

Dynamics 365 Project Operations - Resource Management

Presenters:

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R&D Solution Architect

Mathieu Binaisse

Senior R&D Solution Architect

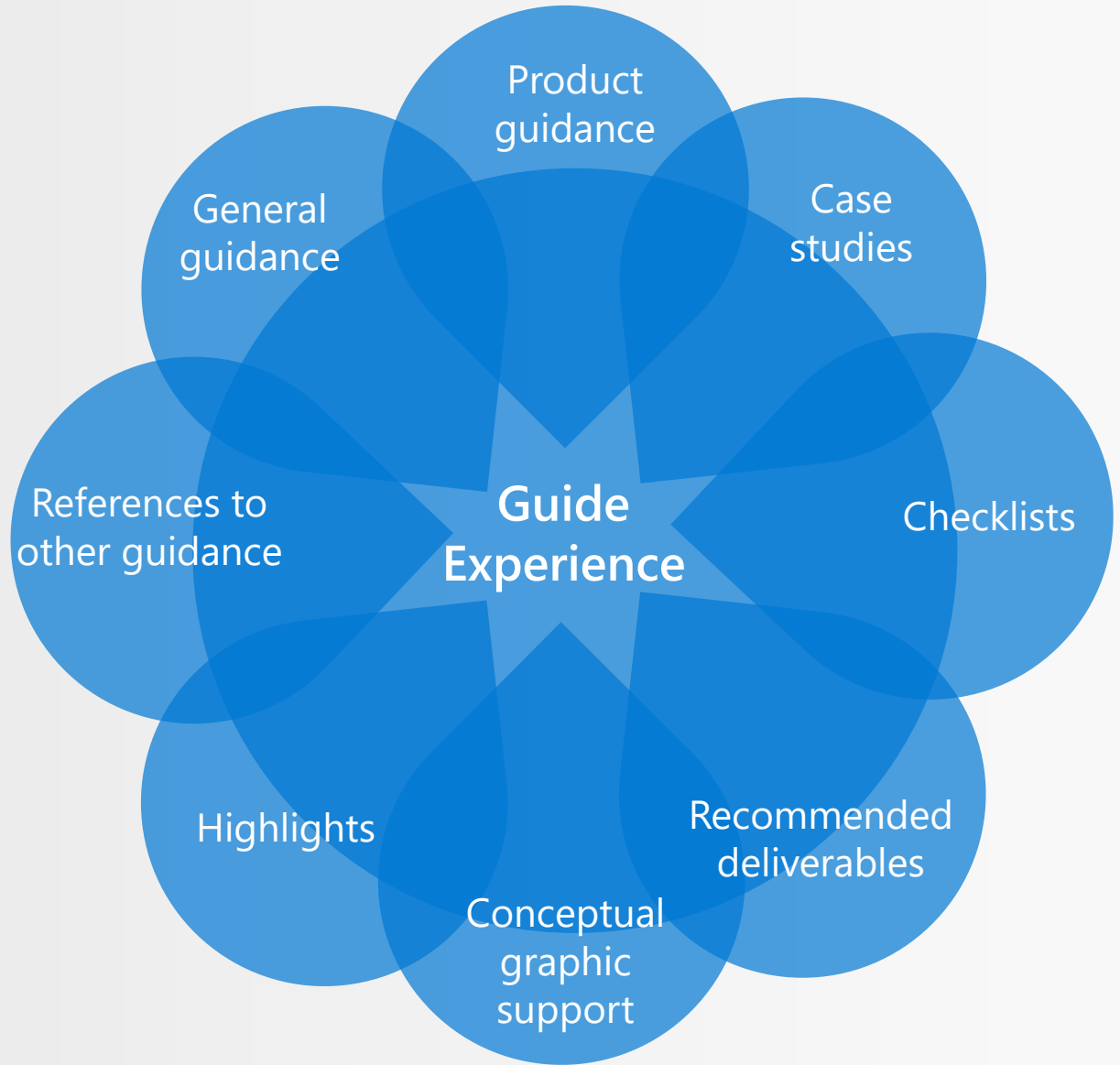
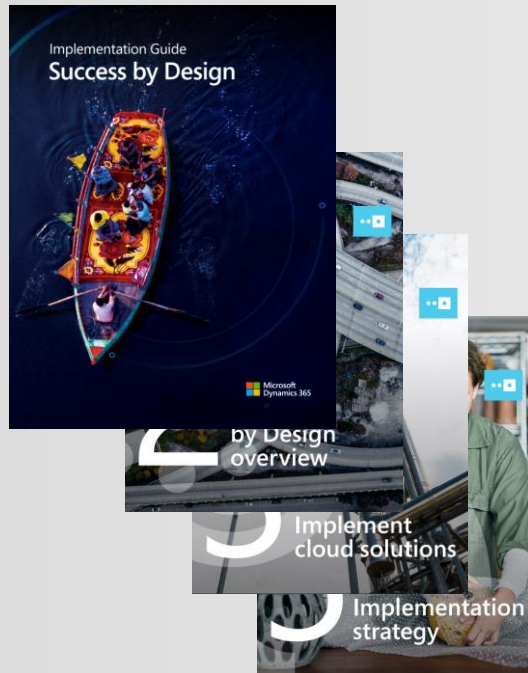
Martin Walker

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

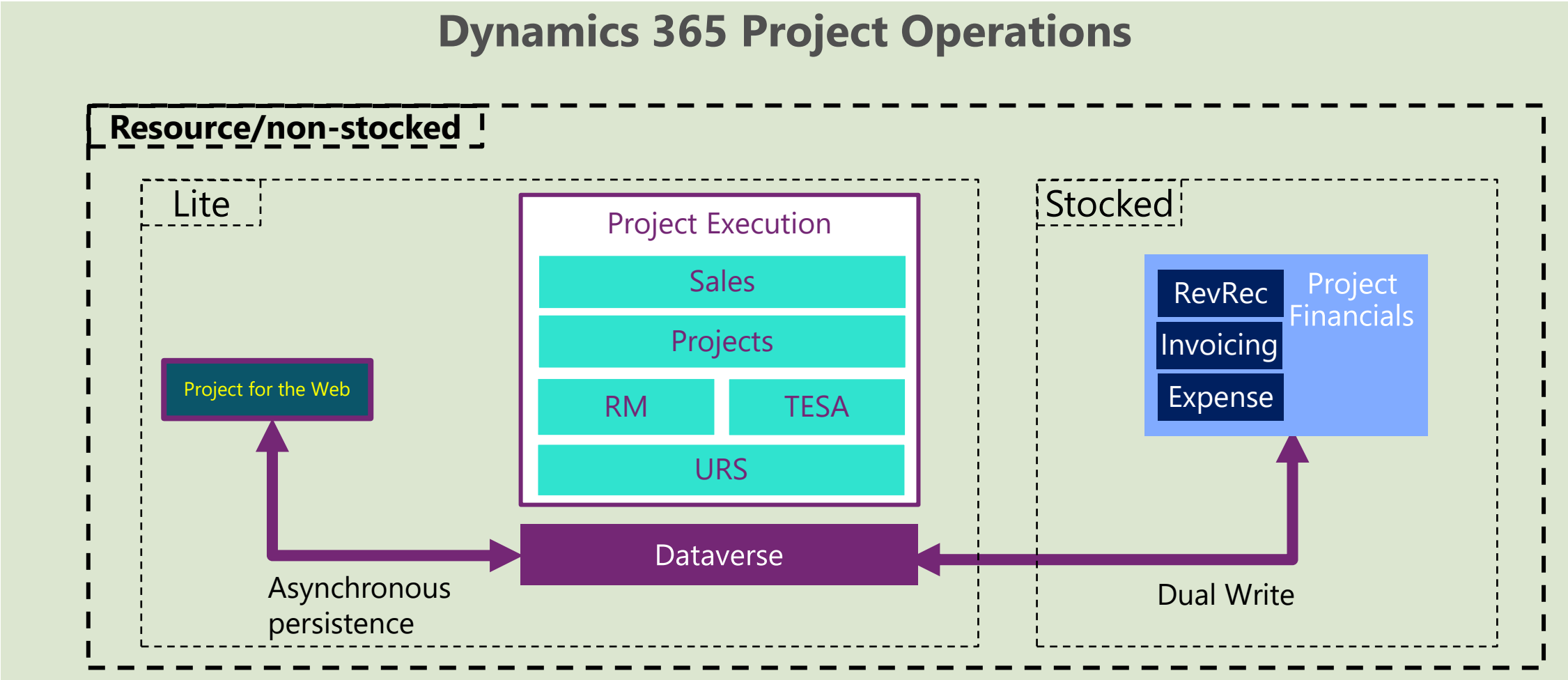
1. Deployment considerations
2. Detailed aspects of Data Migration/Integrations
3. Comparison with other Dynamics 365 Customer Engagement Apps
4. Licensing considerations
5. Technical details

Agenda

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

Before we start

Architecture

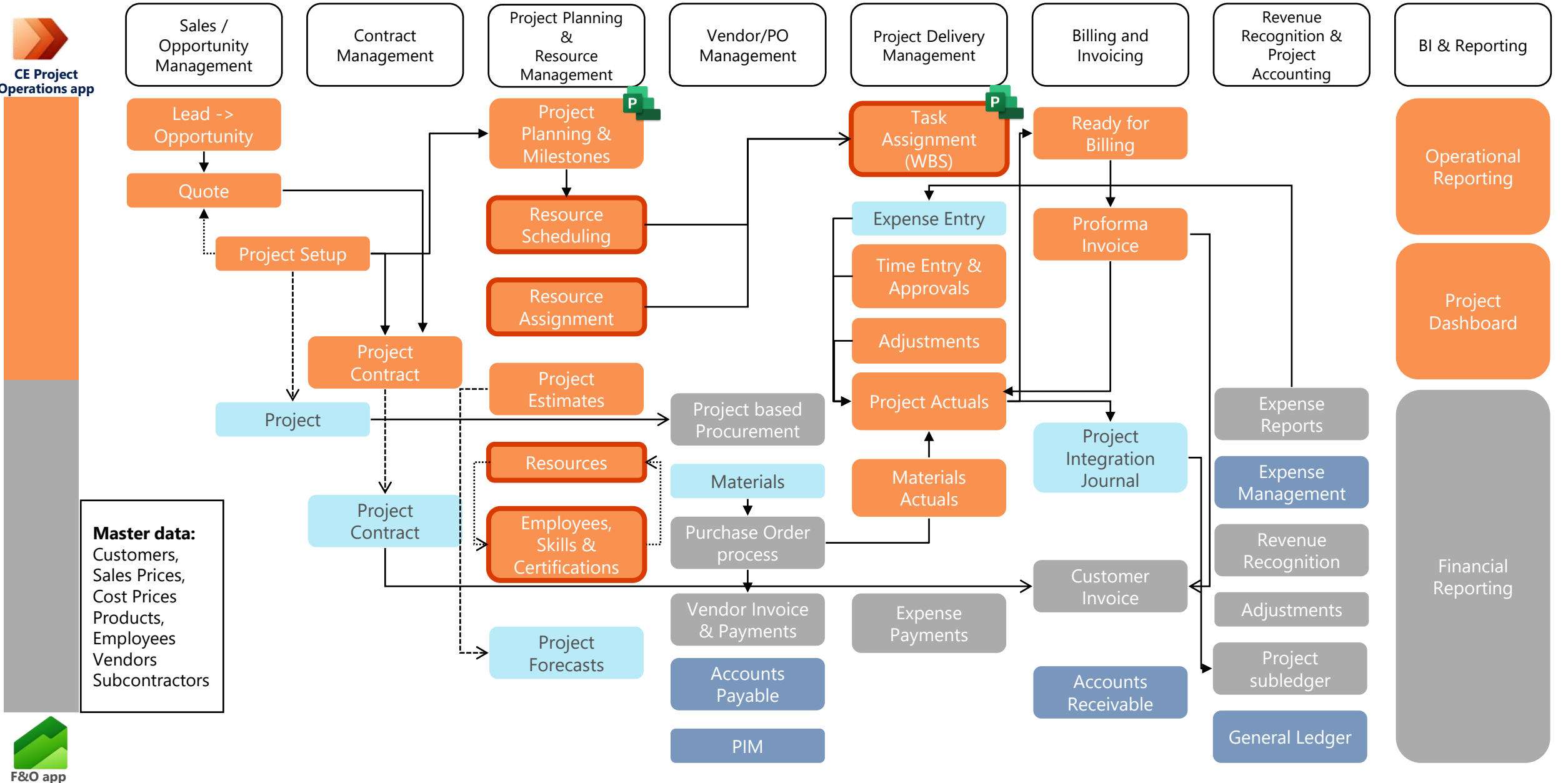


Key

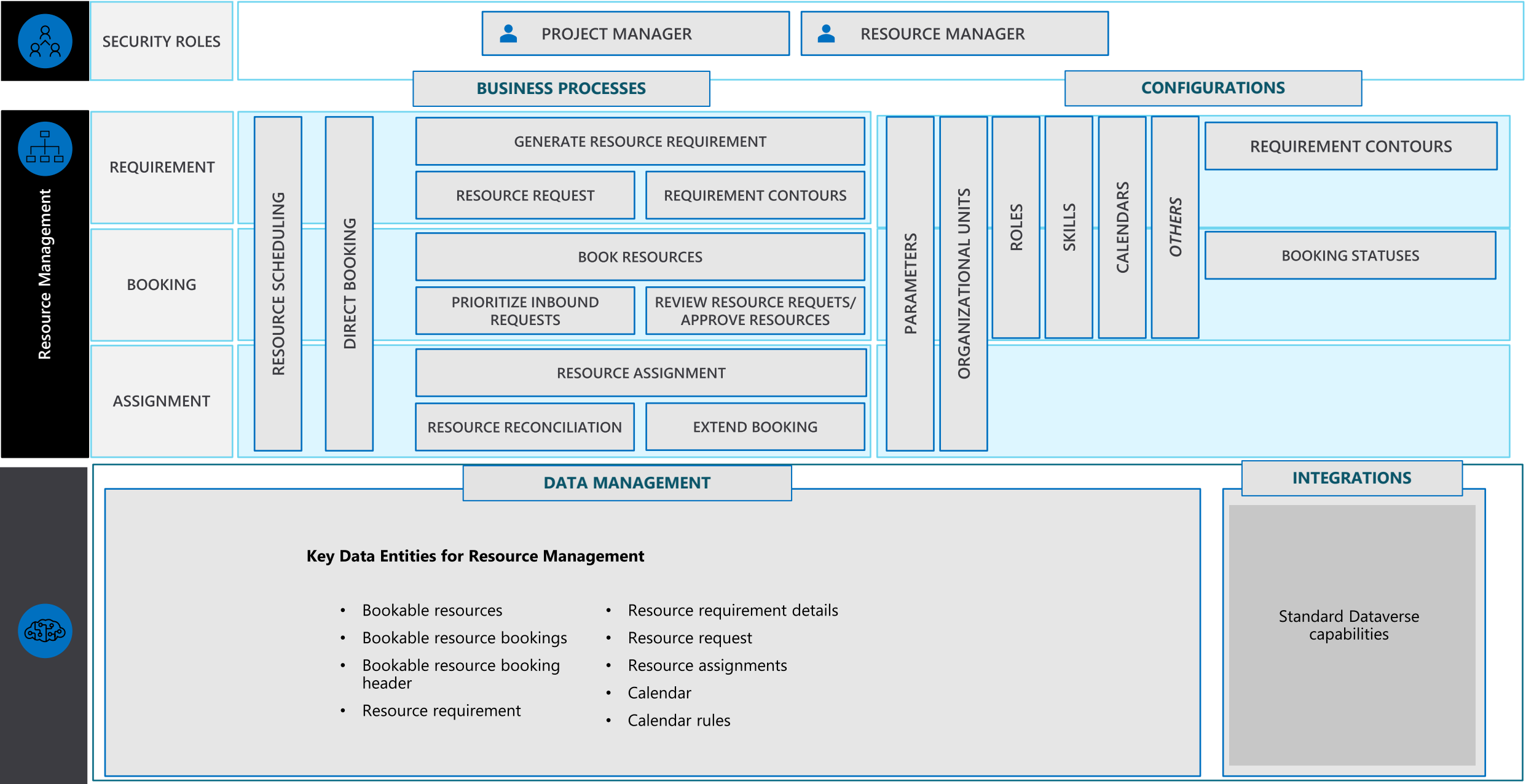
M365 Services	D365 CE App
Dataverse	D365 F&O App

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.

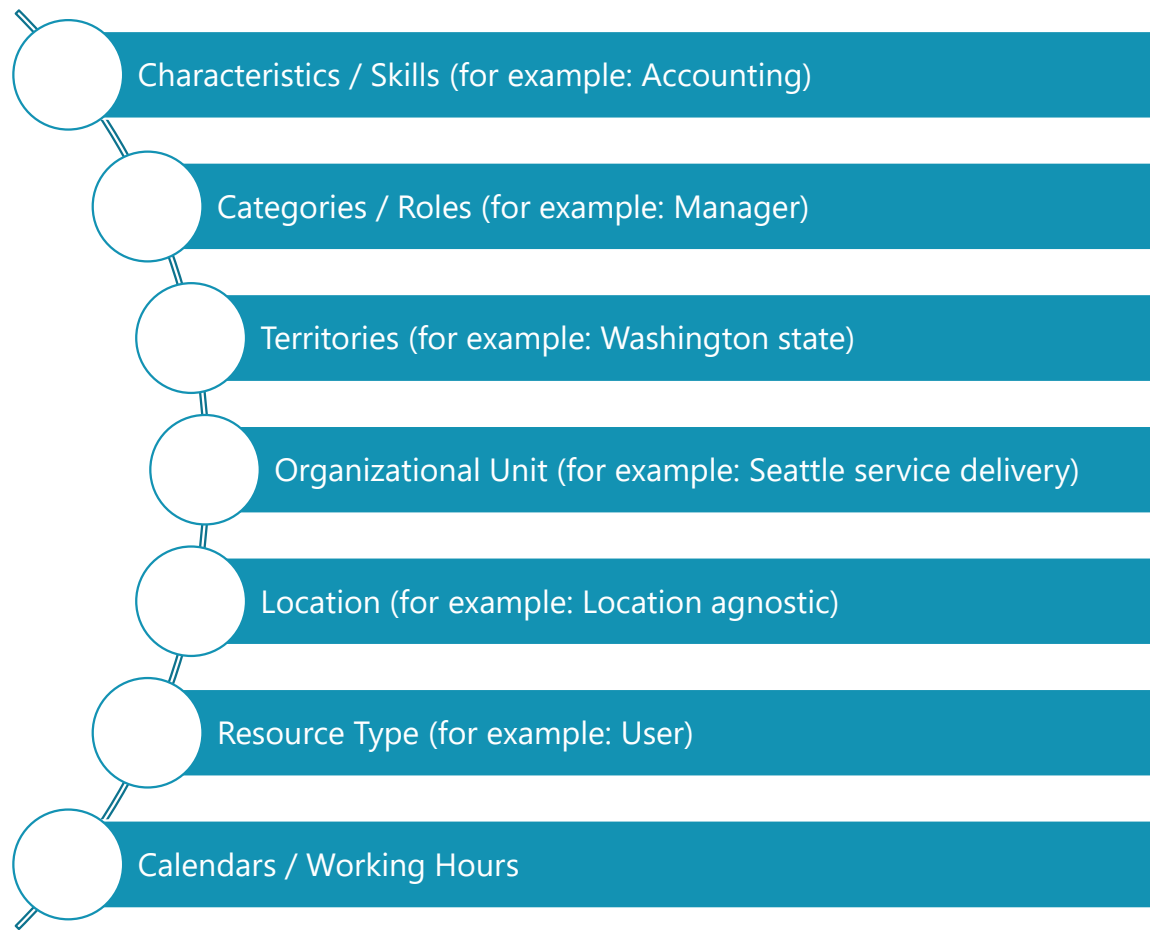


Core concepts

Core concepts

Resources

What defines a resource?



John Fast - Saved
Bookable Resource

GeneralProject ServiceSchedulingWork HoursRelated

Resource Skills

Name 1	Characteristic	Rating Value
Skill - TTR D365FO	TTR D365FO	Good
Skill - TTR Integration	TTR Integration	Good
Skill - TTR Solution Architect	TTR Solution Architect	Good
Skill - TTRM	TTRM	Good

1 - 4 of 4

Resource Role

Resource Category 1	Is Default
TTR Solution Architect	No

1 - 1 of 1

John Fast - Unsaved
Bookable Resource

GeneralProject ServiceSchedulingWork HoursRelated

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

Scheduling

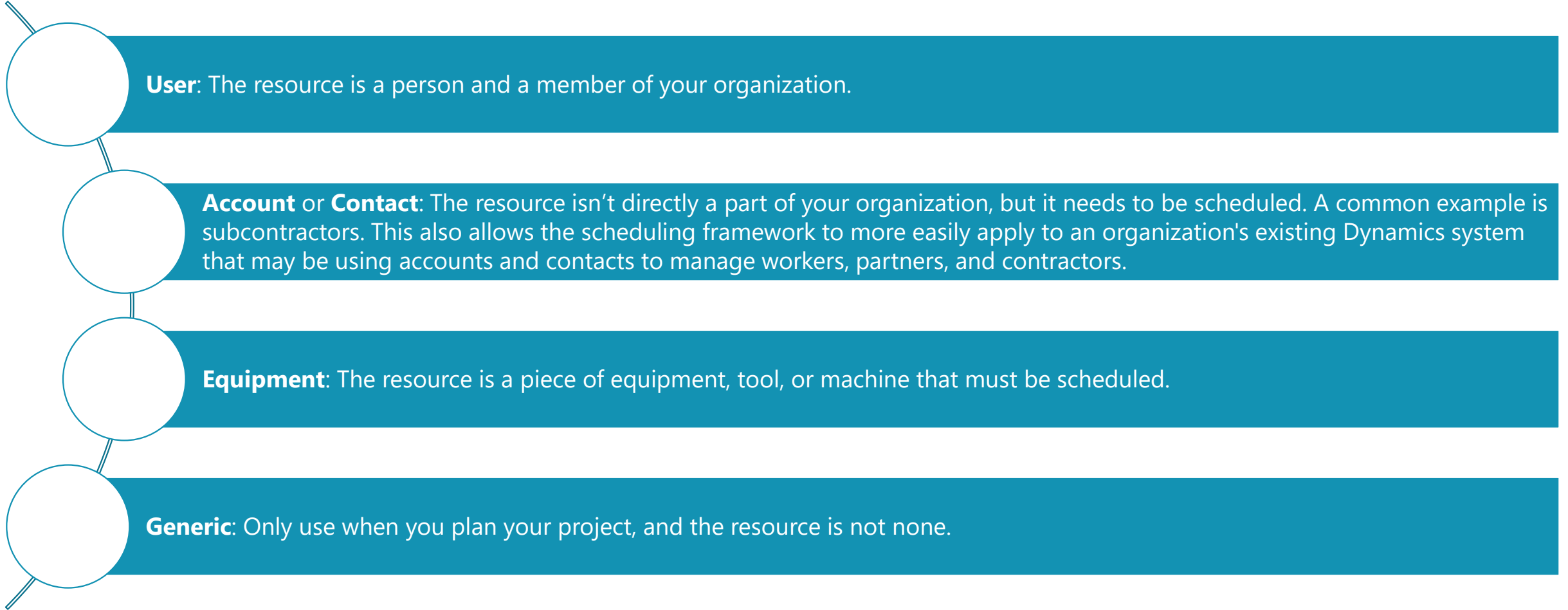
Display On Schedule Board	* Yes	Enable for Availability Search	Yes
---------------------------	-------	--------------------------------	-----



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 ▾

<input type="radio"/> 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

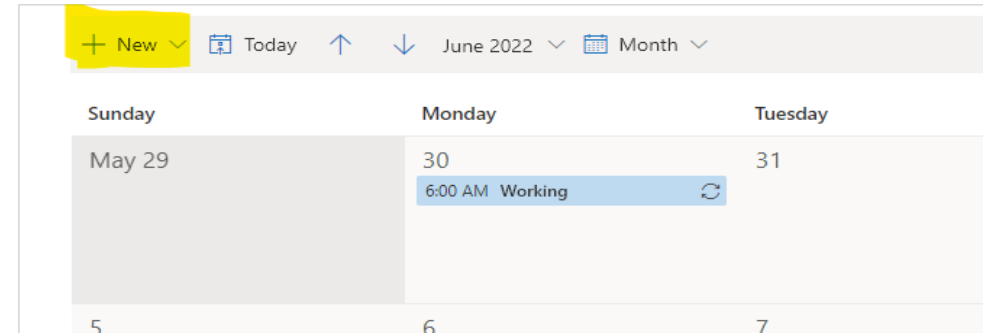
Core concepts

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



The screenshot shows the 'Active Bookable Resources' list. The list has a search bar and a 'Name' dropdown. The resources listed are Abraham McCormick, Allison Dickson (selected), Andreea Bunduc, Ashley Chinn, Bernadette Foley, Bob Kozak, Brady Hannon, and Chad Cottrell. A 'Work Hours Template' dialog box is open, showing a warning message: '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.

SummaryTasksTeamResource AssignmentsResource ReconciliationEstimatesTrackingSalesTask Billing SetupExpense EstimatesMaterial 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	
Task	Bookable Resource	Role (Task)	Organizational Unit (Task)	Role (Project Team)	Resourcing Unit (Project ...	Start			

Resource

Software engineer 007

Start

6/24/20229:00 AM

Estimated Arrival Time

6/24/20229:00 AM

End

6/24/20225:00 PM

Booking Status

Hard

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

SummaryTasksTeamResource AssignmentsResource ReconciliationEstimatesTrackingSalesTask Billing SetupExpense EstimatesMaterial EstimatesRelated

GridBoardTimeline

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
Task 3			2 days		24 hours
Task 4			10 days	5	160 hours
Task 5			1 day		2 hours
+ Add new task					

C1DL

Enter text to search.

Assigned

C1 Consulting Lead 1

DL Demo0 Consultin...

Resource	Total	6/12/2022	6/19/2022	6/26/.
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

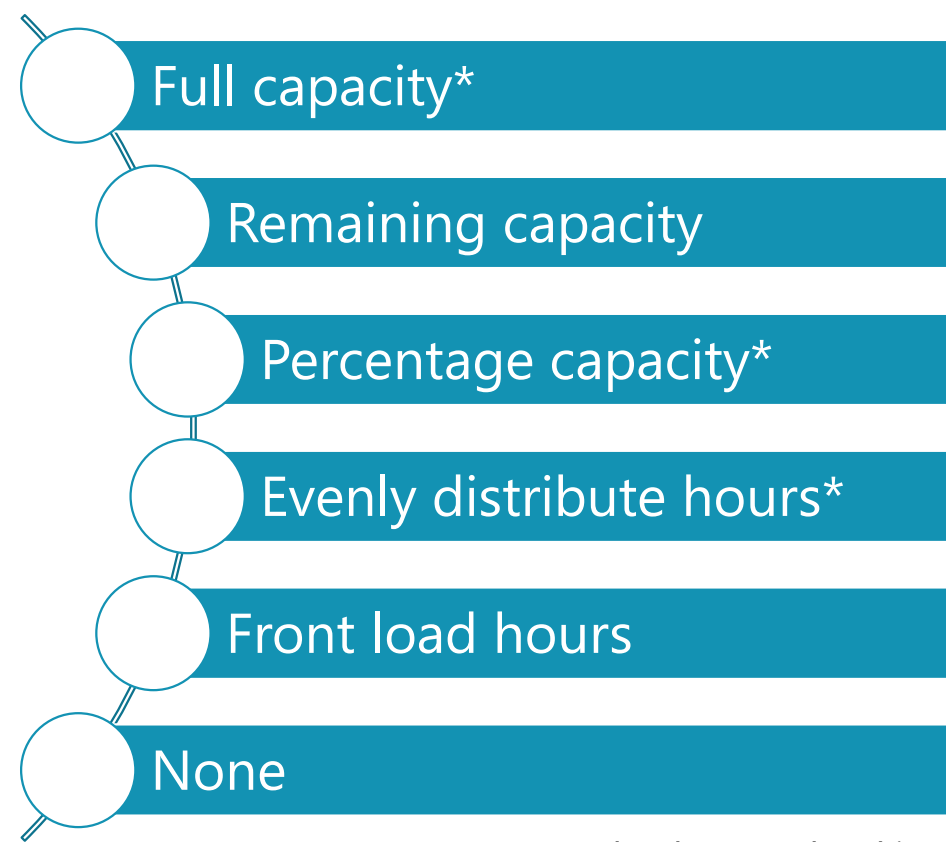
Active Booking Statuses* ▼	
<input type="radio"/> Name ↑ ▼	Status ▼
Canceled	Canceled
Committed	Committed
Hard	Committed
Proposed	Proposed
Soft	Proposed

Named Team Members ▼

+ New  Generate Requirement  Specify Pattern  Edit ⋮

<input checked="" type="checkbox"/> 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

Electrician

×

Resourcing Company

USPM

Resourcing Unit

Contoso Professional Services

Start

11/25/2020

Finish

10/5/2021

Allocation Method

Full Capacity

--Select--

None

Full Capacity

Percentage Capacity

By Hours - Distribute evenly

By Hours - Front load

Hours

Project Approver

Save and Close

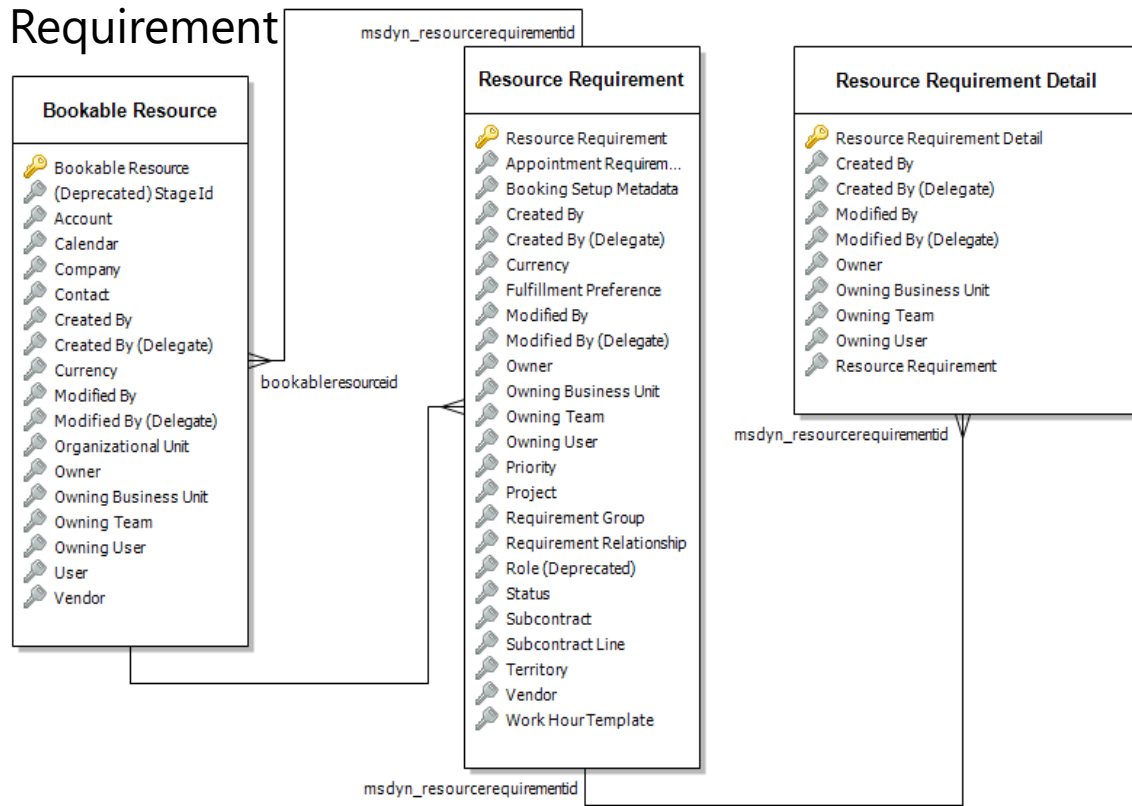
Cancel

Front load hours

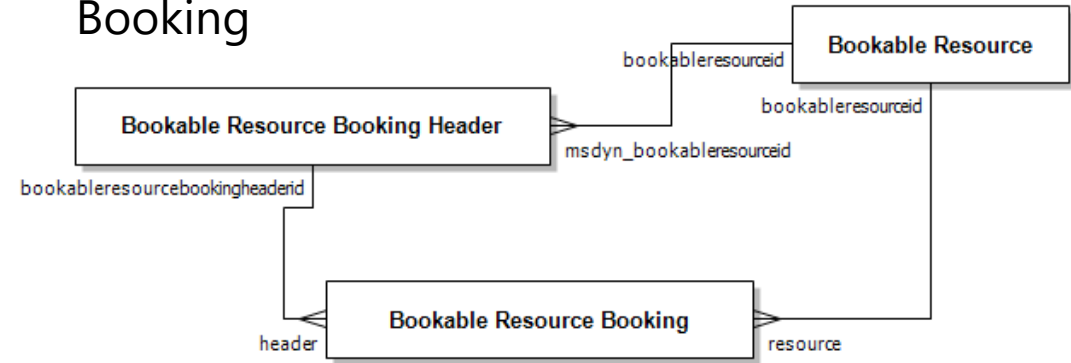
	Day 1	Day 2	Day 3	Day 4	Day 5	Total
Existing bookings	8	8	4	0	0	20
New booking	0	0	4	8	8	20

Core concepts

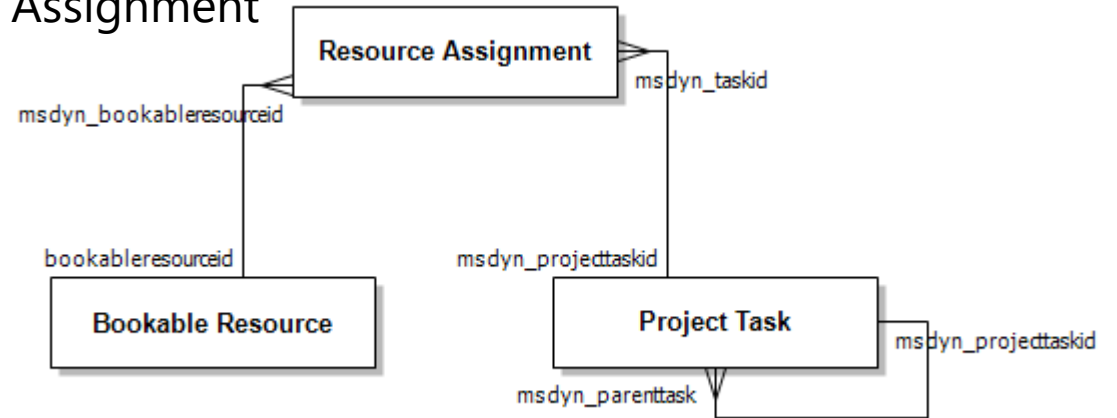
Requirement



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'. The left sidebar contains navigation options: Home, Recent, Pinned, General, Parameters (selected), Organizational Units, Transaction Categories, and Expense Categories. The main content area is titled 'Parameter - Saved' and 'Project Parameter'. It features tabs for 'General', 'Price List', 'Amount Based Pricing Dimensions', 'Markup Based Pricing Dimensions', and 'Related'. The 'General' tab is active, showing a form with the following fields:

Description	Parameter
Enable multi-currency cost price list	No
Default Organizational Unit	Contoso Robotics US

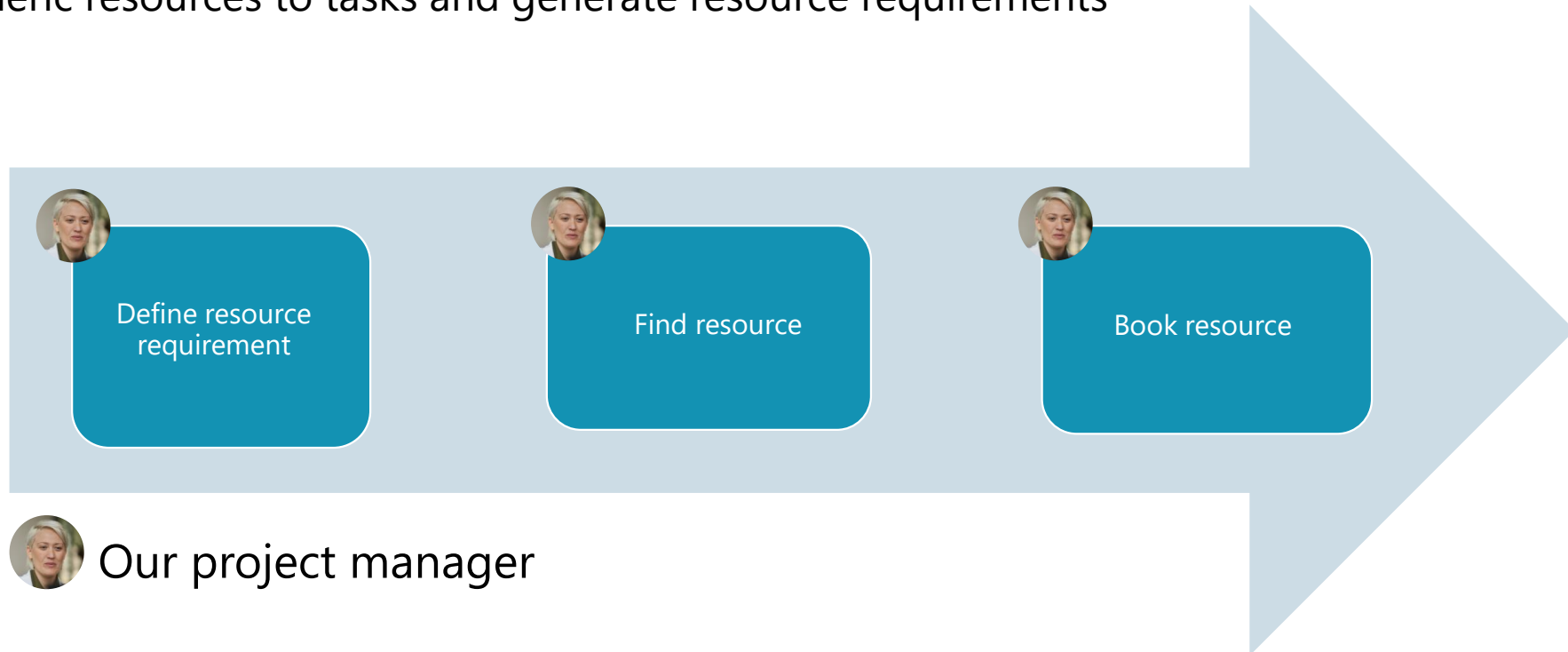
On the right side of the form, there are two additional fields:

- 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:

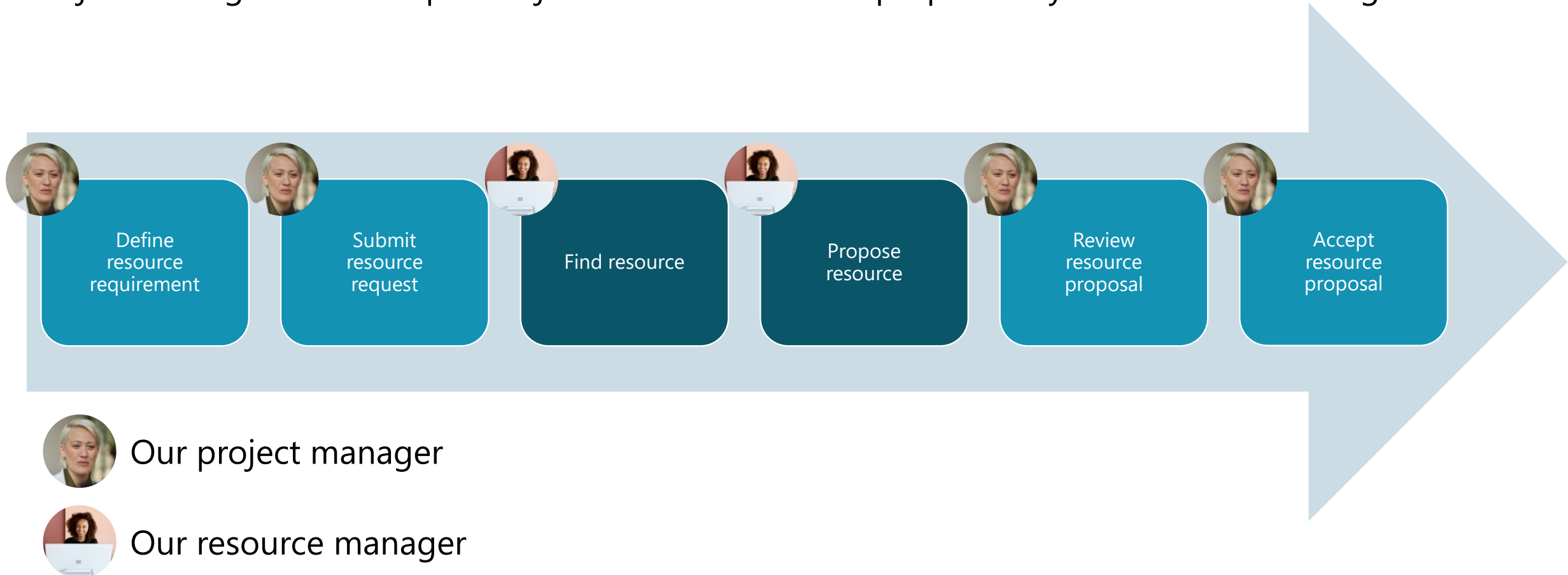
- Add a team member directly to a project
- Book a team member to fulfill resource requirements for a generic resource
- Assign generic resources to tasks and generate resource requirements



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.

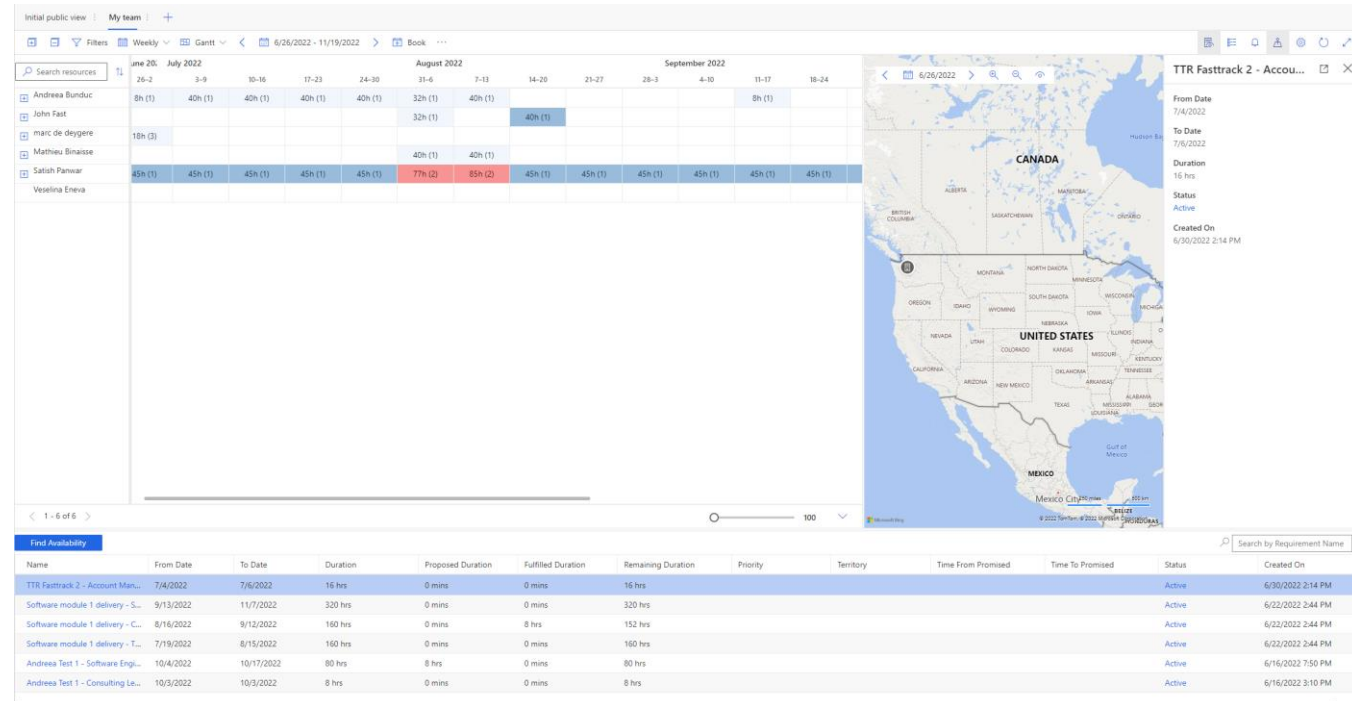


Multiple ways to book a resource

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



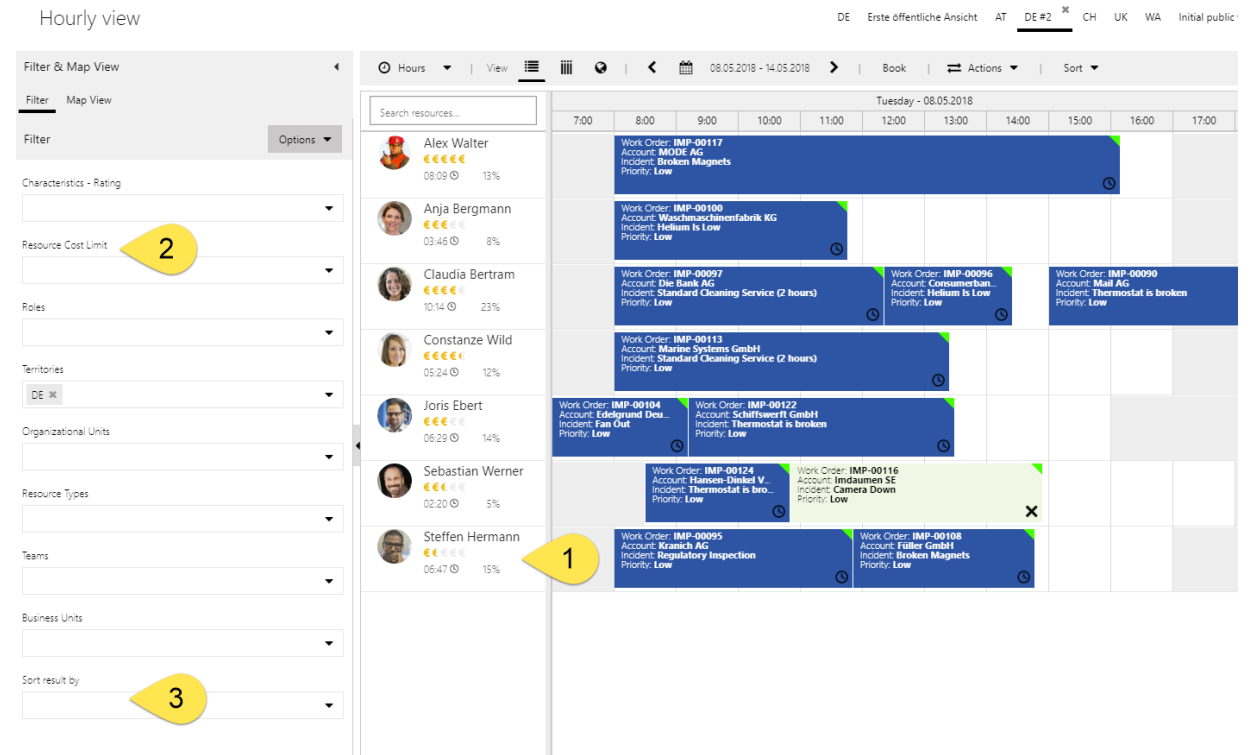
[Detail Configuration on schedule board](#)

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

Save

Save & Close

New Project

Copy Project

Deactivate

Book

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 202	December 202	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

SummaryTasksTeamResource AssignmentsResource ReconciliationEstimatesTrackingSalesExpense EstimatesMaterial EstimatesRelated

All Team Members

Subcontracting OptionsSpecify PatternSubmit Request

Worker TypeSubcontract...Bookable ResourceRoleResourcing UnitPosition NameStartFinishRequired HoursHard Book...Total Effort (Ho...Delete Status

> EmployeeValidShiela SoggeTeam Membert202203142259z12d87iGeneric Team Member.4/25/20224/29/2022---20.00---Not Pending

> EmployeeValidadministrator #Project Managert202203142259z12d87iProject Manager 14/22/2022------Not Pending

WeeksView2/20/2022 - 7/16/2022BookActionsSort

Search resources...

Shiela Sogge100.0120%Project

February 2022March 2022April 2022

2/20/20222/27/20223/6/20223/13/20223/20/20223/27/20224/3/20224/10/20224/17/20224/24/2022

20

Edit Resource BookingAdvanced

Start DateEnd DateHoursMinutes

4/24/20224/30/2022200

Start Date:4/25/2022End Date:4/29/2022Booking Status:HardResource:Shiela Sogge

Selected Work:Consulting projTotal Duration:20 hrs

UpdateClose

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

- The following formulas are used to color the cells:

- **Green:** Billable utilization \geq Resource target utilization
- **Yellow:** Target utilization $- 20 \leq$ 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 D365CE
TTR D365FO
TTR M

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!