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June 4th 2025

abap conf2025

ABAPConf Keynote

Capabilities

June 4th, 2025

09:30 CEST|3:30 EDT

Tobias Hofmann
Conitas GmbH

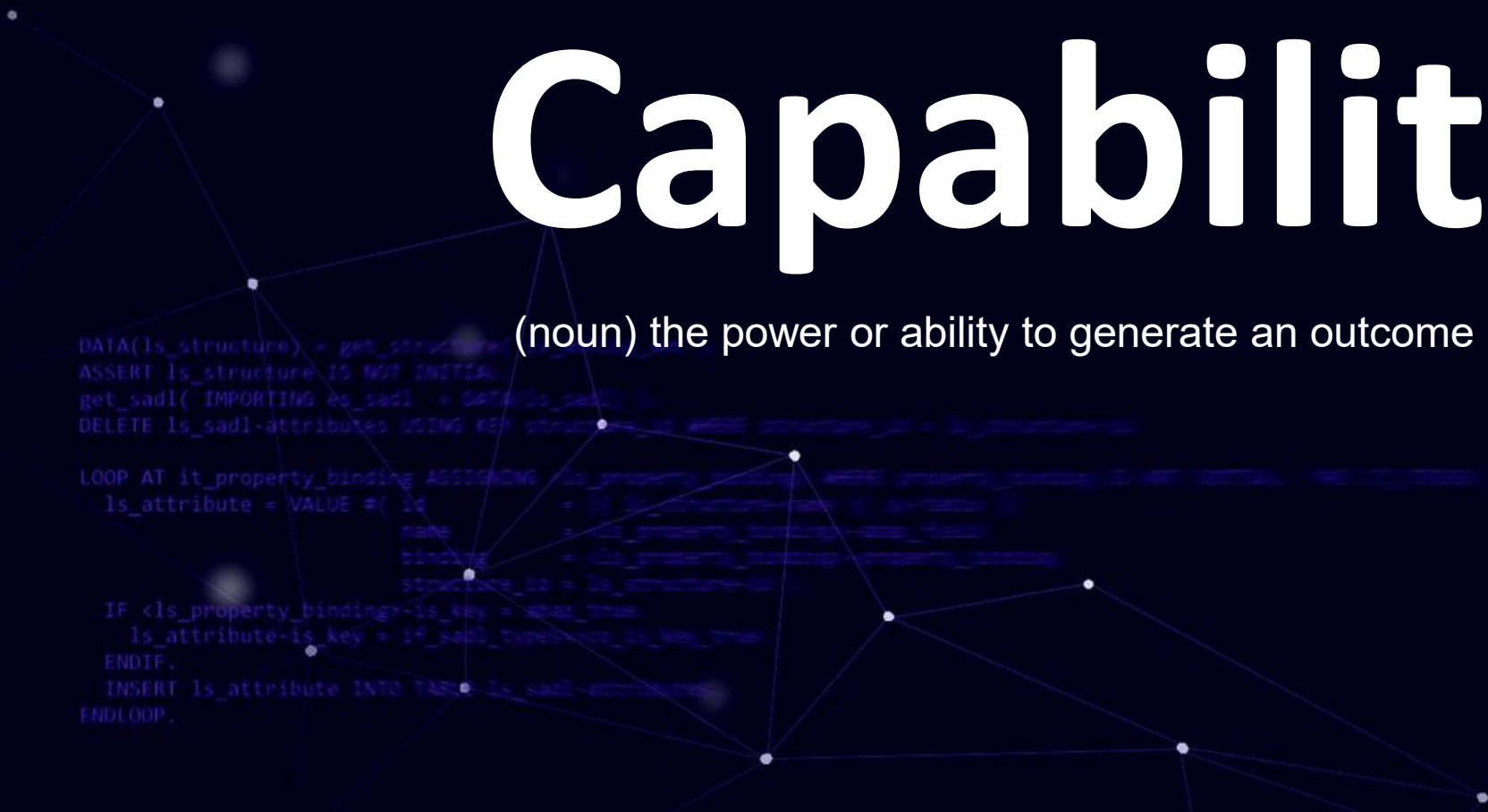
Paul Peitz
Deutsche Bahn AG

Capabilities

/ˌkeɪ.pəˈbɪl.ə.ti/ ca-pa-bil-i-ty

Capabilities

(noun) the power or ability to generate an outcome



Enterprise Architecture

„*ability to do something*“

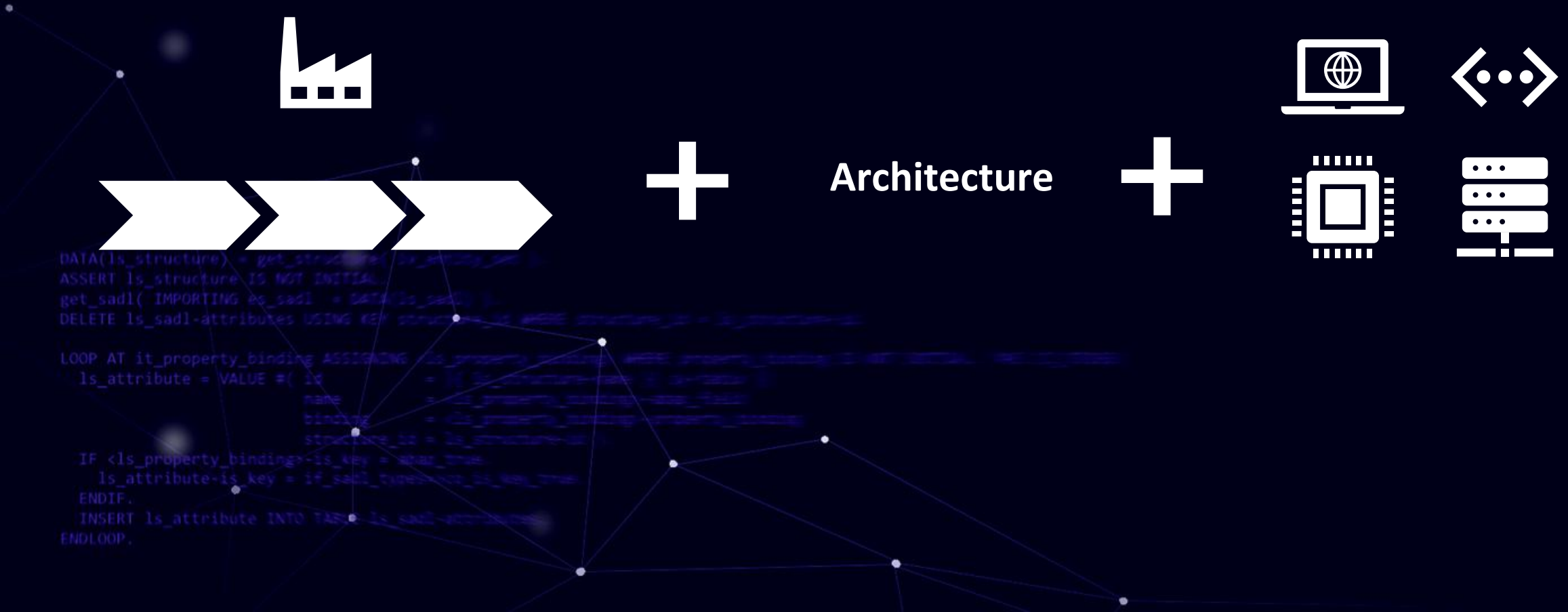
Business Capability

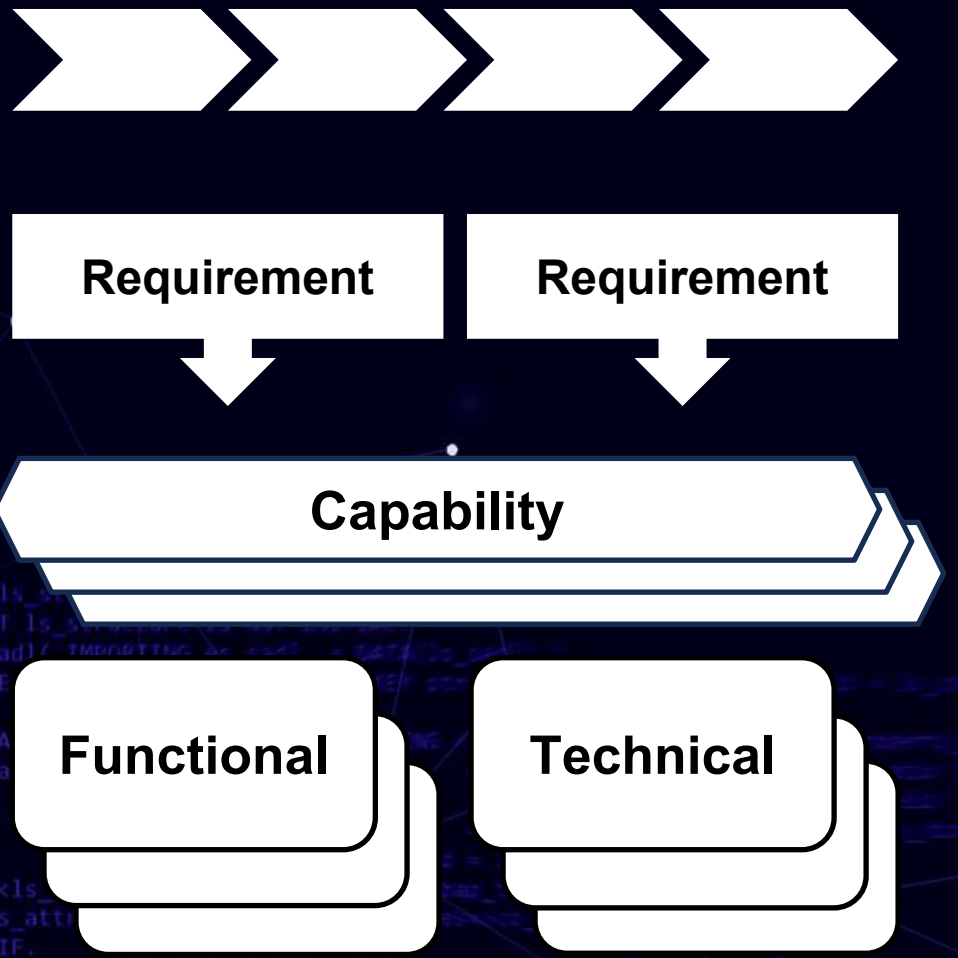
“*A business capability is a particular ability or capacity that a business may possess or exchange to achieve a specific purpose or outcome*” -- TOGAF

Why do we work with SAP?

Why is our company using SAP?

How is SAP used?


Architecture

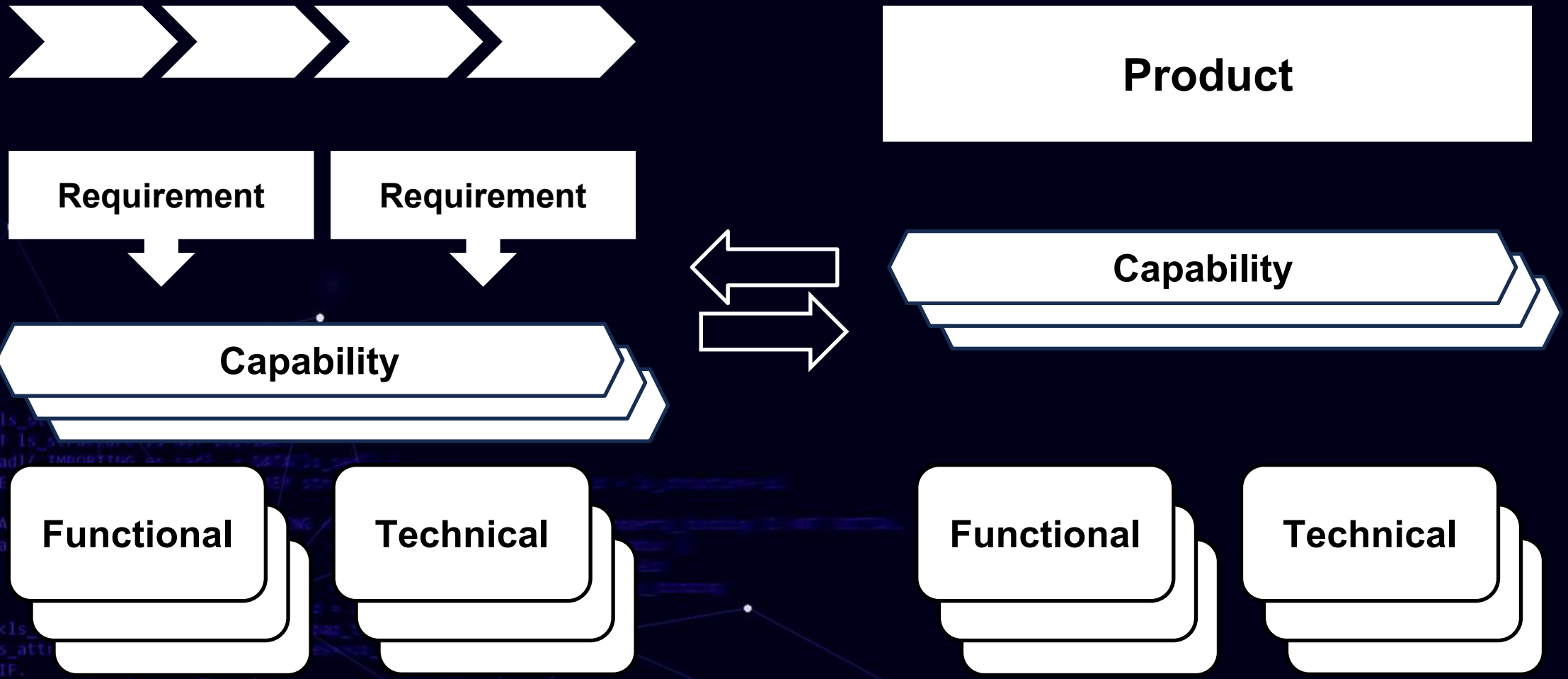

Requirement
Requirement
Capability
Functional
Technical

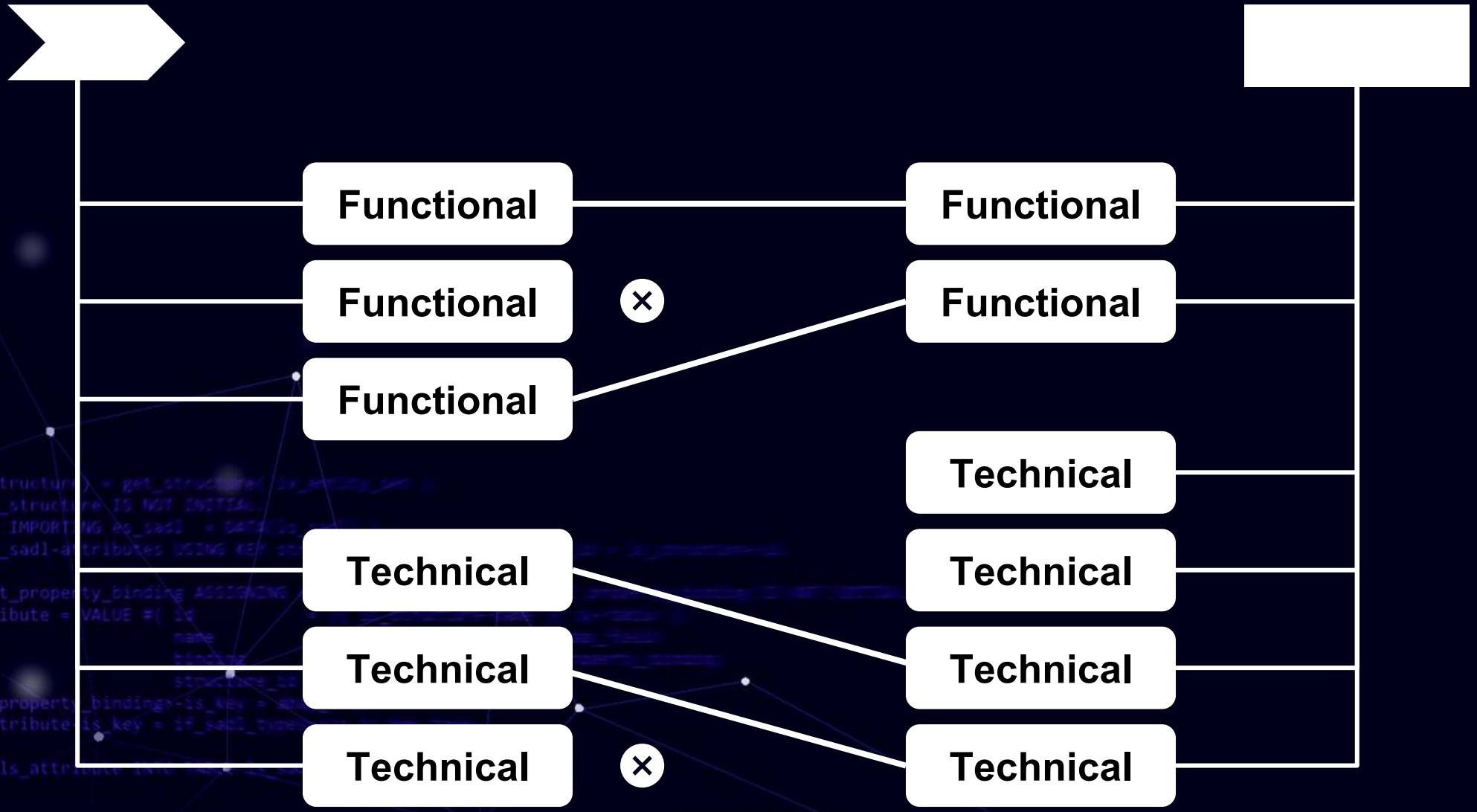
Product

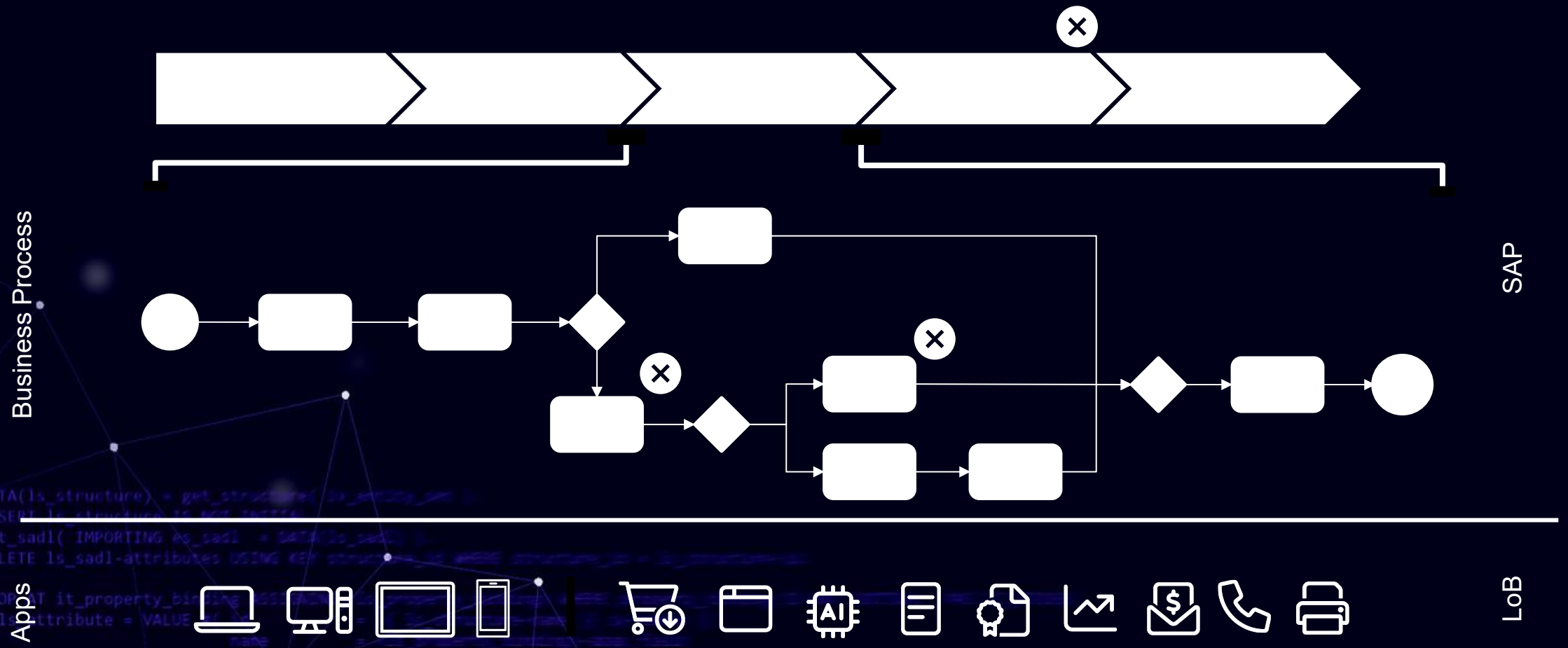
Capability

Functional

Technical

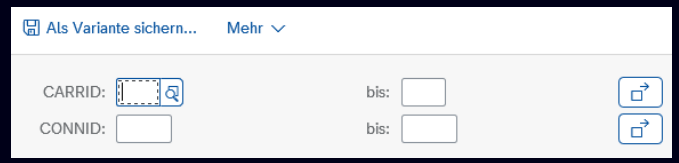

Product
Requirement
Requirement
Capability
Capability
Functional
Technical
Functional
Technical

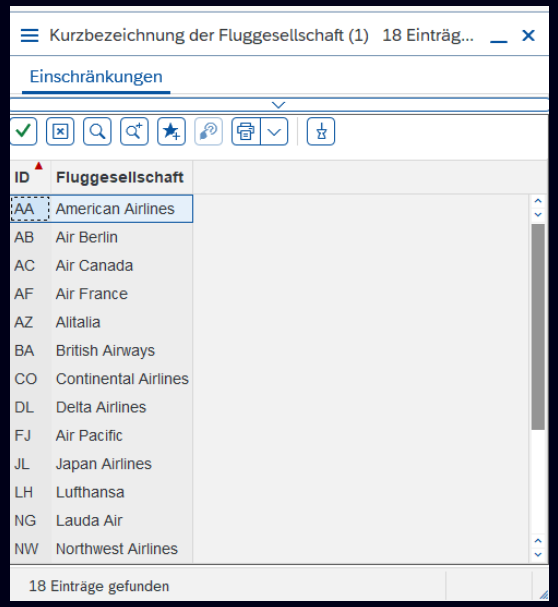

Functional
Functional
Functional
Technical
Technical
Technical
Functional
Functional
Technical
Technical
Technical


Business Process
SAP
Apps
LoB
AI


Custom Development
Enhancements
Cost factor
Risk

```
REPORT z_tobias_sflight.

DATA flights TYPE sflight.

SELECT-OPTIONS carrid FOR flights-carrid.
SELECT-OPTIONS connid FOR flights-connid.

DATA flight_select TYPE STANDARD TABLE OF sflight.

SELECT * FROM sflight
  INTO CORRESPONDING FIELDS OF TABLE @flight_select
  WHERE carrid = @carrid-low AND connid = @connid-low.

TRY.
    cl_salv_table=>factory( IMPORTING r_salv_table = DATA(lo_alv_display)
                            CHANGING  t_table      = flight_select ).
  CATCH cx_salv_msg.
ENDTRY.

lo_alv_display->display( ).
```





Menü Mehr Beenden

Ma...	Car...	Flug-...	Flugdatum	Flugpreis	Währu...	Flugzeugtyp	Kapazität	Belegung Eco.	Akt. Buchungssumme	Kapazität	Belegung Bus.	Kapa...
100		400	20.10.2024	666,00	EUR	A340-600	330	313	261.351,72	30	28	20
100	LH	400	21.11.2024	666,00	EUR	A340-600	330	321	268.964,10	30	28	20
100	LH	400	23.12.2024	666,00	EUR	A340-600	330	319	266.786,28	30	29	20
100	LH	400	24.01.2025	666,00	EUR	A340-600	330	319	266.293,44	30	28	20
100	LH	400	25.02.2025	666,00	EUR	A340-600	330	320	270.828,90	30	30	20
100	LH	400	28.02.2025	666,00	EUR	A340-600	330	320	268.497,90	30	29	20
100	LH	400	28.03.2025	666,00	EUR	A340-600	330	319	267.532,20	30	27	20
100	LH	400	29.03.2025	666,00	EUR	A340-600	330	318	271.068,66	30	30	20
100	LH	400	30.04.2025	666,00	EUR	A340-600	330	318	267.392,34	30	28	20
100	LH	400	01.06.2025	666,00	EUR	A340-600	330	196	163.549,62	30	17	20
100	LH	400	03.07.2025	666,00	EUR	A340-600	330	173	144.641,88	30	16	20
100	LH	400	04.08.2025	666,00	EUR	A340-600	330	115	96.536,70	30	10	20
100	LH	400	05.09.2025	666,00	EUR	A340-600	330	0	0,00	30	0	20
100	LH	400	07.10.2025	666,00	EUR	A340-600	330	36	28.358,28	30	2	20
100	LH	400	08.11.2025	666,00	EUR	A340-600	330	19	16.283,70	30	2	20

SAP for custom development

- Integrated system
- Strong technical foundation
- Enterprise ready
- Reuse resources
- Development efficient
- Business friendly (domain modeling)

+ Cost-efficient

SAP Developer Efficiency

- SAP developer: full stack developer
- Supporting business processes
- From database to UI
- Long term support
- Go-to person for solving a problem


Custom development
Enhancements
Cost factor
Risk

Risks


ASSERT ls_structure IS NOT INITIAL.
DELETE ls_sadl-attributes USING KEY
LOOP AT it_property_binding
ls_attribute = VALUE #( )
IF
ENDIF.
INSERT ls_attribute INTO
ENDLOOP.

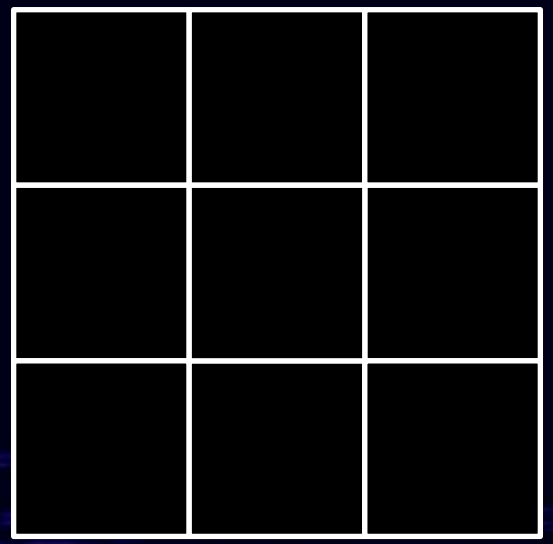
~~Risks~~


DATA(ls_structure) = get_structure(ls_entity_name).
ASSERT ls_structure IS NOT INITIAL.
get_sadl(IMPORTING es_sadl = DATA(ls_sadl)).
DELETE ls_sadl-attributes USING KEY
LOOP AT it_property_binding ASSIGNING
ls_attribute = VALUE #( )
name =
binding =
IF <ls_property_binding>-is_key =
ls_attribute-is_key =
ENDIF.
INSERT ls_attribute INTO
ENDLOOP.

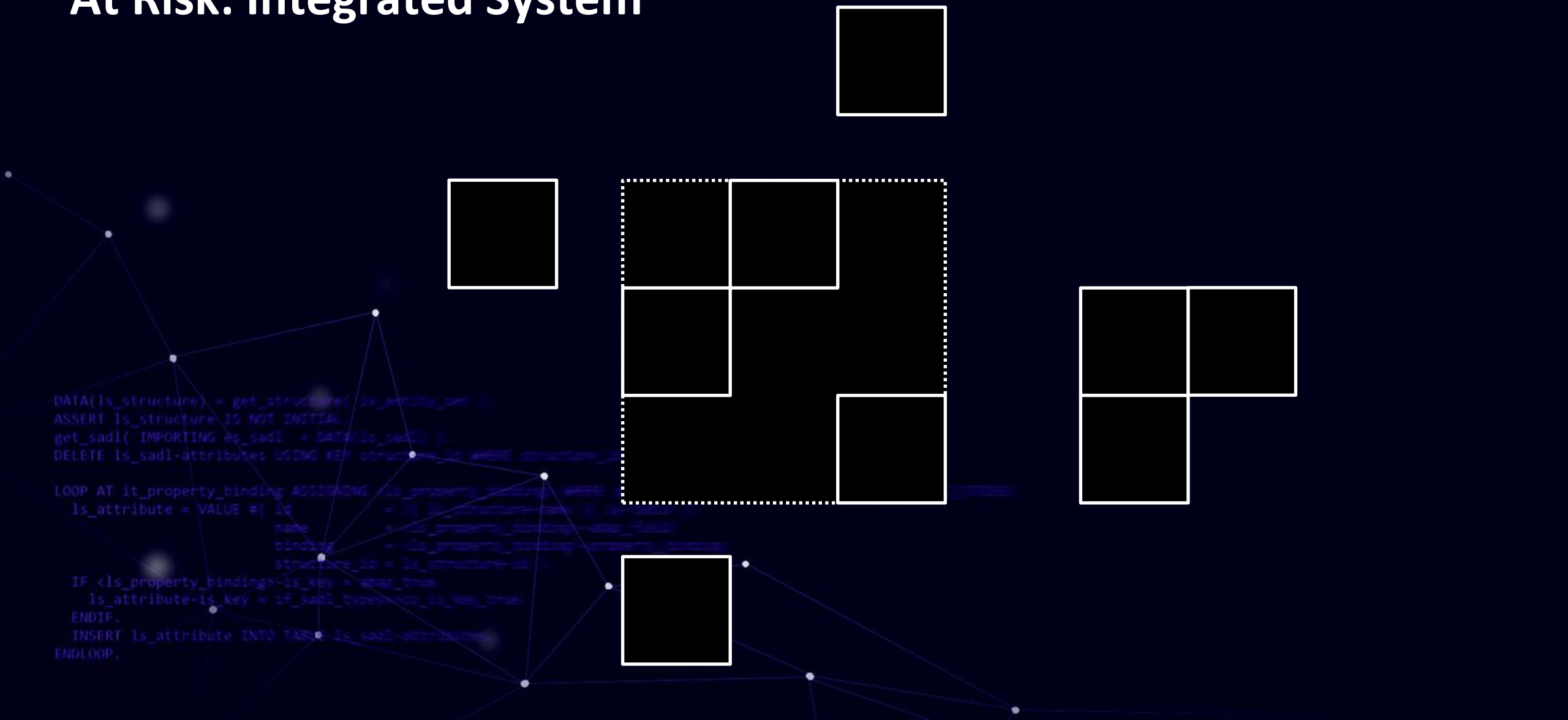
Challenges?


DATA(ls_structure) = get_structure(io_entity_set).
ASSERT ls_structure IS NOT INITIAL.
get_sadl(IMPORTING es_sadl = DATA(ls_sadl)).
DELETE ls_sadl-attributes USING KEY structure_id WHERE structure_id = ls_structure-id.
LOOP AT it_property_binding ASSIGNING <ls_property_binding> WHERE property_binding IS NOT INITIAL AND is_key = abap_true.
ls_attribute = VALUE #(id = <ls_property_binding>-id
name = <ls_property_binding>-property_binding->get_name( )
binding = <ls_property_binding>-property_binding->get_id( )
structure_id = ls_structure-id).
IF <ls_property_binding>-is_key = abap_true.
ls_attribute-is_key = if_sadl_types=>gcs_is_key_true.
ENDIF.
INSERT ls_attribute INTO TABLE ls_sadl-attributes.
ENDLOOP.

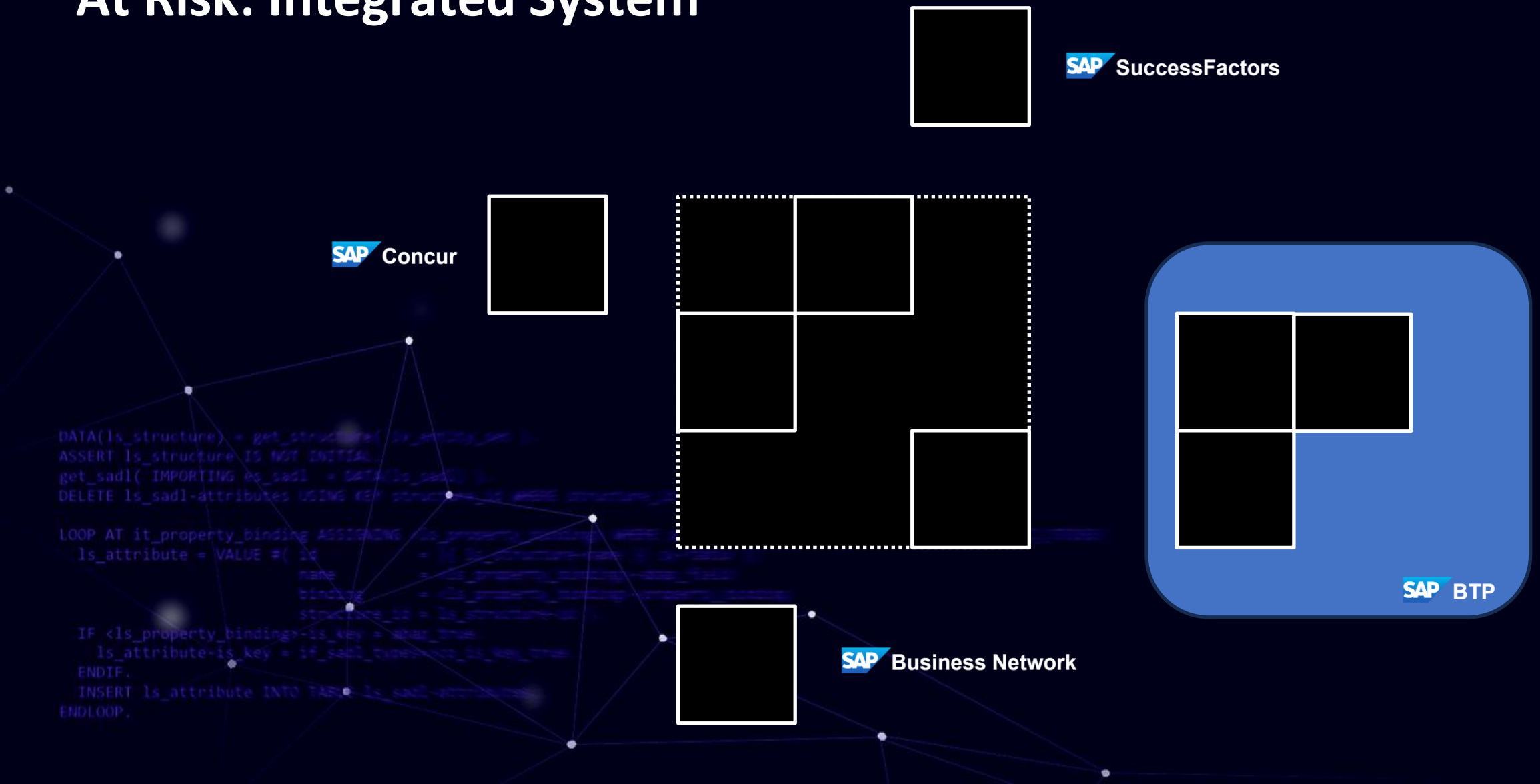
At Risk: Integrated System



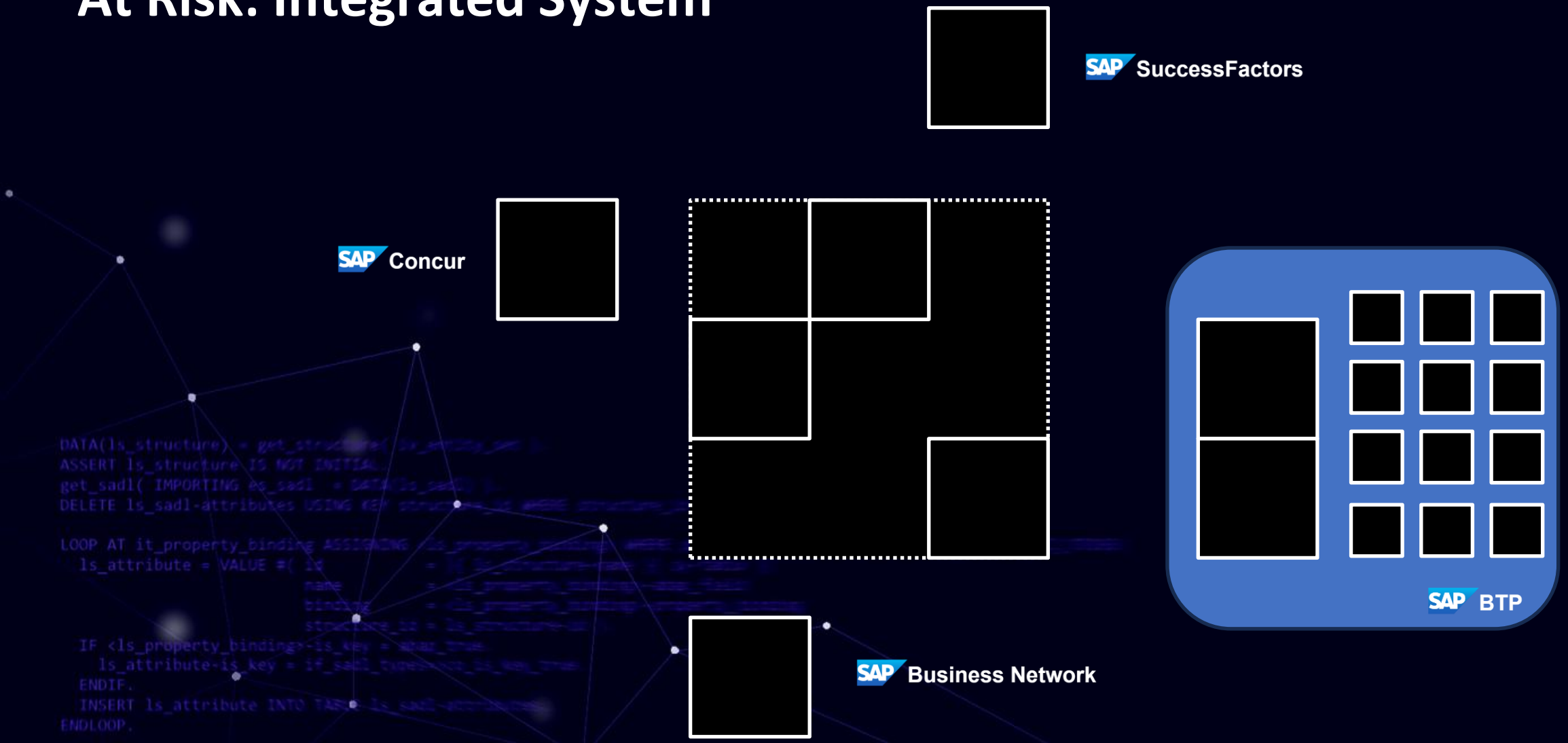
At Risk: Integrated System



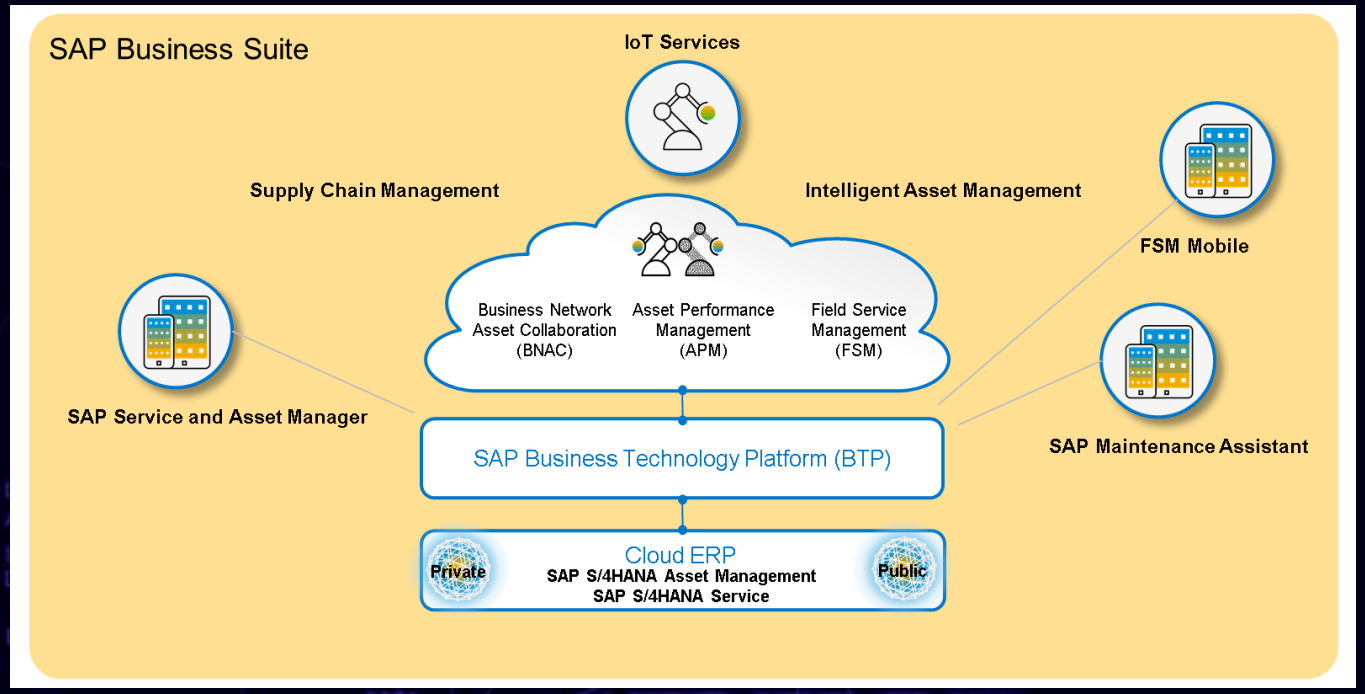
At Risk: Integrated System



At Risk: Integrated System



Example: Enterprise Asset Management



Source

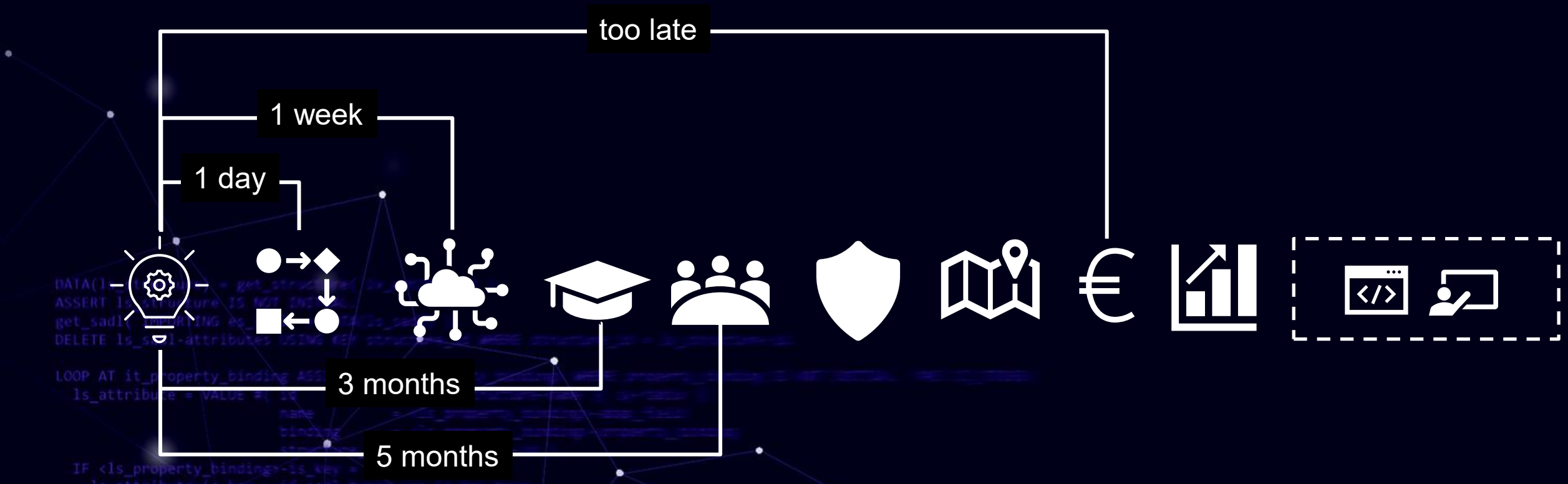
- S/4HANA Asset Management (1)
- S/4HANA Service (2)
- SAP BTP (3)
- Business Network Asset Collaboration (4)
- Asset Performance Management (5)
- Field Service Management (6)
- SAP Mobile Field Service Management (7)
- SAP Service and Asset Manager (8)
- ...
- SAP IoT: collection of tools (9)
- S/4HANA AM for Resource Scheduling (10)
- SAP Integrated Product Development (...)
- SAP Project and Resource Management (...)

Time from idea to prototype to deploy in production

Once upon a time …

Time from idea to prototype to deploy in production

Today …



IDE: Integrated development environment

“Integrated development environments are designed to maximize programmer productivity by providing tight-knit components with similar user interfaces. IDEs present a single program in which all development is done.”

Wikipedia

IDE: Integrated development environment

"Integrated development environments are designed to maximize programmer productivity by providing tight-knit components with similar user interfaces. **IDEs present a single program in which all development is done**."

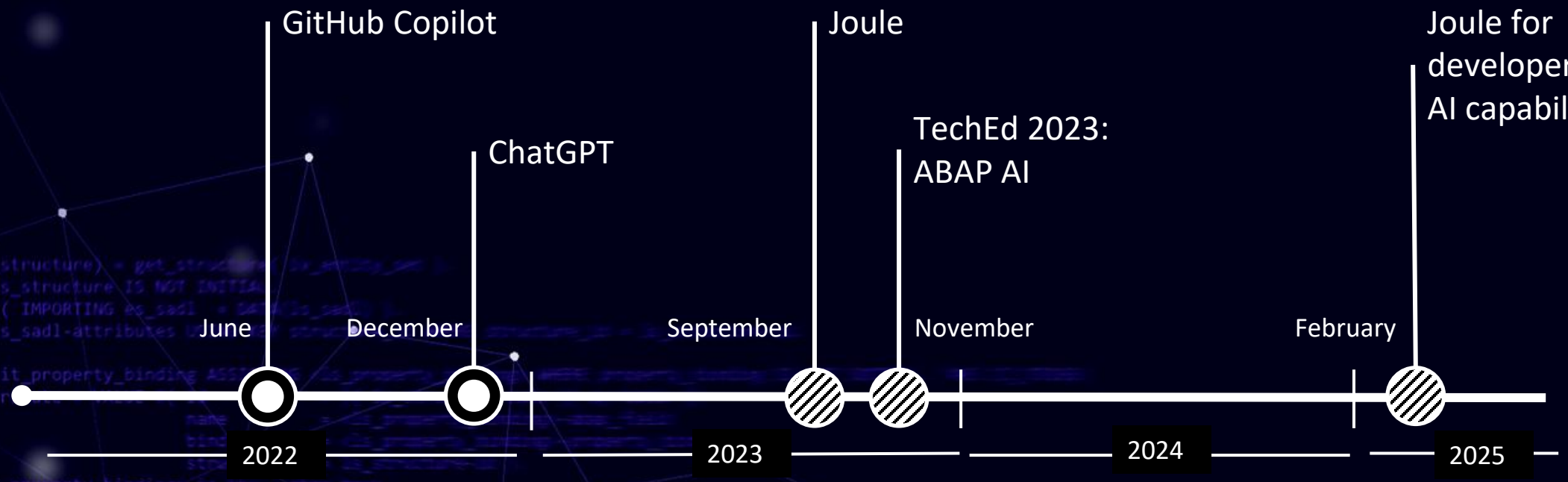
IDEs present a single program in which all development is done.

IDEs present a single program in which all development is done.

OData v2		OData v4
Classes and CDS Views	ADT	RAP
Fiori App	BAS	Fiori App
SEGW	SAP Gui	Service Maintenance


DATA(ls_structure) = get_structure(iv_entity_name).
ASSERT ls_structure IS NOT INITIAL.
get_sadl(IMPORTING es_sadl = DATA(ls_sadl)).
DELETE ls_sadl-attributes USING KEY
LOOP AT it_property_binding ASSIGNING
ls_attribute = VALUE #( )
IF <ls_property_binding>-is_key = abap_true.
ls_attribute-is_key = if_sadl_type=>gc_is_key_true.
ENDIF.
INSERT ls_attribute INTO TABLE
ENDLOOP.

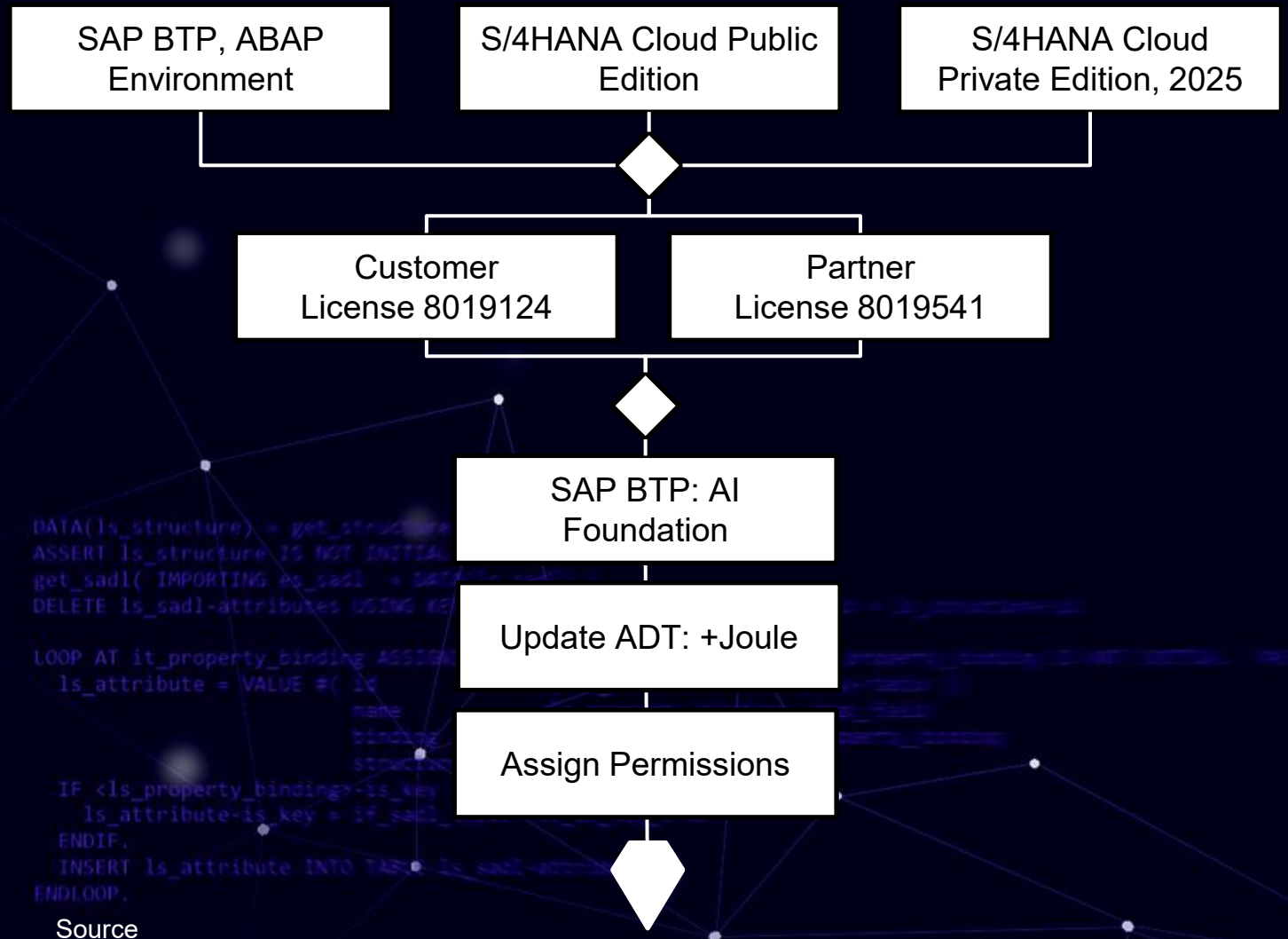
AI adoption



Source - Video

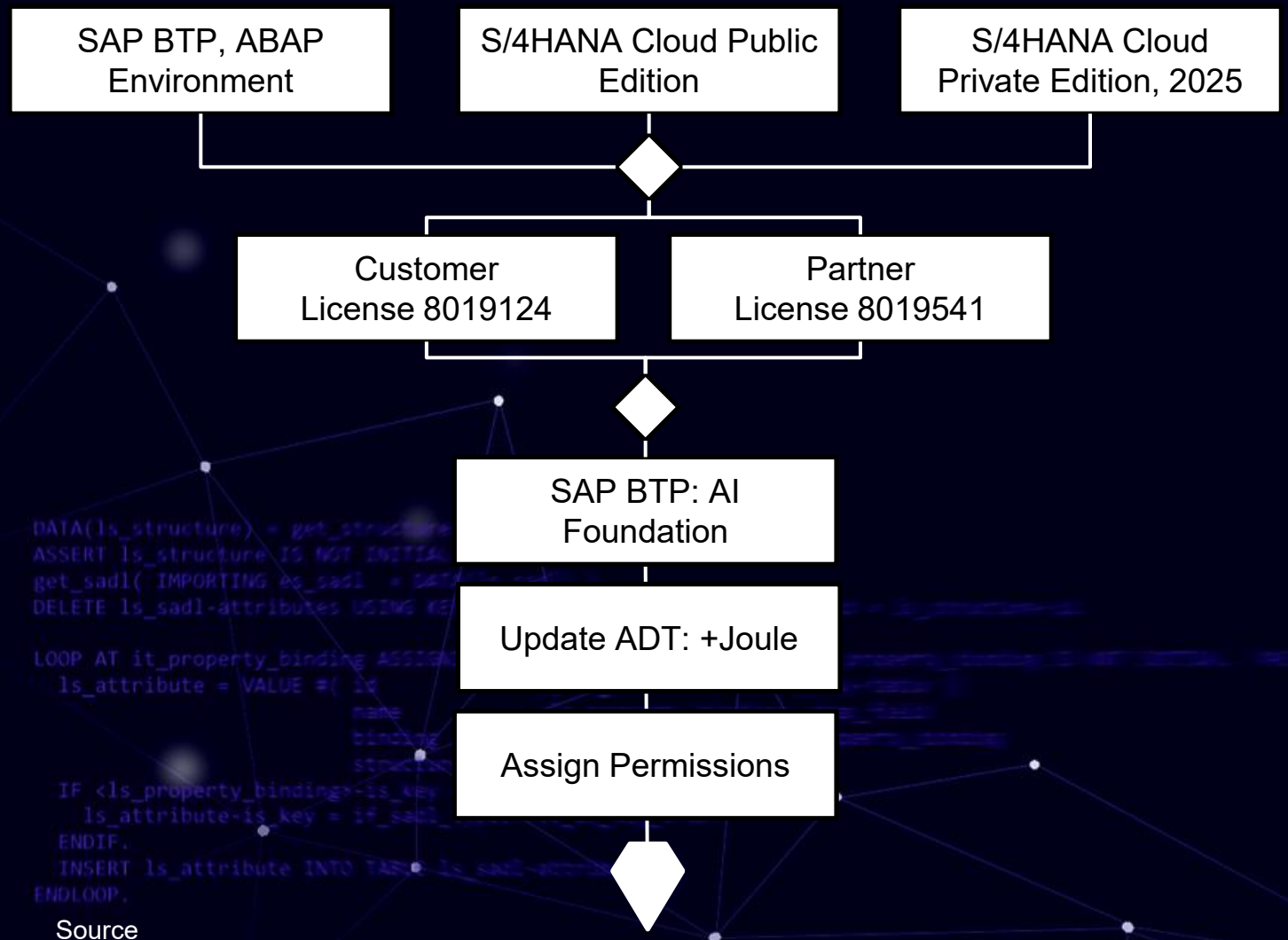
Source

How to get it?

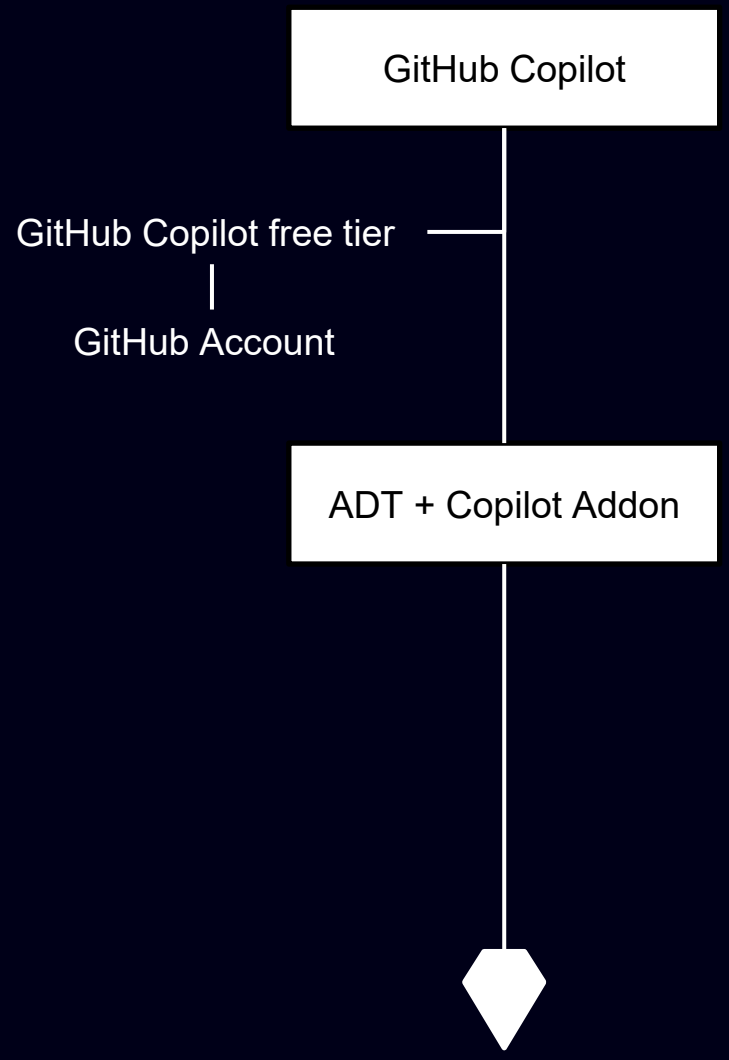


Source

How to get it?



Source



VS Code + Copilot + ABAP

ZMYCLASS.ABAP

```
1   class zmyclass definition
2   public
3   final
4   create public.
5
6   public section.
7       interfaces if_oo_adt_classrun.
8   protected section.
9   private section.
10  endclass.
11
12  class zmyclass implementation.
13
14  endclass
```

CHAT

tobiashofmann

add method to write hello world using if_oo_adt_classrun

ZMYCLASS.ABAP:1-14

GitHub Copilot

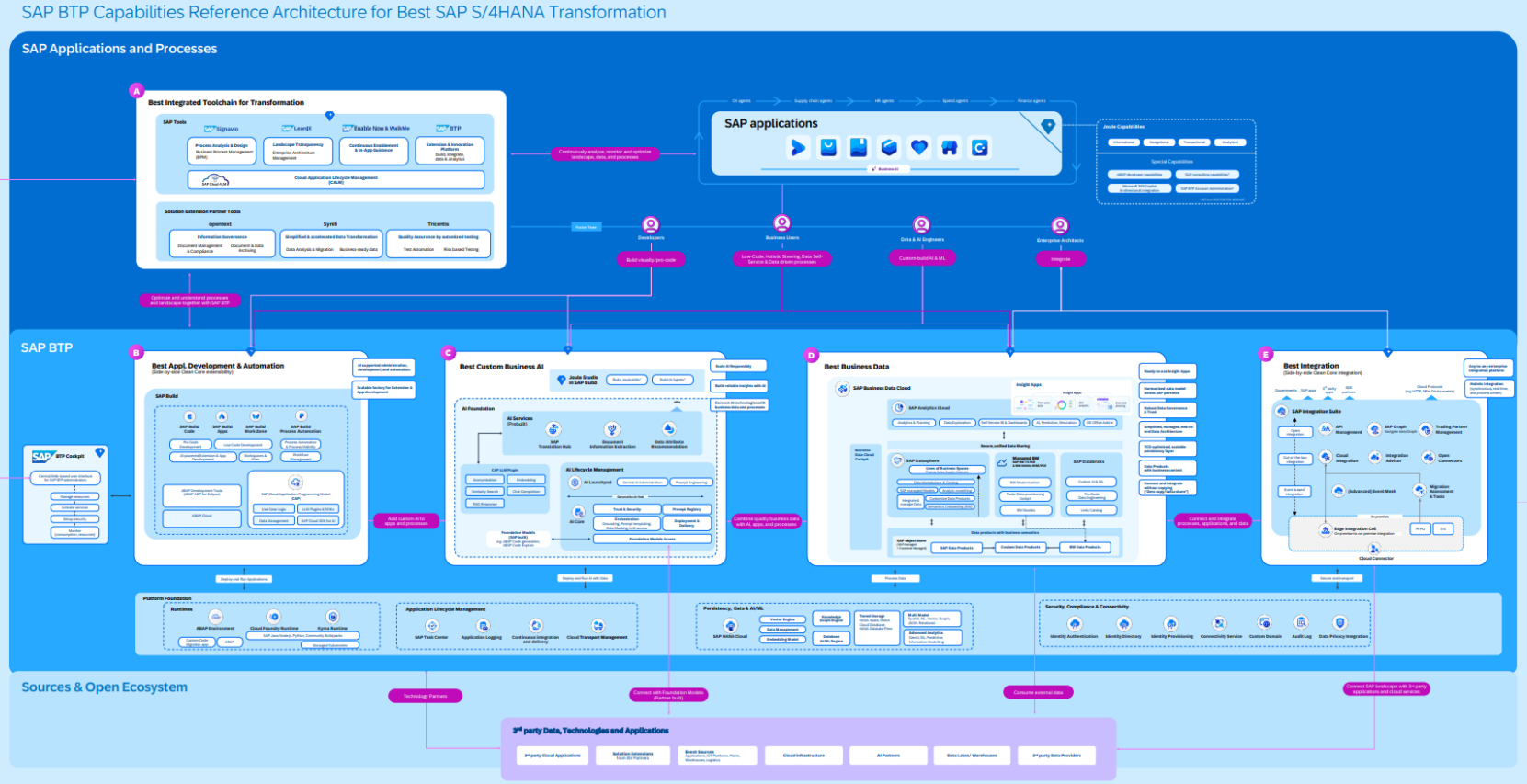
Used 1 reference

```
class zmyclass definition
public
final
create public.

public section.
    interfaces if_oo_adt_classrun.
protected section.
private section.
endclass.

class zmyclass implementation.

    method if_oo_adt_classrun~main.
      out->write( 'Hello World' ).
    endmethod.

endclass
```

ZMYCLASS.ABAP

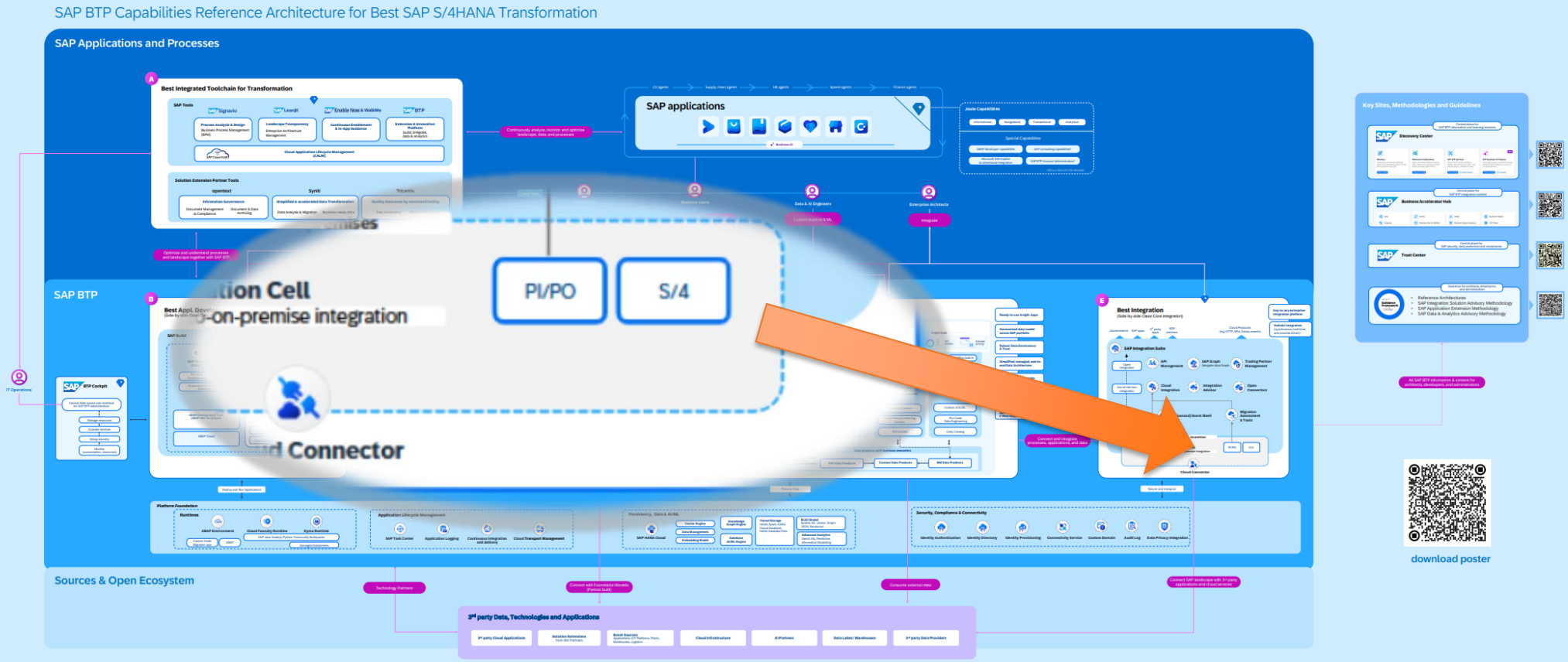
```
1   class zmyclass definition
2   public
3   final
4   create public.
5
6   public section.
7       interfaces if_oo_adt_classrun.
8   protected section.
9   private section.
10  endclass.
11
12  class zmyclass implementation.
13
14      method if_oo_adt_classrun~main.
15        out->write( 'Hello World' ).
16      endmethod.
17
18  endclass
```

The Big Picture



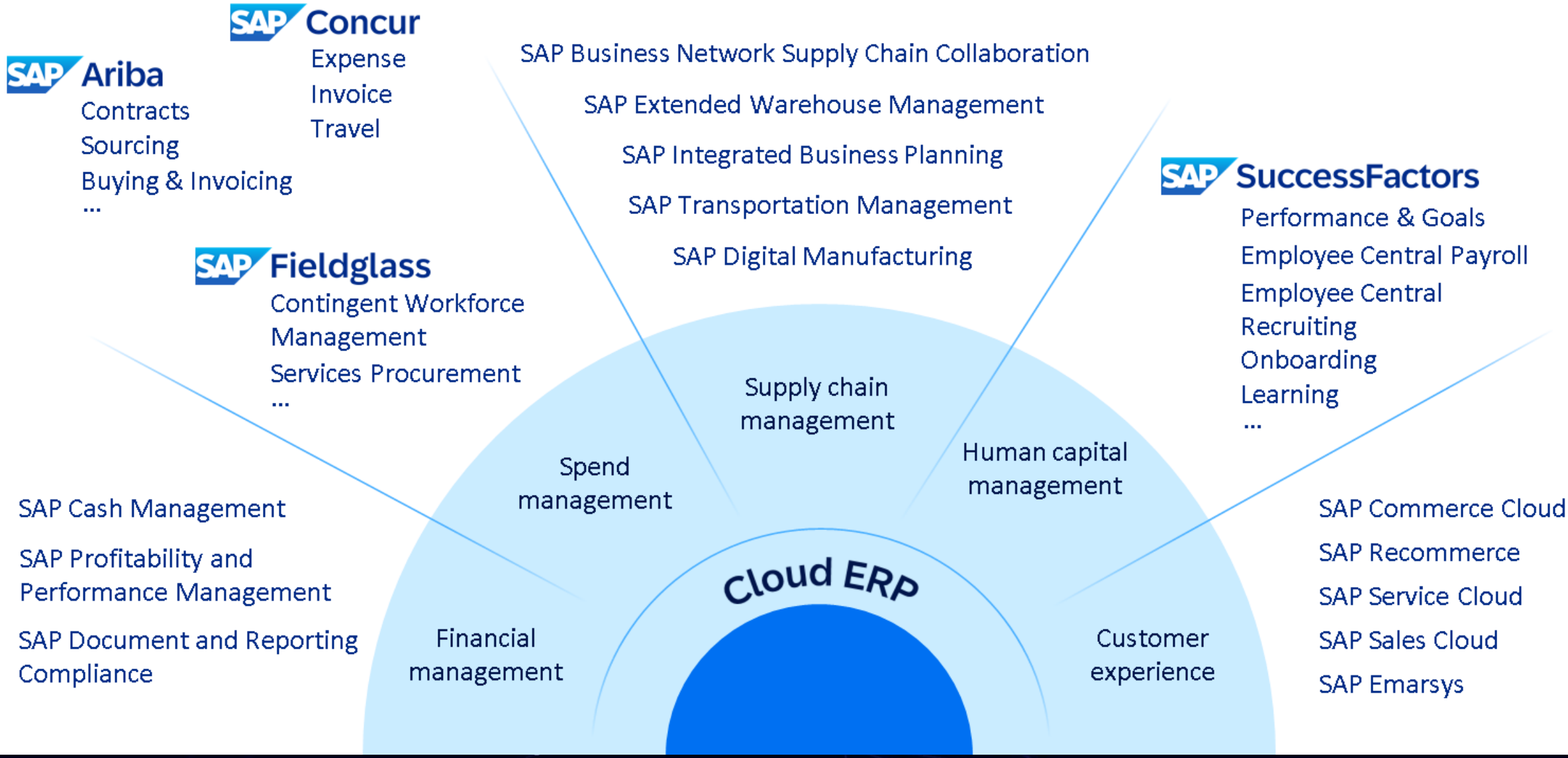
Source

The Big Picture

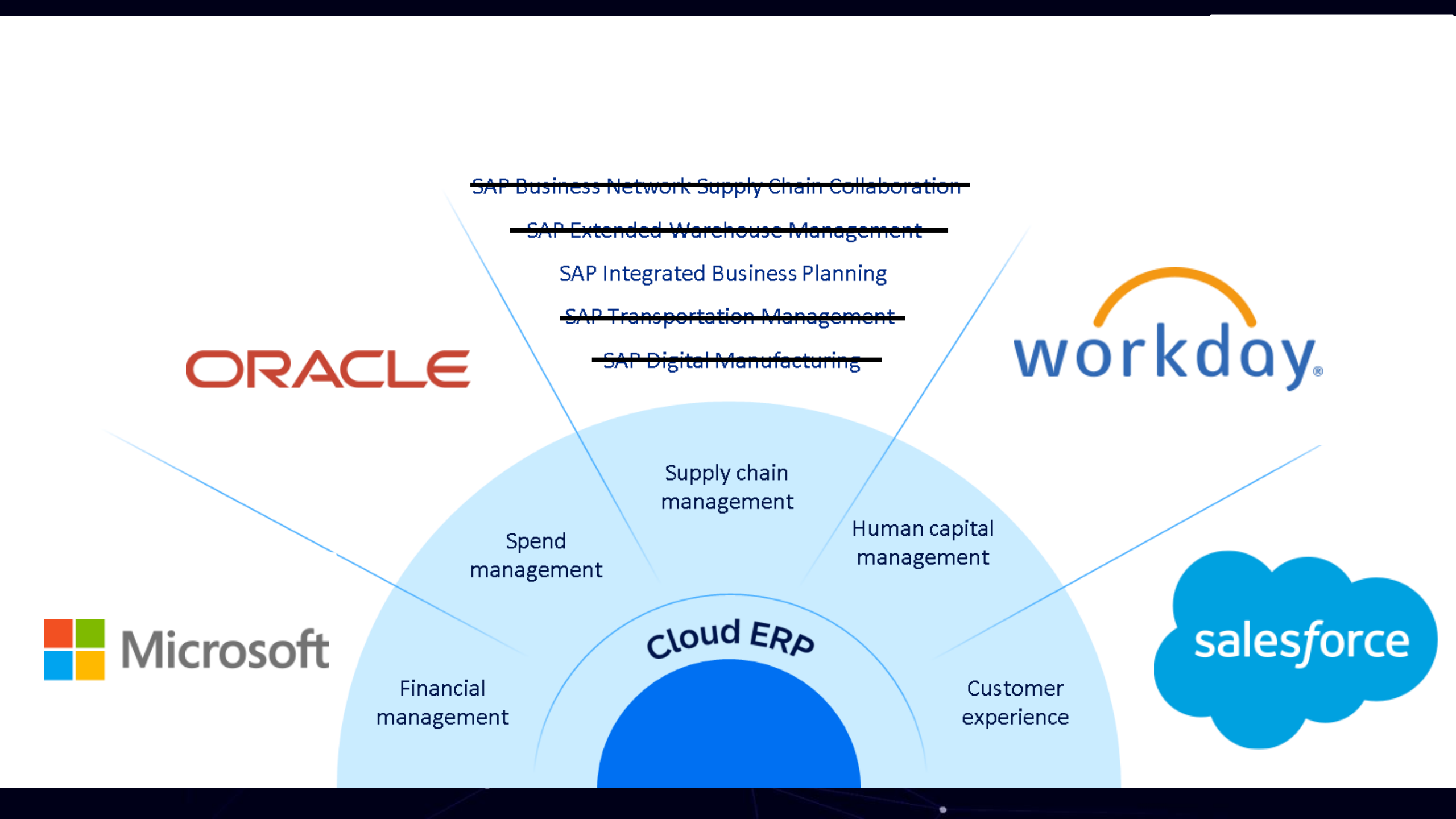


Source

This is not a comprehensive list of all SAP Cloud solutions.



Source


~~SAP Business Network Supply Chain Collaboration~~
~~SAP Extended Warehouse Management~~
SAP Integrated Business Planning
~~SAP Transportation Management~~
~~SAP Digital Manufacturing~~
ORACLE
workday
Supply chain management
Spend management
Human capital management
Cloud ERP
Financial management
Customer experience
Microsoft
salesforce

Build

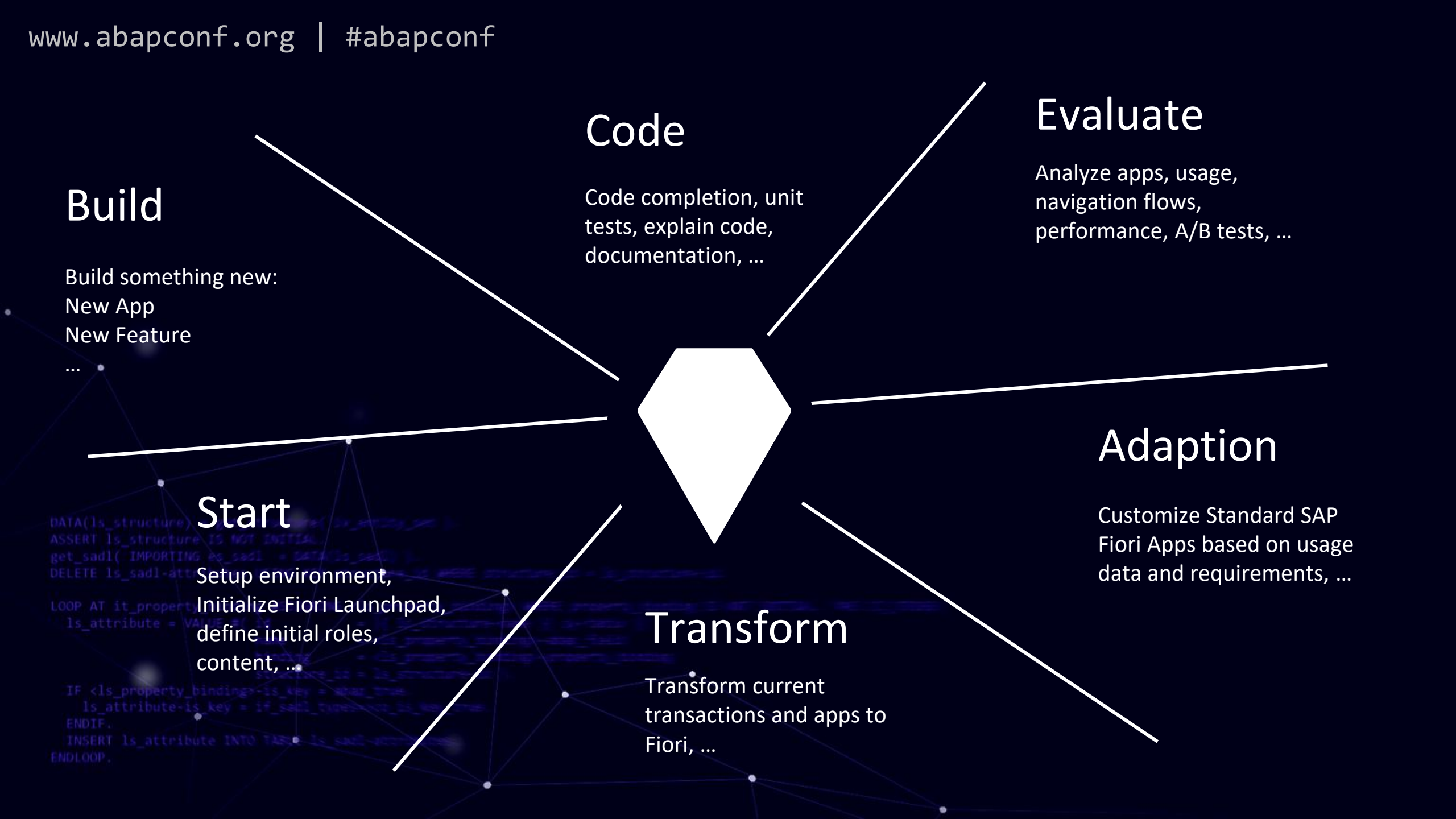
Build something new:
New App
New Feature
…

Code

Code completion, unit tests, explain code, documentation, …

Evaluate

Analyze apps, usage, navigation flows, performance, A/B tests, …



Start

Setup environment, Initialize Fiori Launchpad, define initial roles, content, …

Transform

Transform current transactions and apps to Fiori, …

Adaption

Customize Standard SAP Fiori Apps based on usage data and requirements, …

Current code base

Code added last 6 months

Added by me

By target architecture

AI for identifying skill gaps

Business Process
SAP
Apps
AI
LoB

LoB Apps

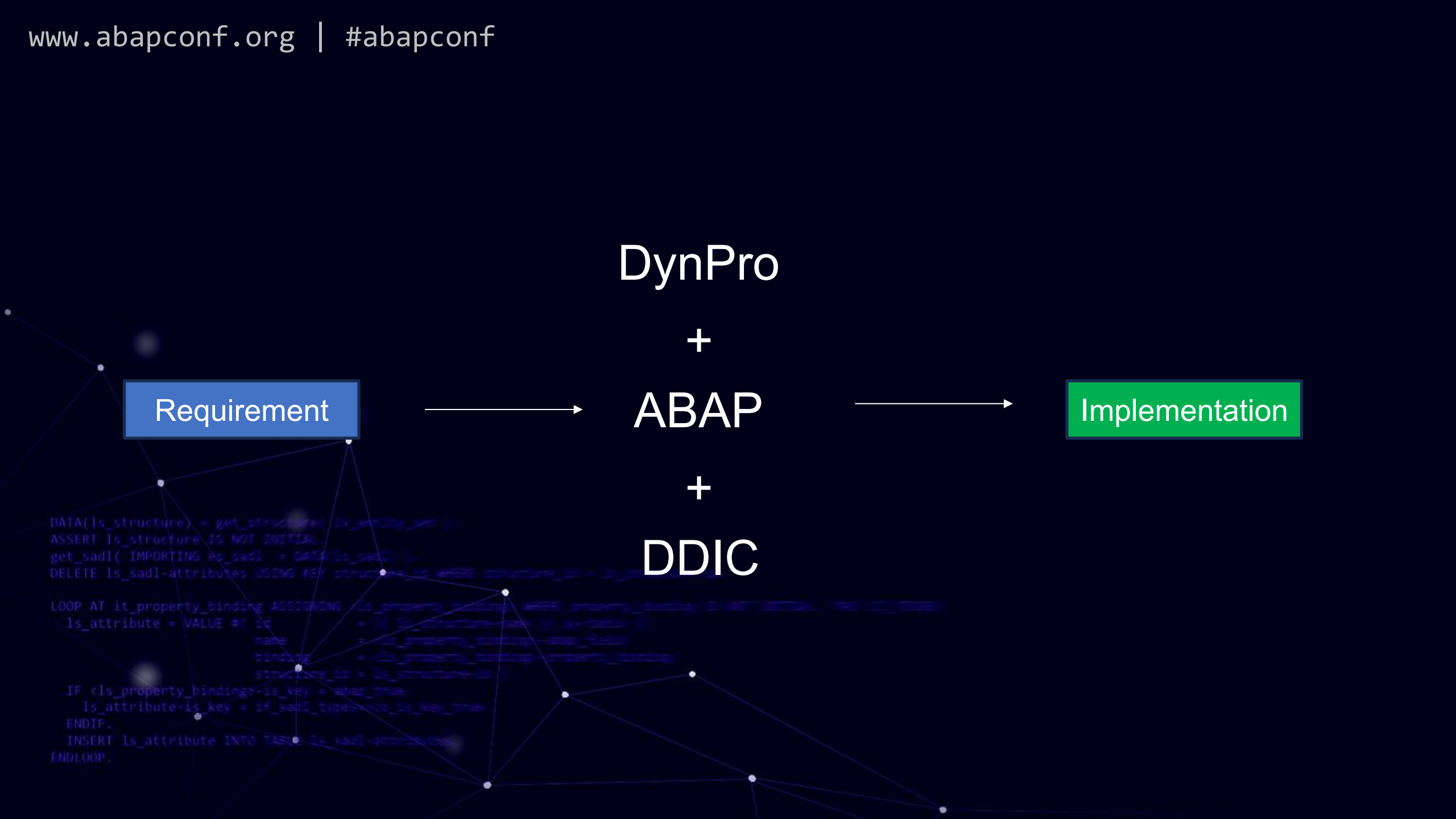
2,689 Fiori Apps for S/4HANA Cloud, Private Edition 2023
64 LoB
34 Industry Solutions
656 Roles

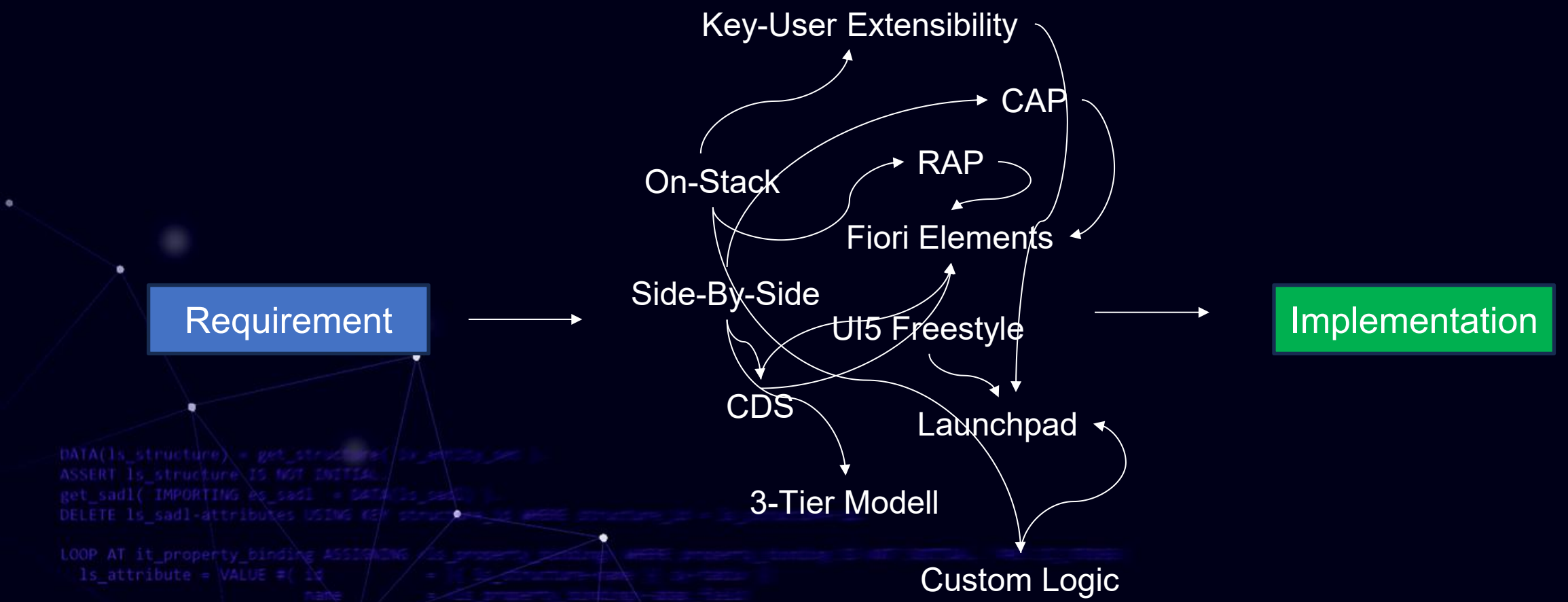
Integrated. One data model.

/s/ /eɪ/ /piː/ /dɪˈvɛləpəɹ/ /ˌkeɪ.pəˈbɪl.ə.ti/ sap de-vel-op-er ca-pa-bil-i-ty

SAP Developer Capability

The ability to realize business requirements in code faster and with less resources compared to a feasible alternative, while adhering company standards like quality, support, usability or security


DynPro
+
Requirement
ABAP
Implementation
+
DDIC

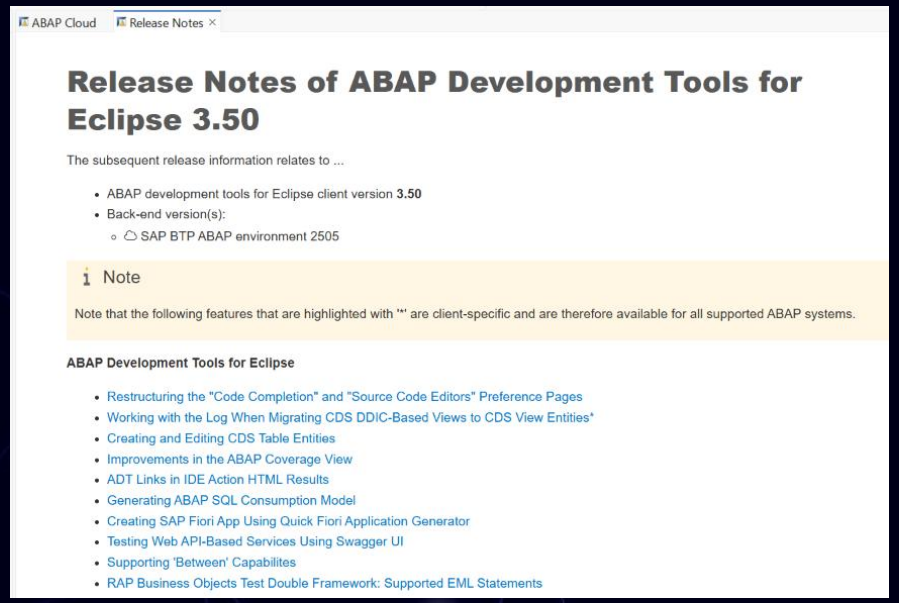

Key-User Extensibility
CAP
RAP
On-Stack
Fiori Elements
Side-By-Side
Requirement
UI5 Freestyle
Implementation
CDS
Launchpad
3-Tier Modell
Custom Logic

/H


DATA(ls_structure) = get_structure(ls_entity_name).
ASSERT ls_structure IS NOT INITIAL.
get_sadl(IMPORTING es_sadl = DATA(ls_sadl)).
DELETE ls_sadl-attributes USING KEY
LOOP AT it_property_binding ASSIGNING
ls_attribute = VALUE #( )
IF <ls_property_binding>-is_key = abap_true.
ls_attribute-is_key = if_sadl_type=>gc_is_key_true.
ENDIF.
INSERT ls_attribute INTO TABLE
ENDLOOP.

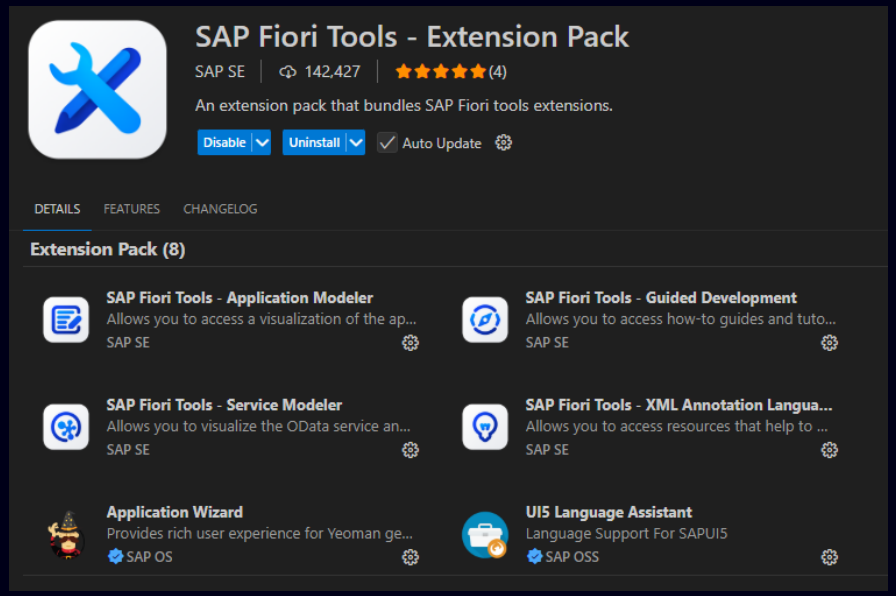
We have to make sure that SAP developers can be as efficient as in the past

Eclipse + ADT Builder



https://github.com/tobiashofmann/adt-bundle-builder/

VS Code + Fiori Tools Builder

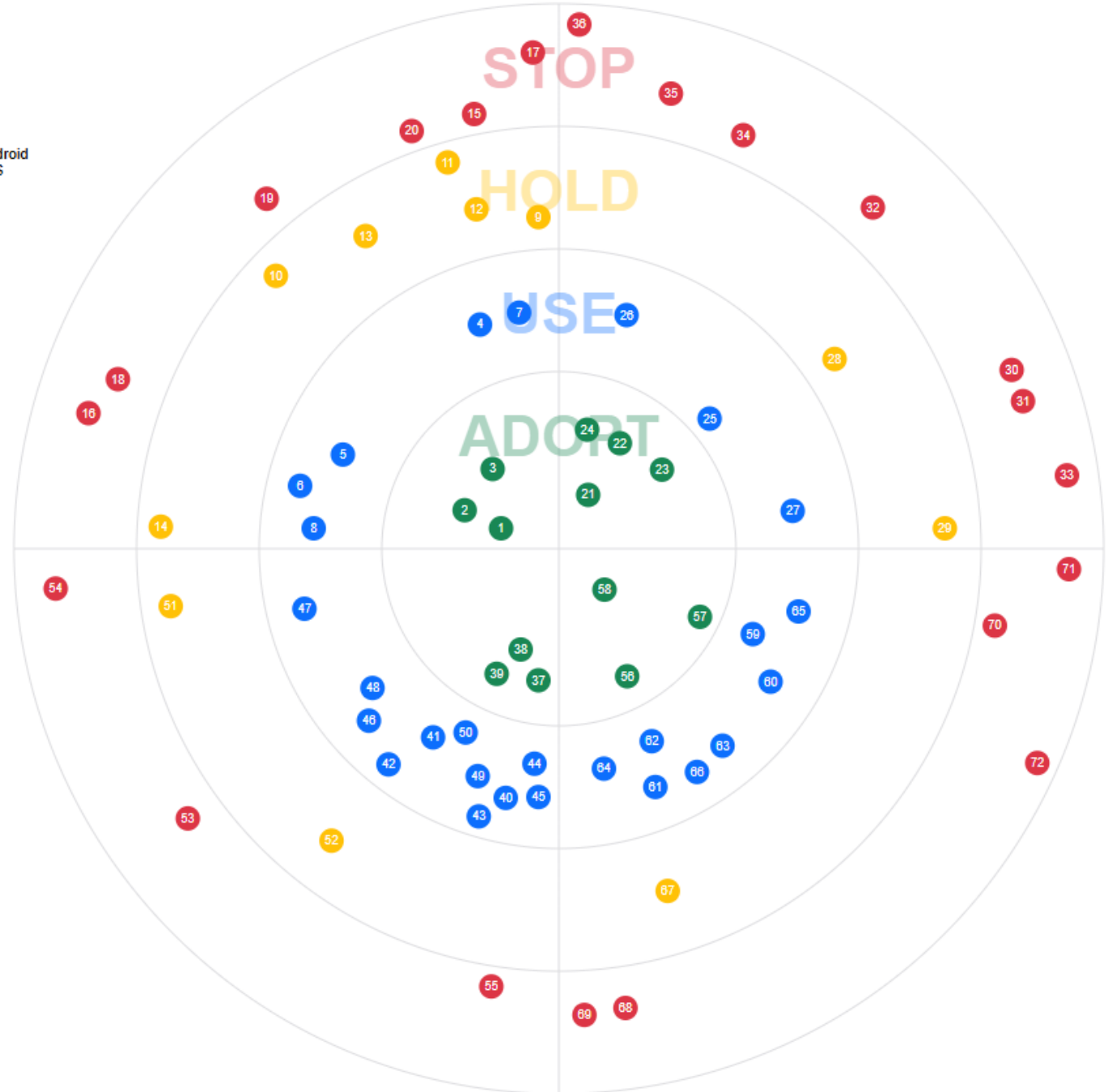


https://github.com/tobiashofmann/vscode-fiori-tools-bundle-builder

SAP Development Tech Radar

SAP Development Tech Radar

2025.06



UI

ADOPT
1. FPM
2. WDI5
3. Web Components

USE
4. Fiori Launchpad
5. Fiori UX
6. MDK
7. Personas
8. UI Flexibility

HOLD
9. ALV
10. Mobile Cards
11. SAP BTP SDK for Android
12. SAP BTP SDK for iOS
13. UI5 freestyle
14. WDA

STOP
15. BSP
16. CRM-WebClient-UI
17. Dynpro
18. J2EE
19. NWBC
20. WDJ

Technology

ADOPT
21. BTP
22. OData v4
23. Steampunk
24. Workzone

USE
25. CDS View Entity
26. FES embedded
27. OData v2

HOLD
28. CDS Views
29. SOAP

STOP
30. FES hub
31. JCo
32. Neo
33. Portal
34. SAPscript
35. XSA
36. XSC

Frameworks

ADOPT
37. ABAP Cloud
38. CUBCO
39. RAP managed draft

USE
40. ABAP Unit
41. AMDP
42. BRF+
43. CAP JS
44. Clean ABAP
45. Custom Fields & Logic
46. Fiori Elements
47. OpenUI5
48. RAP managed
49. RAP unmanaged
50. SAPUI5

HOLD
51. BOPF Fiori
52. CAP Java

STOP
53. BOPF
54. Reports
55. SM30

Tools

ADOPT
56. Cloud ALM
57. gCTS
58. UI5 linter

USE
59. ABAP Cleaner
60. abapGit
61. ADT
62. ATC
63. BAS
64. eCATT
65. UI5 tooling
66. VS Code

HOLD
67. SolMan

STOP
68. Kapsel
69. SAP GUI
70. SE80
71. SEGW
72. WebIDE

Leitmotiv for every decision taken

Make developers efficient