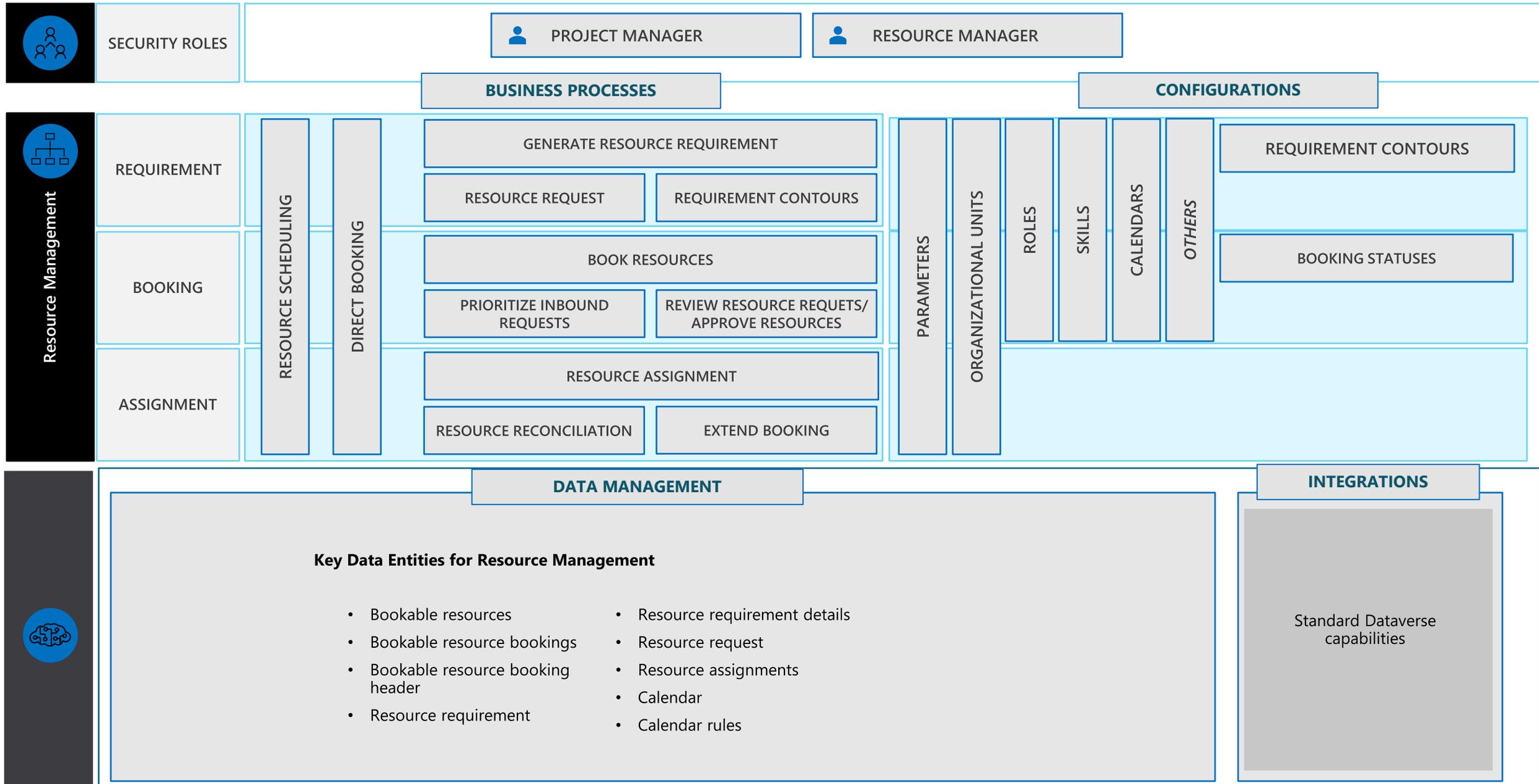


RM = Resource Management
TESA = Time, Expense, Status, Approvals
URS = Universal Resource Scheduling
RevRec = Revenue Recognition

End to End Process flow



Resource Management – Process Catalog



Resource management

Resources are the most important asset of a service-based organization.

The ability to find the right resources at the right time, book those resources on projects and keep them utilized, helps the organization meet revenue targets and customer satisfaction goals.

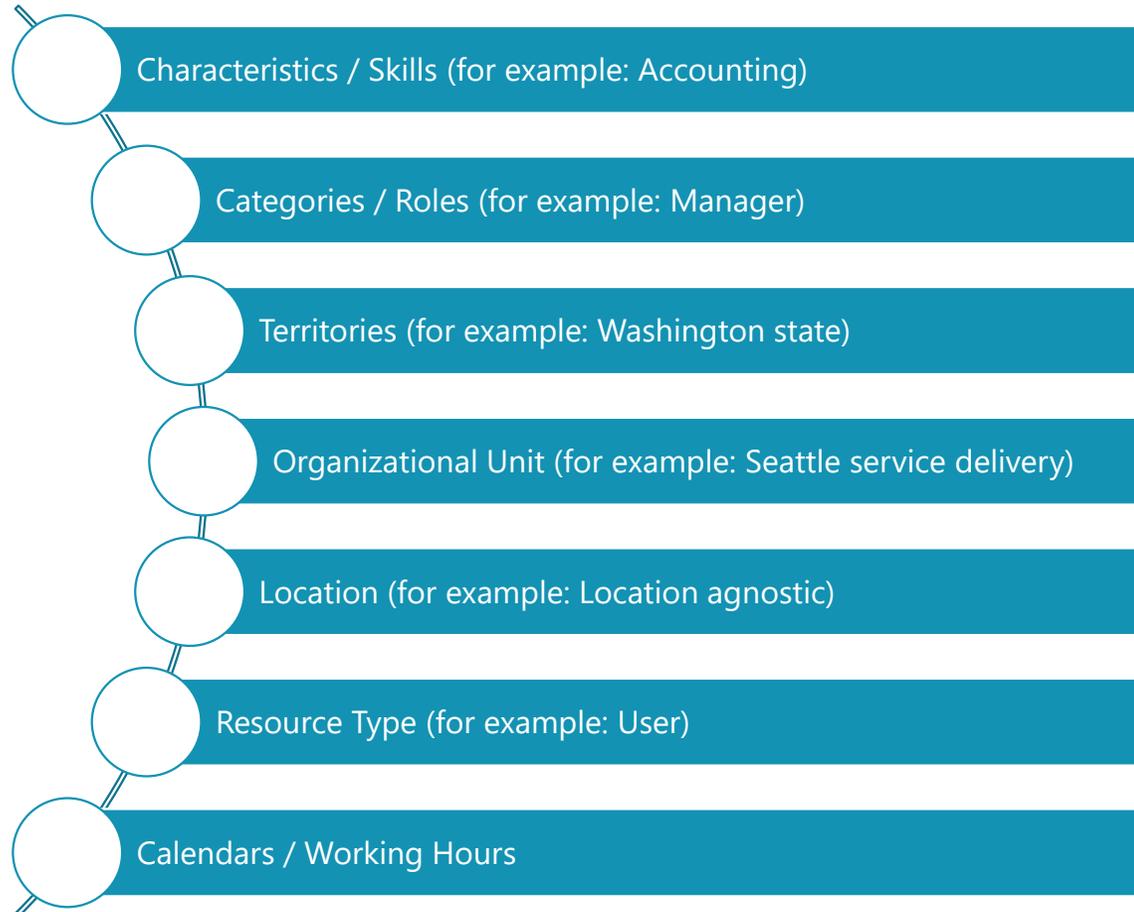


Core concepts

Core concepts

Resources

What defines a resource?



John Fast - Saved
Bookable Resource

General **Project Service** Scheduling Work Hours Related

Resource Skills			+ New Bookable Resour...	
<input type="radio"/>	Name 1 ▾	Characteristic ▾	Rating Value ▾	
<input type="radio"/>	Skill - TTR D365FO	TTR D365FO	Good	
<input type="radio"/>	Skill - TTR Integration	TTR Integration	Good	
<input type="radio"/>	Skill - TTR Solution Architect	TTR Solution Architect	Good	
<input type="radio"/>	Skill - TTRM	TTRM	Good	

1 - 4 of 4 10 < Page 1 >

Resource Role			
<input type="radio"/>	Resource Category 1 ▾	Is Default ▾	
<input type="radio"/>	TTR Solution Architect	No	

1 - 1 of 1 10 < Page 1 >

John Fast - Unsaved
Bookable Resource

General Project Service **Scheduling** Work Hours Related

Start Location	* Resource Address	Generic Type	---
End Location	* Resource Address	Company	USPM
		Organizational Unit	Contoso Robotics US

Scheduling

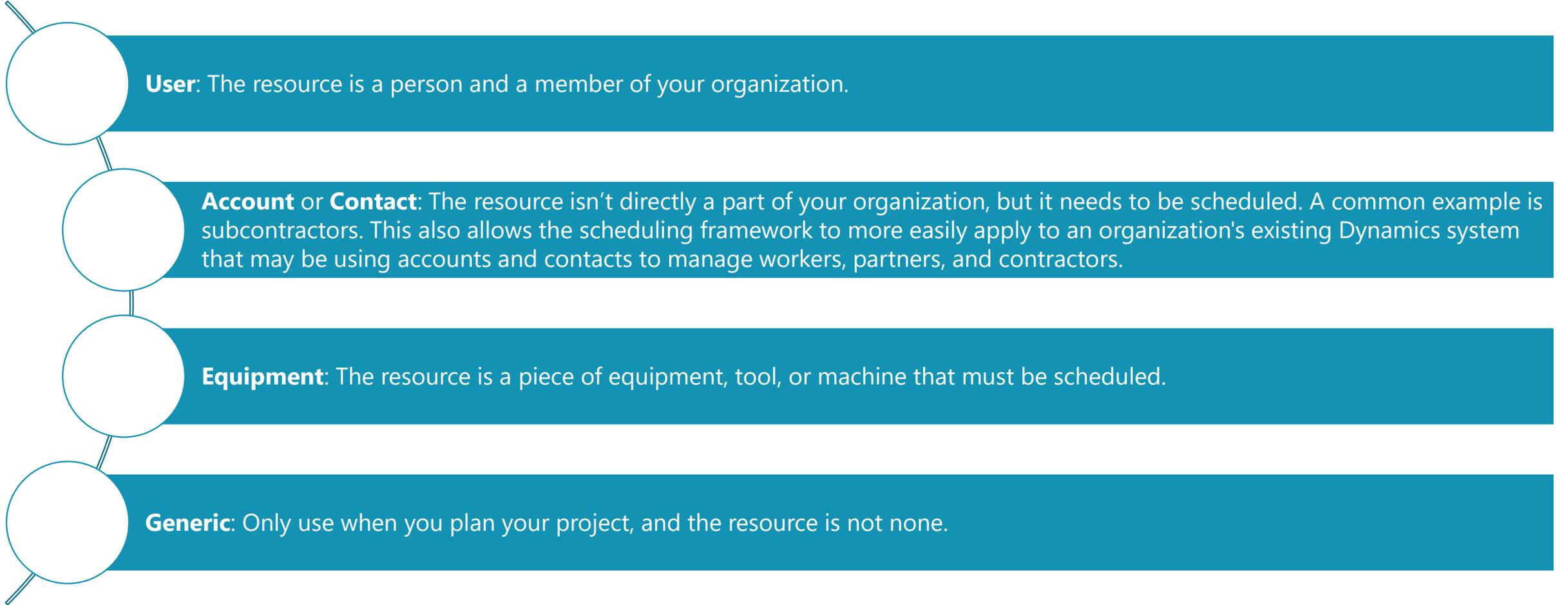
Display On Schedule Board	* Yes	Enable for Availability Search	Yes
---------------------------	-------	--------------------------------	-----



Longitude & latitude should be filled if you choose a location different from agnostic.

Core concepts

Type of resources



Facility, Crews and Pools are not supported.

Core concepts

Categories/ Roles

- Roles can facilitate broad grouping of bookable resources by type (e.g. technician, supervisor, subcontractor).
- Roles can have specific target utilization and billing type; Billing type can always be changed in a project when it comes to the customer billing stage.



Roles can be defined at the project task level to allow a resource to fulfill multiple roles within a project.

Active Resource Categories ▼

Category ID ▼	Name ↑ ▼
RCN-0000001002-B0L8N	Account Manager
RCN-0000001000-G1N6V	Backhoe loader
RCN-0000001001-Z9L0M	Building
RCN-0000001003-V4C4M	Consulting Lead
RCN-0000001004-M2Z4J	Customer Service
RCN-0000001005-Y2B7N	Field Service Lead
RCN-0000001006-W4B9D	General Manager
RCN-0000001007-I6M1W	Network Technician

Account Manager - Saved

Bookable Resource Category

General Related

Category ID	* RCN-0000001002-B0L8N
Name	* Account Manager
Owner	* SA Solutions Architect
Description	---
Target Utilization	---
Billing Type	Non Chargeable

Core concepts

Skills and proficiency models

Characteristics are used to enrich the attributes describing the abilities of a resource. Each characteristic of a resource can be described as a **Skill** or a **Certification**.

Proficiency allows to define skills level.

D365 - Unsaved
Rating Model

General Related

Name	* D365
Owner	*  Mathieu Binaise
Min Rating Value	* 1
Max Rating Value	* 3
Ratable Entity	* None

Rating Values

[+ New Rating Value](#) [Refresh](#) [⋮](#)

Name ↑	Value ↑	Is Default
Level 100	1	Yes
Level 200	2	No
Level 300	3	No

1 - 3 of 3 Page 1

Skills can be defined on resources, roles and requirements. They enable a project and a resource manager to find resources for a project.

Two types :

- Skill
- Certification

Name ↑	Characteristic Type	Description
TTR D365CE	Skill	D365CE
TTR D365FO	Skill	D365FO
TTR Dynamics 365 Finance Functional Consultant Associate	Certification	Dynamics 365 Finance Functional Consultant Associate
TTR Fasttrack	Skill	Fasttrack
TTR Manager	Skill	Manager
TTR PMI Certification	Certification	PMI Certification
TTR Project Manager	Skill	Project Manager
TTR Solution Architect	Skill	Solution Architect

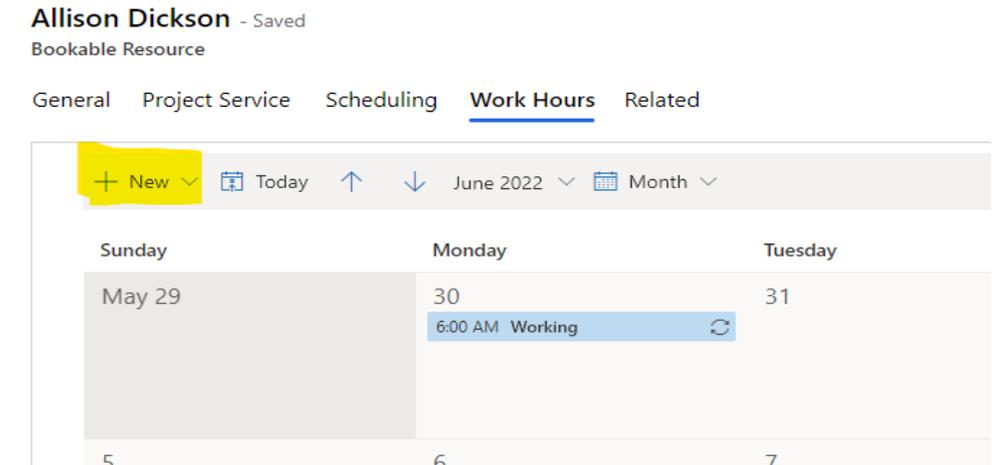


Only one proficiency model can be linked to skills (Ratable entity field)
On schedule board only resource's skills are considered

Core concepts

Calendars

- Each bookable resource working on a project must have a calendar of working hours to define their availability.
- Workings hours for a resource can be defined in two ways:
 - Define individual calendar rules for a resource
 - Apply an existing calendar template for the resource
- The calendar template defines the following project attributes:
 - Working hours, including start and end time
 - Working days
 - Calendar exceptions such as non-working days

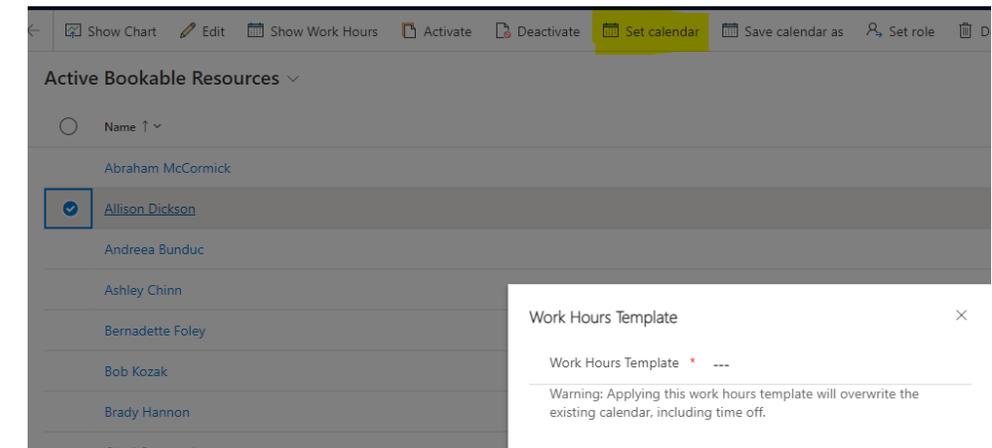


Allison Dickson - Saved
Bookable Resource

General Project Service Scheduling Work Hours Related

+ New Today June 2022 Month

Sunday	Monday	Tuesday
May 29	30 6:00 AM Working	31
5	6	7



Show Chart Edit Show Work Hours Activate Deactivate Set calendar Save calendar as Set role

Active Bookable Resources

Name ↑

- Abraham McCormick
- Allison Dickson
- Andreea Bunduc
- Ashley Chinn
- Bernadette Foley
- Bob Kozak
- Brady Hannon
- Cheri Cartwright

Work Hours Template

Work Hours Template * ---

Warning: Applying this work hours template will overwrite the existing calendar, including time off.



To update a calendar template, you need to create a new resource and then apply it to the calendar template. When you change the calendar template on a project, new tasks will take this template, but old tasks remain in the original template until a new task for the associated resource is created.

Core concepts

Bookings vs assignments

Bookings are the hard or soft allocation of resources to a project. They are a project-level concept.

Summary Tasks **Team** Resource Assignments Resource Reconciliation Estimates Tracking Sales Task Billing Setup Expense Estimates Material Estimates

All Team Members + New

Bookable Resource	Role	Resourcing...	Resourcing Unit	Position Name	Start	Finish	Required Hours	Hard Book...	Tot
> Generic Resource	Software Engineer	USMF	Contoso Robotics US	Software Engineer 1	6/22/2022	7/19/2022	0.00	---	
> Software engineer 007	Software Engineer	USMF	Contoso Robotics US	Software Engineer 1	6/24/2022	6/24/2022	---	8.00	

Resource
[Software engineer 007](#)

Start
6/24/2022 9:00 AM

Estimated Arrival Time
6/24/2022 9:00 AM

End
6/24/2022 5:00 PM

Booking Status
Hard

Assignments are the commitment of resources to project tasks in the project schedule. The resources can be named or generic.

Summary **Tasks** Team Resource Assignments Resource Reconciliation Estimates Tracking Sales Task Billing Setup Expense Estimates Material Estimates Related

Grid Board Timeline

Name	Quick look	Assigned to	Duration	Depends on	Effort
> First set of tasks			2 days		20 hours
> Second set of tasks			12 days		186 hours
5 Task 3			2 days		24 hours
6 Task 4			10 days	5	160 hours
7 Task 5			1 day		2 hours

+ Add new task

Assigned

- C1 Consulting Lead 1
- DL Demo0 Consultin...

Resource	Total	6/12/2022	6/19/2022	6/26/2022
> Demo0 Consulting Lead	2.00	2.00		
Booked	2.00	2.00		
Assigned				
> Demo2 Consulting Lead	2.00		2.00	

Core concepts

Booking statuses

Depending on the type of allocation of resources to a project

Soft

- does not consume a resource's available capacity
- used to show the intent of assigning a resource to the project
- generic resources cannot be soft booked, nor can a soft booking fulfill a request for a generic resource.

Hard

- consumes a resource's capacity
- only hard bookings are considered when reconciling bookings against assignments.

Standard type of statuses:

- Proposed
- Committed
- Cancelled

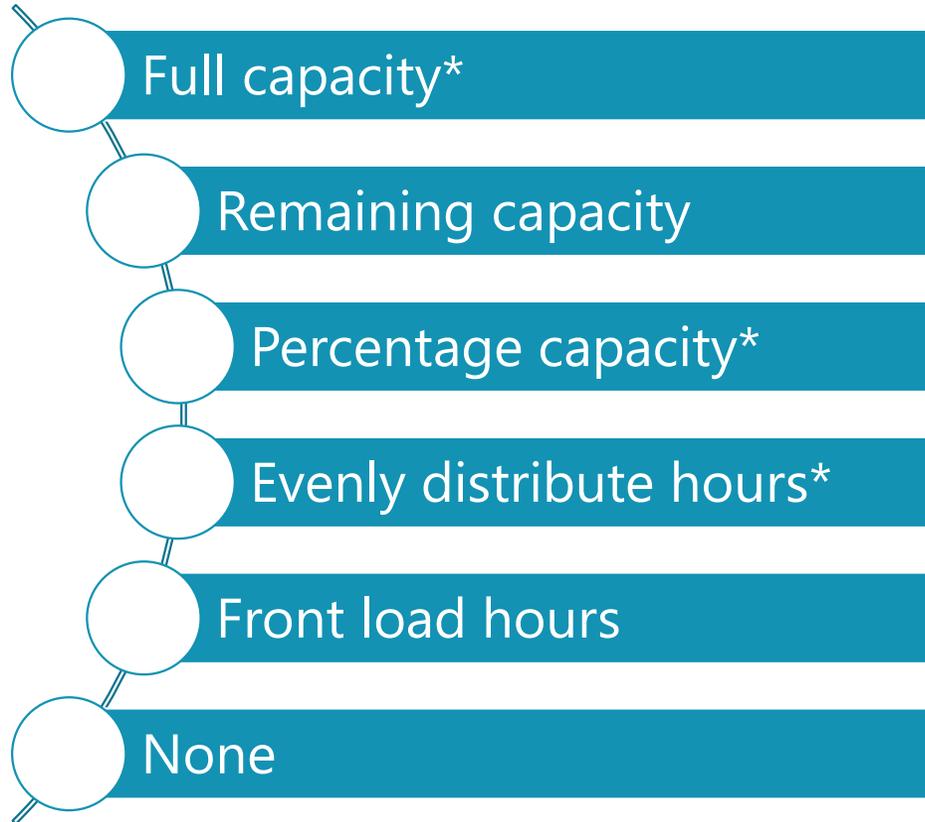
Active Booking Statuses* ▾

<input type="radio"/>	Name ↑ ▾	Status ▾
<input type="radio"/>	Cancelled	Cancelled
<input type="radio"/>	Committed	Committed
<input type="radio"/>	Hard	Committed
<input type="radio"/>	Proposed	Proposed
<input type="radio"/>	Soft	Proposed

Named Team Members ▾

✓	Bookable Resource ▾	Role ▾	Resourcing Company ▾	Resourcing Unit ▾	Start ▾	Finish ▾	Hard Booked Hours ▾	Soft Booked Hours ▾	Total Effort (Hours) ↑ ▾	Delete Status ▾
>	Demo2 Consulting Leac	Consulting Lead	USMF	Contoso Robotics US	6/20/2022	6/20/2022	2.00	---	---	Not Pending
>	Allison Dickson	Team Member	USPM	PO-DEMO	6/17/2022	6/29/2022	---	48.00	---	Not Pending
>	Demo0 Consulting Leac	Consulting Lead	USMF	Contoso Robotics US	6/16/2022	6/17/2022	2.00	---	16.00	Not Pending

Booking allocation methods



*can lead to overbooking

Quick Create: Project Team Member

Position Name ---

Bookable Resource ---

Role *

Resourcing Company *

Resourcing Unit

Start *

Finish *

Allocation Method

Hours

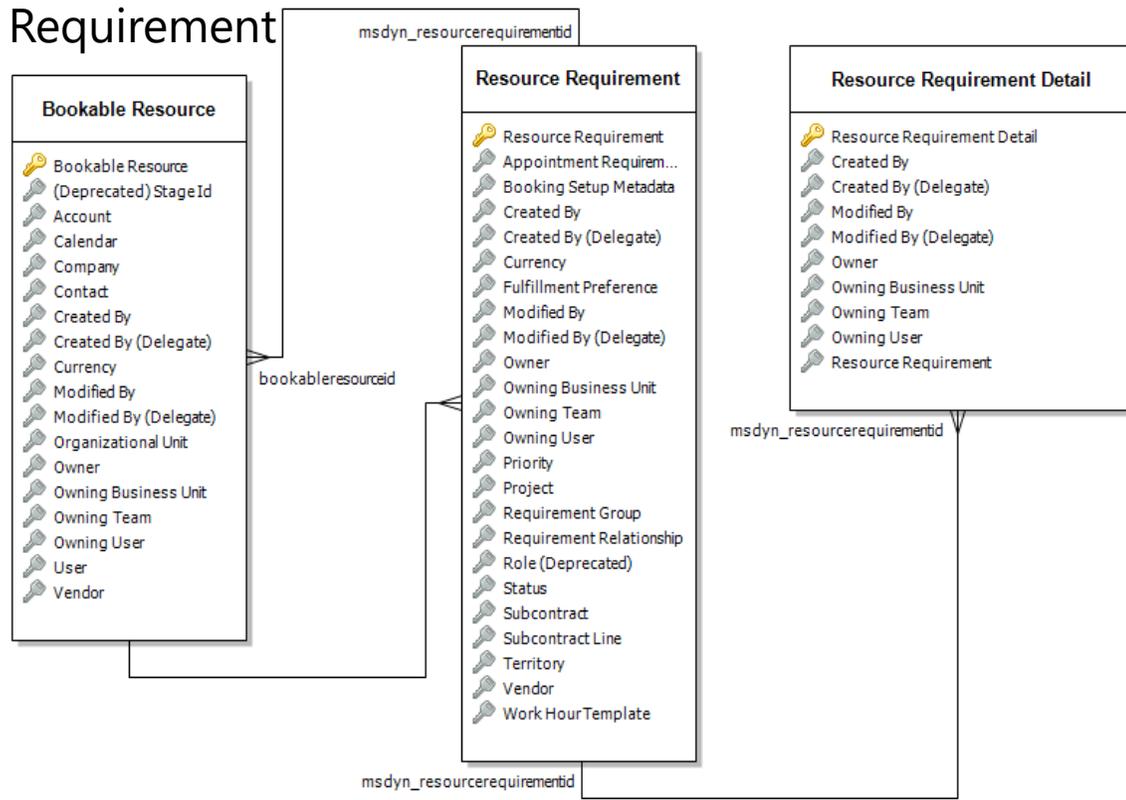
Project Approver

Front load hours

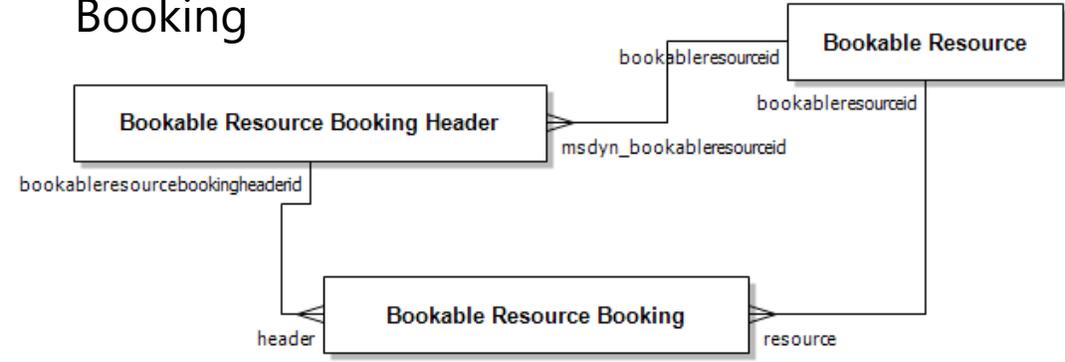
	Day 1	Day 2	Day 3	Day 4	Day 5	Total
Existing bookings	8	8	4	0	0	20
New booking	0	0	4	8	8	20

Core concepts

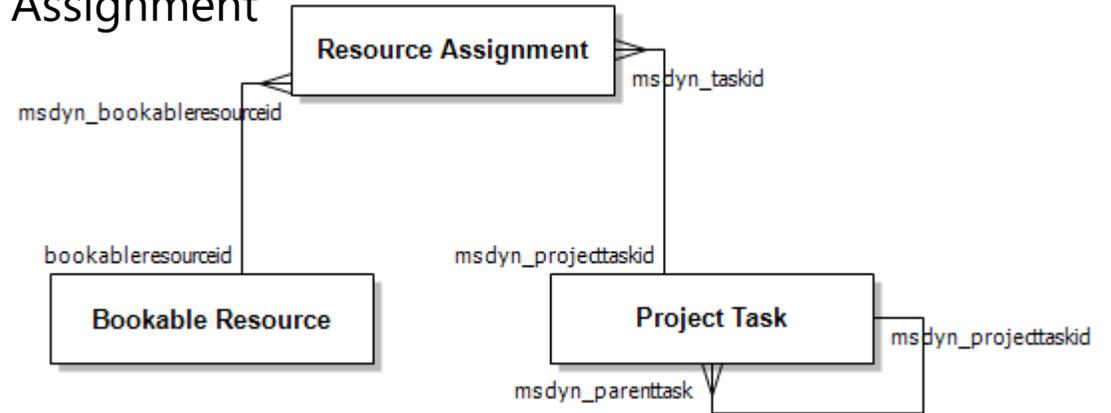
Requirement



Booking



Assignment



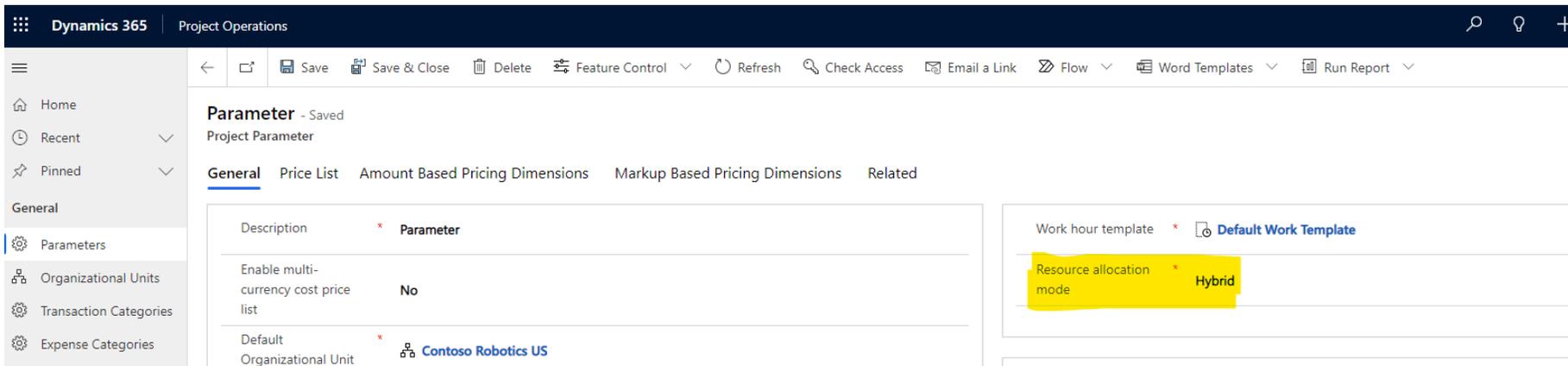
Demo – Resource Creation

Mathieu Binaisse

Resource management

Resource management modes

- Dynamics 365 Project Operations supports two modes in order for you to execute the overall booking flow:
 - Centralized Mode
 - Hybrid mode
- The mode of management is defined as a project parameter and can be modified if your business needs change.



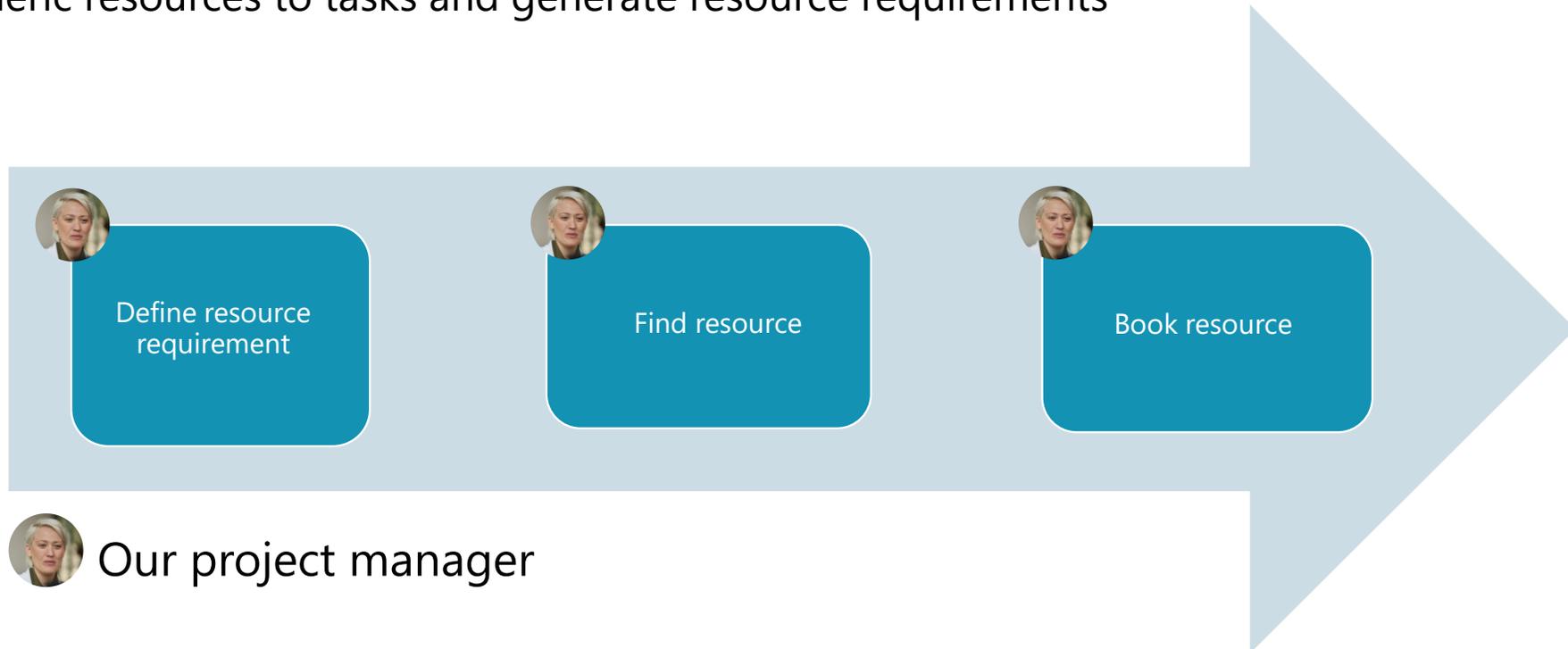
The screenshot displays the Dynamics 365 Project Operations interface. The top navigation bar shows 'Dynamics 365' and 'Project Operations'. Below the navigation bar is a toolbar with various actions: Save, Save & Close, Delete, Feature Control, Refresh, Check Access, Email a Link, Flow, Word Templates, and Run Report. The main content area is titled 'Parameter - Saved' and 'Project Parameter'. The 'General' tab is selected, showing the following configuration:

Field	Value
Description	Parameter
Enable multi-currency cost price list	No
Default Organizational Unit	Contoso Robotics US
Work hour template	Default Work Template
Resource allocation mode	Hybrid

Hybrid Mode

Both Resource managers and Project managers can book resources using the following methods:

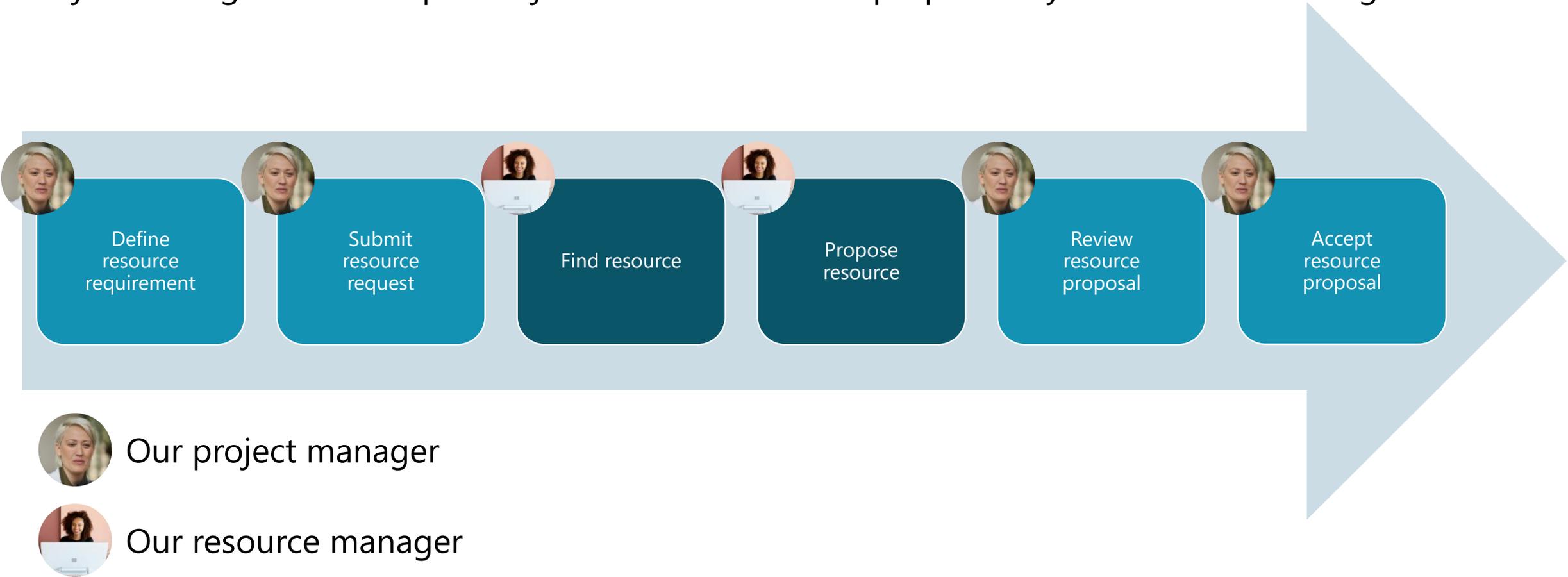
- Add a team member directly to a project
- Book a team member to fulfill resource requirements for a generic resource
- Assign generic resources to tasks and generate resource requirements



Central Mode

Fulfillment of the resource requirements is delegated to a Resource manager.

Project managers can accept or reject resources that are proposed by the Resource manager.

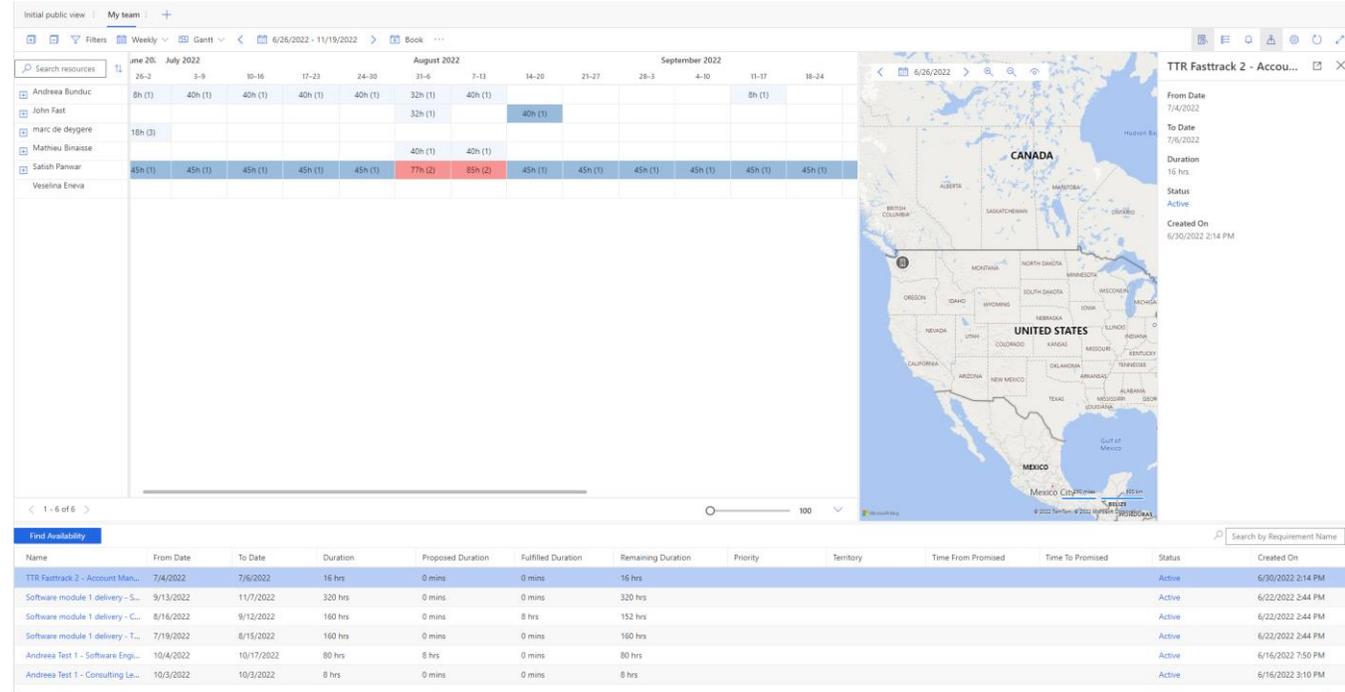


Multiple ways to book a resource

Ways	Mode	Description	Used
From the project main form	Hybrid	From the Project, find a resource and book with zero hour to add to the team	When you need to add someone based on the field criteria available in the schedule assistant
Book from the project's team grid	Hybrid	From the team member grid, add a team member from the quick create and book directly	When you know exactly who you want on your project and for how long
Generic resource fulfillment	Hybrid	From the team member grid, generate a resource requirement and book a resource using the schedule assistant	When you need to add someone based on requirement
Generic resource fulfillment	Central	From the schedule board, book a task derived requirement	When you need to add someone based on requirement
Book from schedule board	Central	Book a resource based upon an inbound list of resource requests	When you need to add several resources based on requirement
Generic resource booking	Central	From the schedule board, book the Project's Primary Requirement	When you need to add someone based on the field criteria available in the schedule assistant

Scheduling board

- Detail panel
- Map view
- Filter (Skills, territory...) & Save filter
- Requirement panel & view
- Alert
- Tab management & configuration



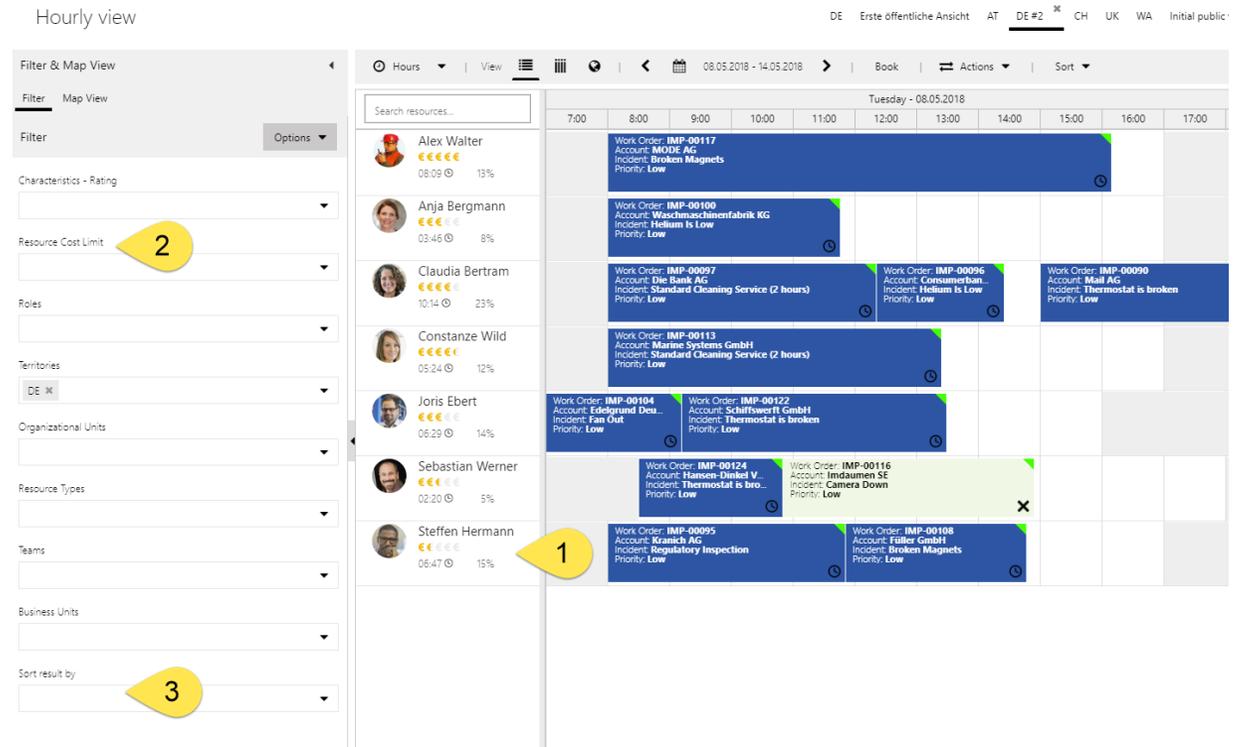
[Detail Configuration on schedule board](#)

Scheduling board

Custom resource attributes

The schedule board can be customized and extended:

- The resource cells where the resources' names, pictures, and utilization are listed by default
- The fields in the filter pane where dispatchers choose the resources in a view
- The sort options (also located in the filter pane) allowing dispatchers to sort the current resources on the schedule board based on various criteria.



Learn: [Extend Universal Resource Scheduling with Dynamics 365 Project Operations - Learn | Microsoft Docs](#)

Walkthrough: [Customize the schedule board with a custom resource attribute | Microsoft Docs](#)

Sample: [Extend Universal Resource Scheduling with custom constraint | Microsoft Docs](#)

Demo – Booking methods - Hybrid

Andreea Bunduc

Demo – Booking methods - Centralized

Andreea Bunduc & Mathieu Binaisse

Resource Reconciliation View

Typically, the sum of the bookings for a resource should equal the sum of the resource's assignments across one or many tasks. However, Project Operations **doesn't enforce this**

The Resource Reconciliation view displays where a resource's bookings and assignments don't agree.

- **Booking Shortage** is when a resource has more assignments than bookings.
- **Excess Bookings** are when a resource has been booked to the project but hasn't been assigned as much effort on tasks

Store Rebrand and Refurbish
Project

Project Stages: Active for 26 days, New (26 D), Quote

Summary | Tasks | Team | Resource Assignments | **Resource Reconciliation** | Estimates

Search resources... Refresh Previous difference Next difference Extend bo

Resource	Total	November 2021	December 2021	January 2021
David So	1,779.00	189.00	207.00	189.00
Booked	1,779.00	189.00	207.00	189.00
Assigned				
Jessica Liu	1,756.00	189.00	207.00	188.00
Mario Rogers	-266.00		-38.00	
Booked				
Assigned	266.00		38.00	
Plumbing	19.00			
Waste Removal	19.00			
	3,282.00	467.00	494.00	465.00

Legend: Booking shortage Excess bookings

Maintain and extend bookings

Used when you want to extend or maintain a resource on your project

Summary Tasks **Team** Resource Assignments Resource Reconciliation Estimates Tracking Sales Expense Estimates Material Estimates Related

All Team Members ▾

Subcontracting Options Specify Pattern Submit Request

Worker Type	Subcontract...	Bookable Resource	Role	Resourcing Unit	Position Name	Start	Finish	Required Hours	Hard Book...	Total Effort (Ho...	Delete Status
Employee	Valid	Shiela Sogge	Team Member	t202203142259z12d87	Generic Team Member	4/25/2022	4/29/2022	---	20.00	---	Not Pending
Employee	Valid	administrator #	Project Manager	t202203142259z12d87	Project Manager 1	4/22/2022	---	---	---	---	Not Pending

- Generate Requirement
- Edit
- Maintain Bookings
- Confirm
- Delete
- Share
- Email a Link
- Flow
- Word Templates
- Export Selected Records
- See associated records
- Show As

The screenshot shows a resource booking interface. At the top, there are navigation tabs: Summary, Tasks, Team (selected), Resource Assignments, Resource Reconciliation, Estimates, Tracking, Sales, Expense Estimates, Material Estimates, and Related. Below the tabs is a table of team members. The table has columns for Worker Type, Subcontracting status, Bookable Resource, Role, Resourcing Unit, Position Name, Start, Finish, Required Hours, Hard Booking status, Total Effort (Hours), and Delete Status. Two rows are visible: one for Shiela Sogge (Team Member) and one for administrator # (Project Manager). A context menu is open over the Shiela Sogge row, listing actions like Generate Requirement, Edit, Maintain Bookings, Confirm, Delete, Share, Email a Link, Flow, Word Templates, Export Selected Records, See associated records, and Show As. Below the table, there is a calendar view showing resource bookings for February, March, and April 2022. A specific booking for Shiela Sogge is highlighted on 4/24/2022. An 'Edit Resource Booking' dialog box is open, showing the booking details: Start Date (4/24/2022), End Date (4/30/2022), Hours (20), and Minutes (0). The dialog also shows the Start Date (4/25/2022), End Date (4/29/2022), Booking Status (Hard), and Resource (Shiela Sogge). The dialog has 'Update' and 'Close' buttons.

Demo – Maintain bookings

Andreea Bunduc & Mathieu Binaisse

Resource Utilization

• Utilization calculations are based on the actual hours that resources have reported by using approved time entries.

• The following formulas are used to calculate utilization:

- **Billable Utilization** = Chargeable actual hours ÷ Resource capacity
- **Non-Billable Utilization** = Actual time with billing type ID = Non-chargeable, Complementary, or Not available ÷ Resource capacity
- **Internal** = Actual time with no sales contract ÷ Resource capacity
- **Resource Capacity** = Resource work hours – Out-of-office – Non-working days

• The following formulas are used to color the cells:

- **Green:** Billable utilization >= Resource target utilization
- **Yellow:** Target utilization – 20 <= Billable utilization < Target utilization
- **Red:** Billable utilization < Target utilization – 20

Search resources...	Mon 6/13/2022	Tue 6/14/2022	Wed 6/15/2022	Thu 6/16/2022	Fri 6/17/2022	Sat 6/18/2022	Sun 6/19/2022	Mon 6/20/2022	Tue 6/21/2022	Wed 6/22/2022
Andreea Bunduc 0.00 @ 0%	0%	0%	0%	0%	0%	0%	0%	0%	22%	77%
John Fast 0.00 @ 0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
marc de deygere 0.00 @ 0%			55%	44%	44%	0%	0%	44%	44%	77%
Mathieu Binaisse 0.00 @ 0%			0%	0%	0%	0%	0%	0%	0%	0%
Satish Panwar 27.00 @ 30%			22%	0%	0%	0%	0%	0%	0%	33%
Veselina Eneva 0.00 @ 0%			0%	0%	0%	0%	0%	0%	0%	0%

marc de deygere
GMT+01:00

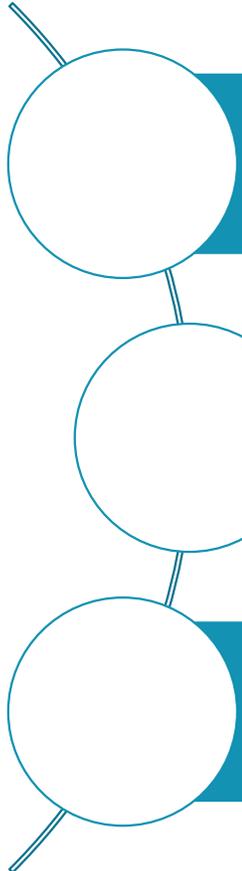
Skills
TTR 0366CE
TTR 0366FO
TTR 0366M

Roles
Software Engineer
TTR Manager
TTR Solution Architect

Utilization
Target 75%
Billable 40%
Non-Billable 0%
Internal 0%
Not Utilized 52%

What's coming

What's coming in future releases



New scheduling board

Editing task assignment contours

Performance improvements on long running bookings

Resources

Resources - General

- [Overview - Dynamics 365 Project Operations | Microsoft Docs](#)
- [Overview - Finance and Operations application documentation - Finance & Operations | Dynamics 365 | Microsoft Docs](#)
- [Community - Dynamics 365 General - Forums, Blogs, Support](#)
- [Roadmap - Product Updates | Microsoft Dynamics 365](#)
- [Ideas - Ideas \(dynamics.com\)](#)
- [FastTrack - Microsoft FastTrack, move to the cloud with confidence](#)
- [Resource management key concepts | Microsoft Docs](#)

Resources – Documentation and Learning

- [Dynamics 365 Project Operations Deployment Options and Scenarios | February 2 & 3, 2022 - Microsoft Dynamics Blog](#)
- [Dynamics 365 Project Operations Demonstration | March 16, 2022 - Microsoft Dynamics Blog](#)
- [Dynamics 365 Project Operations Data Migration | April 14, 2022 - Microsoft Dynamics Blog](#)
- [Documentation](#)
- [Developer home page](#)
- TechTalks* [Upcoming](#) / [Recordings](#)
- YouTube [Dynamics 365](#)
- [Microsoft Learn](#)

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Useful links on SLA, Compliance, and Support

- [Licensing Guide](#)
- [Trust Center](#) – For information on privacy, compliance, and security procedures
- [Online Services Terms](#) – Terms and Conditions of Microsoft Services
- [Support Options](#)

Q & A

Reach out!

- Andreea Bunduc: abunduc@microsoft.com
- Mathieu Binaisse: mbinaisse@microsoft.com
- Martin Walker: walker.martin@microsoft.com

Thank you!