



ABAP RESTful Application Programming Model (RAP)

Webinar, 30.4.2021, 10:00 Uhr



Sören Schlegel

Development Architect at j&s-soft gmbh

eMail: soeren.schlegel@js-soft.com

Twitter: [@SoSchlegel87](https://twitter.com/SoSchlegel87)

Themenschwerpunkte

- Konzeption & Management von Entwicklungsprojekten
- SAP Architektur moderner Anwendungen
- SAP Change Management and S/4HANA
- SAP CDS, oData und Cloud



Johann Föbleitner

Senior Consultant at Cadaxo

eMail: johann.foessleitner@cadaxo.com

Twitter: [@foessleitnerj](https://twitter.com/foessleitnerj)

Beratungsschwerpunkte

- Konzeption & Management von Entwicklungsprojekten
- Qualitymanagement & Performanceoptimierung
- Clean Code
- S/4HANA Custom Development

- SAP Champion 🏆



Domini Bigl

Senior Consultant at Cadaxo

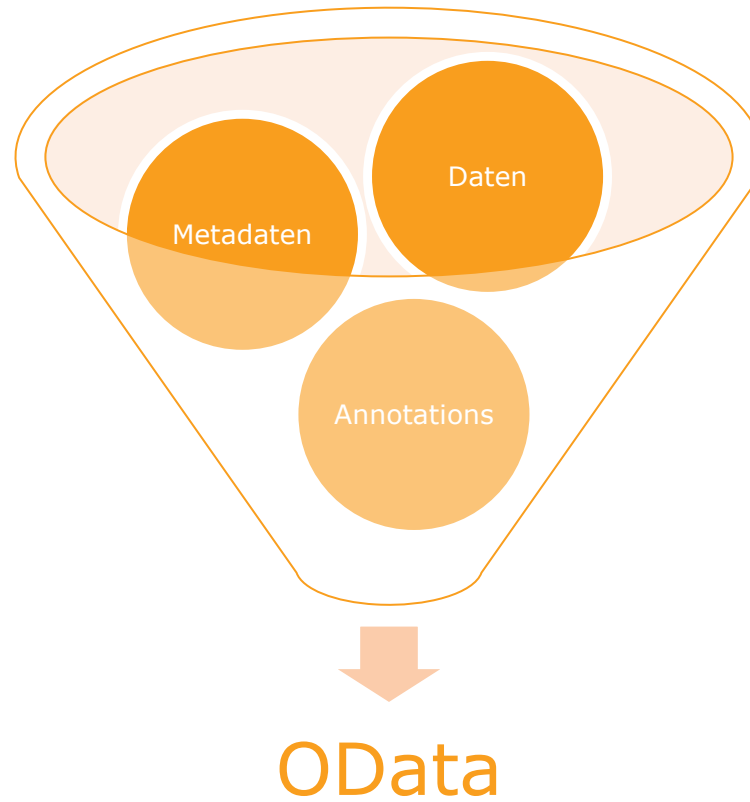
eMail: dominik.bigl@cadaxo.com

Twitter: [@DomiBiglSAP](https://twitter.com/DomiBiglSAP)

Beratungsschwerpunkte

- Konzeption & Management von Entwicklungsprojekten
- Qualitymanagement & Performanceoptimierung
- ABAP Units
- SAP Fiori, SAP UI5

Was ist eigentlich OData und woher kommt RAP



Freestyle

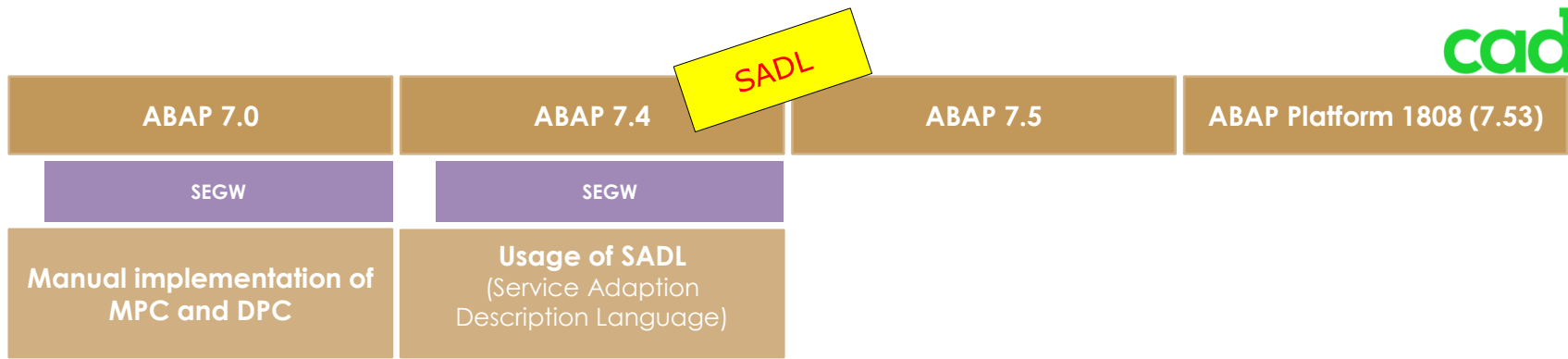


SEGW

Manual implementation of MPC and DPC

- Annotations:
- Vocabulary
 - MPC_EXT

- Logic:
- Everything: Manual!



Annotations:

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Logic:

- Everything: Manual!

Logic:

- Query + READ: SADL
- CUD: Manual

ABAP for Fiori

ABAP 7.0	ABAP 7.4	ABAP 7.5	ABAP Platform 1808 (7.53)
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SEGW

SEGW

SEGW @odata.publish: true

Manual implementation of MPC and DPC

Usage of SADL (Service Adaption Description Language)

CDS & BOPF (Core Data Services (Business Object Processing Framework) RDS (Referenced Data Source) + SADL

- Annotations:
- Vocabulary
 - MPC_EXT

- Annotations:
- Vocabulary
 - MPC_EXT

- Annotations:
- Vocabulary
 - MPC_EXT
 - CDS-Based
 - MDE: Meta-Data-Extension

Only with SEGW

- Logic:
- Everything: Manual!

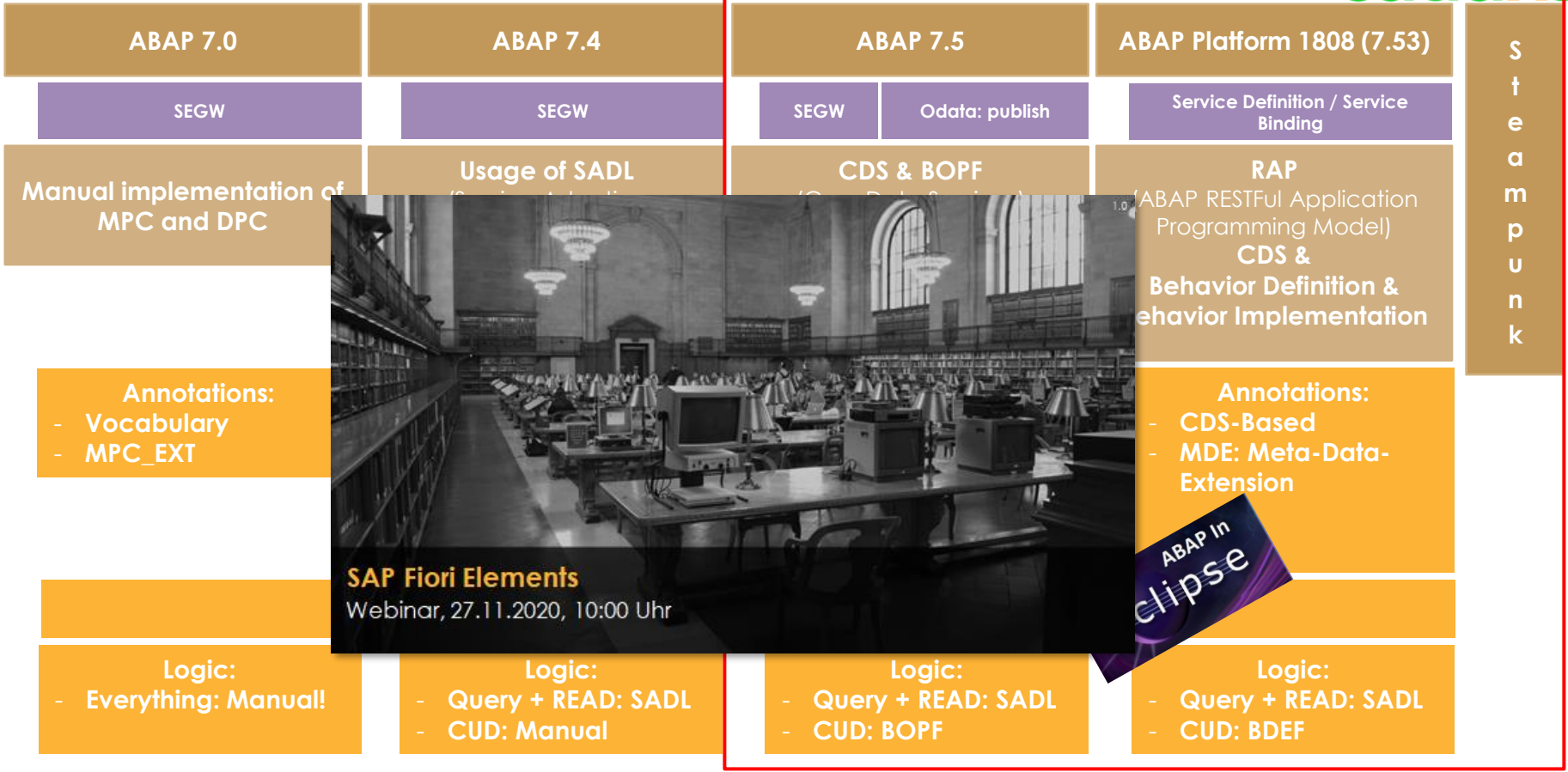
- Logic:
- Query + READ: SADL
 - CUD: Manual

- Logic:
- Query + READ: SADL
 - CUD: BOPF

RAP

ABAP 7.0	ABAP 7.4	ABAP 7.5		ABAP Platform 1808 (7.53)
SEGW	SEGW	SEGW	Odata: publish	Service Definition / Service Binding
Manual implementation of MPC and DPC	Usage of SADL (Service Adaption Description Language)	CDS & BOPF (Core Data Services) (Busines Object Processing Framework) RDS (Referenced Data Source) + SADL		RAP (ABAP RESTful Application Programming Model) CDS & Behavior Definition & Behavior Implementation
Annotations: <ul style="list-style-type: none"> - Vocabulary - MPC_EXT 	Annotations: <ul style="list-style-type: none"> - Vocabulary - MPC_EXT 	Annotations: <ul style="list-style-type: none"> - Vocabulary - MPC_EXT - CDS-Based - MDE: Meta-Data-Extension 		Annotations: <ul style="list-style-type: none"> - CDS-Based - MDE: Meta-Data-Extension
Logic: <ul style="list-style-type: none"> - Everything: Manual! 	Logic: <ul style="list-style-type: none"> - Query + READ: SADL - CUD: Manual 	Logic: <ul style="list-style-type: none"> - Query + READ: SADL - CUD: BOPF 		Logic: <ul style="list-style-type: none"> - Query + READ: SADL - CUD: BDEF

Only with SEGW



Die Architektur

Klassische ABAP Entwicklung

- Freestyle ABAP
Entwicklung

ABAP Plattform \leq 7.50

ABAP Programmiermodell für SAP FIORI

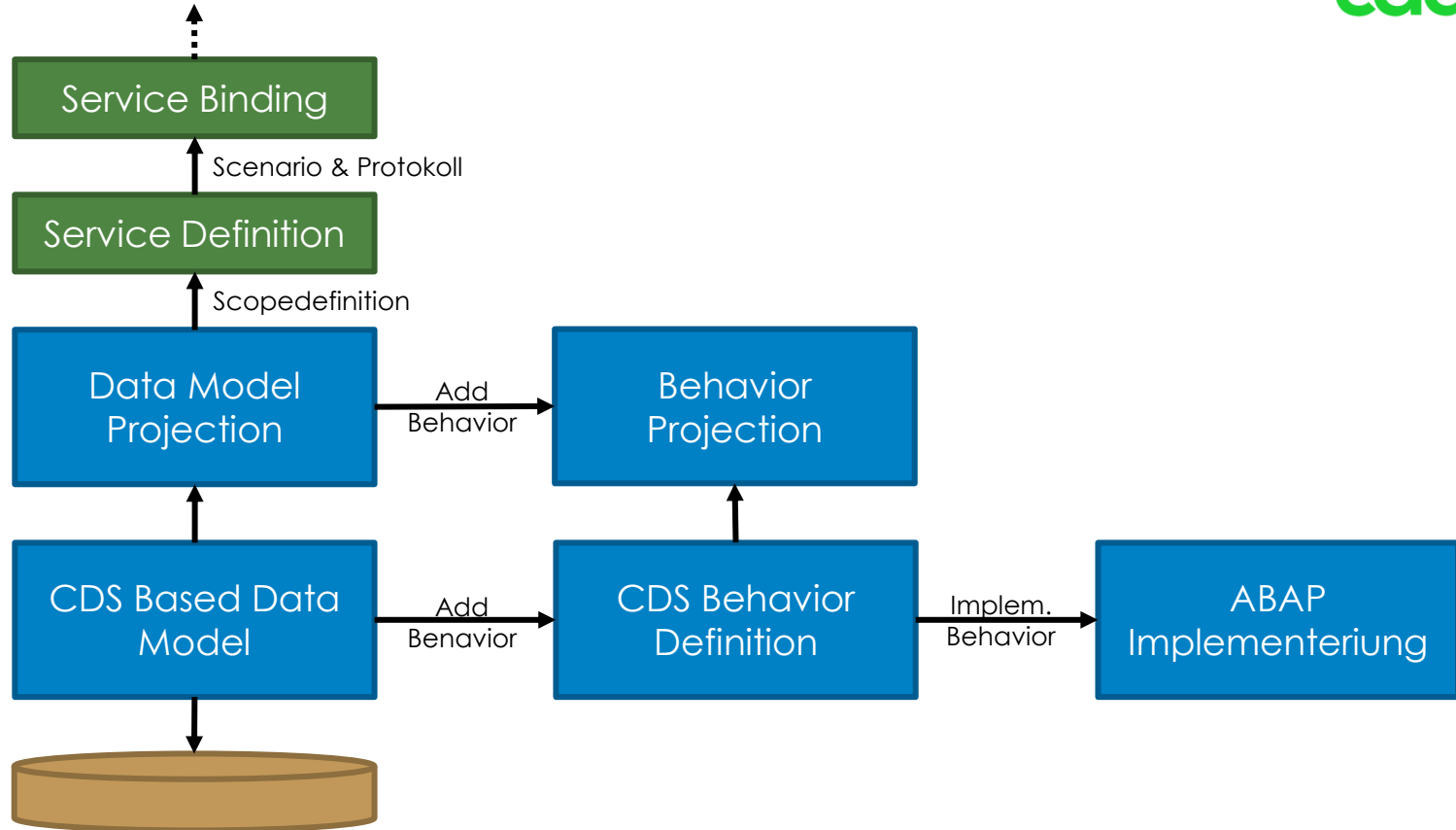
- Gateway Builder
- OData
- BOPF
- Core Data Services

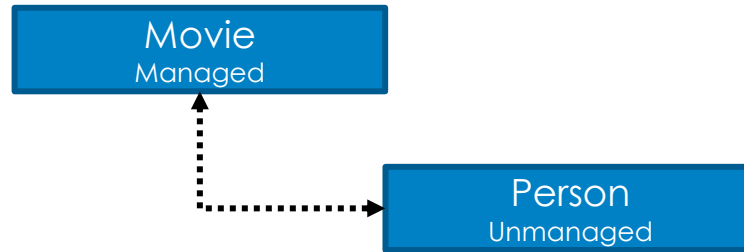
ABAP Plattform \geq 7.51

ABAP RESTful Programmiermodell (RAP)

- Business Service
- Core Data Services
- Verhaltensdefinition

SAP Cloud Platform ABAP
SAP S/4HANA





Unmanaged

Brownfield – Vollständige Kontrolle der RAP Entwicklung und Integration bestehender Entwicklungen.

Managed

Greenfield – Für Neuentwicklungen gedacht. No-Code bzw. Low-Code.

Managed Demo

Unmanaged Demo

Und was ist nun mit BOPF?

RAP vs. CAP

- ABAP **RESTful Application Programming Model**
- **Cloud Application Programming Model**
- Was ist der Unterschied?

- **Der 1. Buchstabe - ;)**

	RAP	CAP
Plattform	ABAP Steampunk (SAP BTP ABAP Environment) S/4HANA > 1909	Node.js / Java
Sprachen	ABAP	Javascript / Java
Typ	ABAP Sprachsyntax + Framework	<i>opinionated framework</i> „Baukasten“ aus Libraries, Tools für unterschiedliche Sprachen offenes Design*
Basis	ABAP CDS (HANA)	CAP CDS HANA, SQLite PostgreSQL*

* <https://github.com/sapmentors/cds-pg>

Volker Buzek, Gregor Wolf,...

<https://blogs.sap.com/2021/02/15/6-reasons-why-sap-should-open-source-cap/>

EML

- **Entity Manipulation Language (EML)**
 - RAP Objekte können direkt in ABAP mit der EML Syntax verwendet werden
 - Standard API / Generic API

```
DATA: failed TYPE RESPONSE FOR FAILED zsd_f_i_movie_m.
```

```
READ ENTITIES OF zsd_f_i_movie_m
  ENTITY movie
  FIELDS ( title ) WITH VALUE #( ( movieid = i_movie_id ) )
  RESULT DATA(lt_received_travel_data)
  FAILED failed.
```


- **Mögliche Themen für den 2. Teil – 25.6. 10:00 Uhr**

- DRAFT (vgl. mit BOPF)
- Update Tasks / Commit
- Custom Entities
- Virtual Nodes
- Conversion Exits
- Actions (with Parameters)
- ...



<https://www.eventbrite.com/e/abap-restful-application-programming-model-teil-2-tickets-134890317571>

- SAP Developer Tutorials
 - [Develop a Fiori App Using RAP – Managed Scenario](#)
- openSAP
 - [Building Apps with the ABAP RESTful Application Programming Model](#)
 - [Developing Web Apps with SAPUI5](#)
 - Woche 2, Unit 6 – Working with OData Services
- CodeJam
 - [CodeJam - SAP Cloud Platform, ABAP Environment & ABAP RESTful Application Programming Model](#)
- Youtube
 - [The RAP Generator – SAP Online Track 2020](#)
 - [RAP on Speed](#) – SAP Online Track Munich / Vienna
- SAP TechED
 - [ABAP RESTful Programming Mode \[Live Demo\], SAP TechEd Lecture \(2019\)](#)
 - [DEV260 - Build SAP Fiori Apps with the ABAP RESTful Application Programming Model](#)



<http://www.cadaxo.com/blog/>