

# Planning Applications Kit - In Memory Planning in Action

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# Agenda

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In Memory Planning in SAP NetWeaver BW

Runtime Comparison Planning Applications Kit against BW-IP

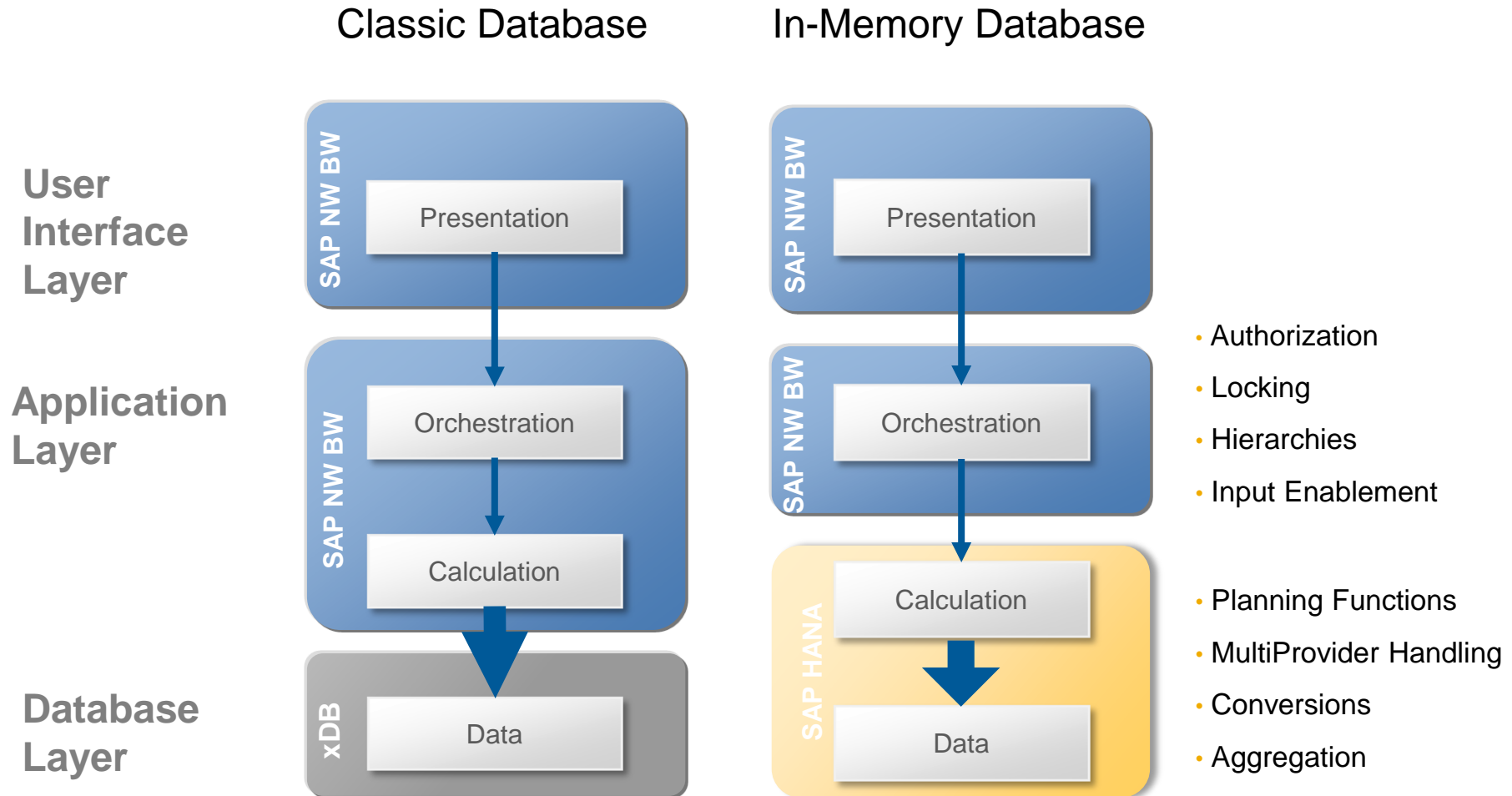
Demo

Restrictions for Planning Applications Kit

Implementation Recommendations

# In-Memory Planning

## The Technological Change



# SAP NetWeaver BW 7.30

## In-Memory Planning - Simple Disaggregation Example

	FY 2010 Actual	FY 2011 Plan
Country	EUR	EUR
France	200,00	200,00
Germany	250,00	250,00
Italy	180,00	180,00

user changes  
a plan value



	FY 2010 Actual	FY 2011 Plan
Country	EUR	EUR
France	200,00	200,00
Germany	250,00	300,00
Italy	180,00	180,00

### Traditional Approach

1. Determine the delta → **+50**
2. Disaggregate (in appl. server)
  - per week (52)
  - per branch (500)
  - 26000 combinations / values
3. Send 26000 values to DB to save

### HANA-Based Approach

1. Determine the delta → **+50**
2. Send 1 value to DB  
+ instruction to disaggregate and how
3. Disaggregate (in DB engine)
  - per week (52)
  - per branch (500)
  - create + save 26000 values

# SAP NetWeaver BW 7.30

## In-Memory Planning - Simple Disaggregation Example

	FY 2010 Actual	FY 2011 Plan
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### Traditional Approach

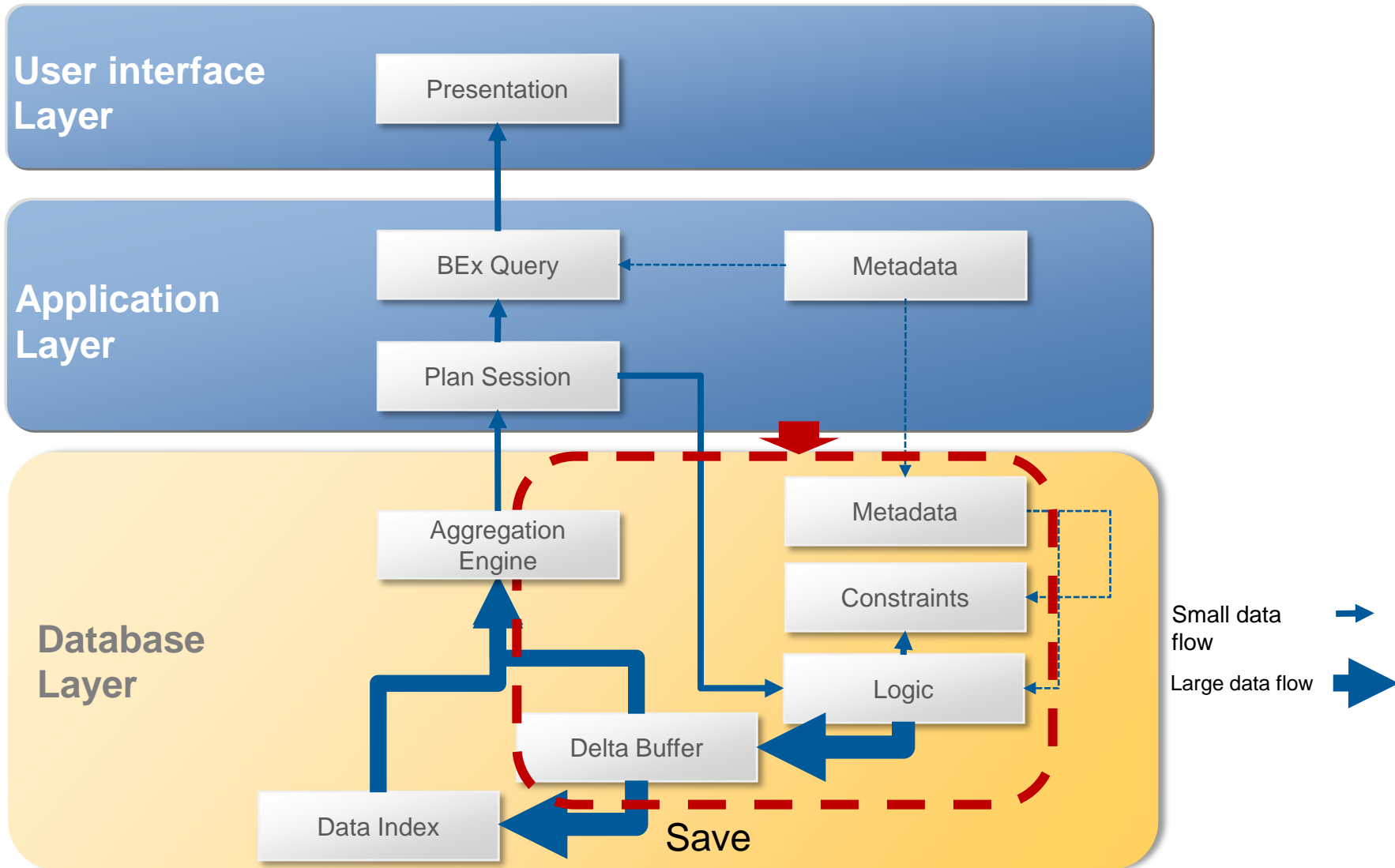
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### HANA-Based Approach

1. Determine the delta → +50
2. Send **1** value to HANA database + instruction to disaggregate and how
3. Disaggregate (in HANA engine)
  - per week (52)
  - per branch (500)
  - create + save 26000 values



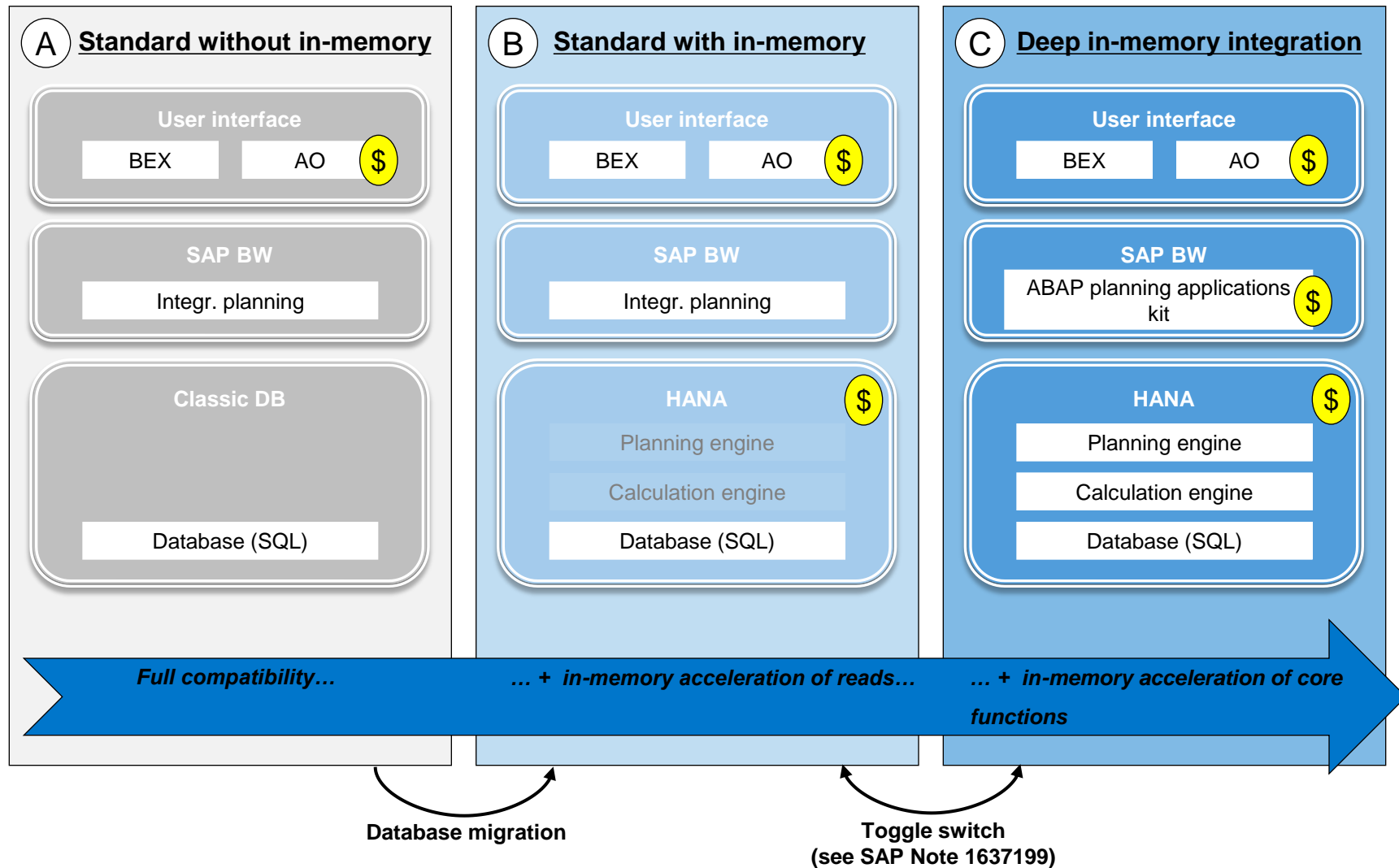
# In-Memory Planning Architecture





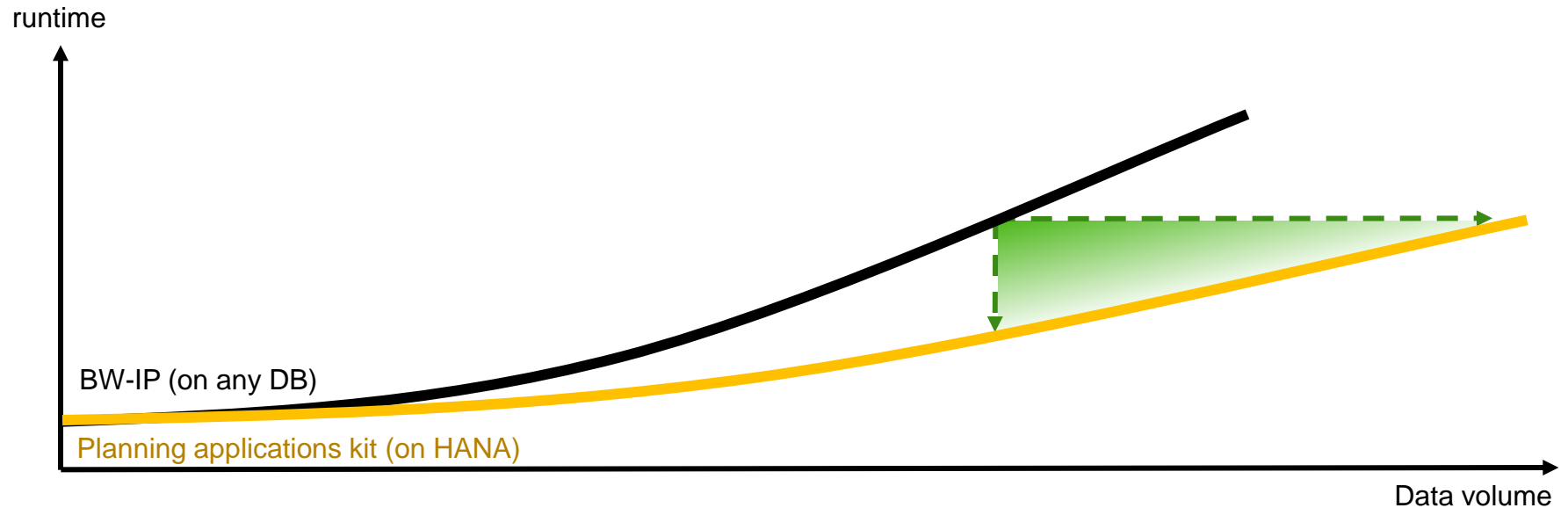
# SAP BW powered by HANA

## Deployment options for planning (SAP BW 7.30 SP5)



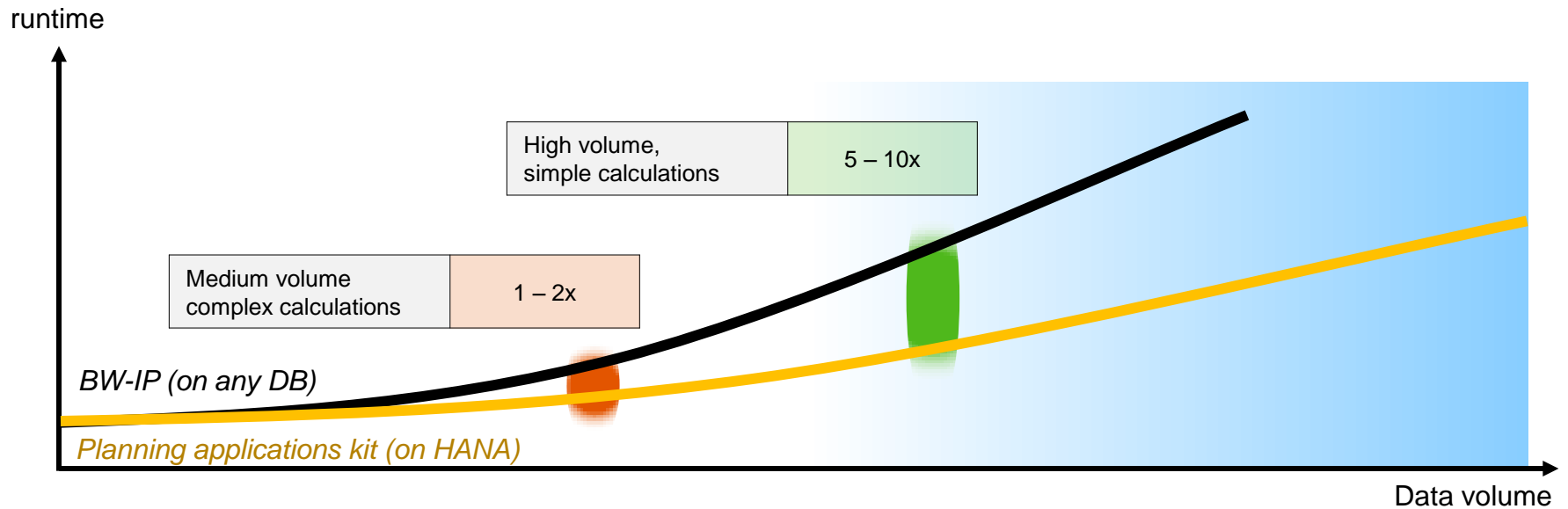
# In-Memory Planning

## Value Proposition



- **Improved plan quality**  
(better response times allow more simulations cycles)
- **Improved user experience**  
(better response time)
- **Improved plan accuracy**  
(higher data volume can processed in same time)

# In-Memory Planning



- **Benefit is scenario specific**  
(fix costs might dominate low volume scenarios)

# Demo

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## Web Demo

# ABAP Planning Applications Kit

## Features Executed In-Memory

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### **Features executed in In-Memory calculation engine**

Query execution for reading and writing the data

Disaggregation in queries

Characteristic Relationships type Attribute, DSO

Planning functions:

- FOX (with some restrictions, see next slides)
- Distribution by reference data
- Copy
- Delete
- Reevaluate
- Repost
- Set Value

# ABAP Planning Applications Kit

Features using ABAP Calculations (see Note 1637199)

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**Features executed in ABAP calc. engine, data is transported to ABAP layer – for this step only (!)**

Planning functions:

- Custom defined (ABAP Exit)
- Distribution with Keys
- Unit Conversion/Currency Conversion
- With more than one condition

Disaggregation in Query in certain cases

- Query based on MultiProvider on top of aggregation level
- Reference key figure is a formula itself
- Key figure is restricted to multiple values (multiple single values, interval, hierarchy node)

# ABAP Planning Applications Kit

Features NOT Supported in ABAP Planning Appl. Kit (see Note 1637199)

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## Entire planning model is executed in ABAP:

### Characteristic Relationships:

- Type Exit
- Type Hierarchy

### Key figures

- Type TIMS and DATS (time and date)
- With other aggregation than SUM

### Data Slices (all kinds)

### Logging BAdI

### Commands in Fox formulas:

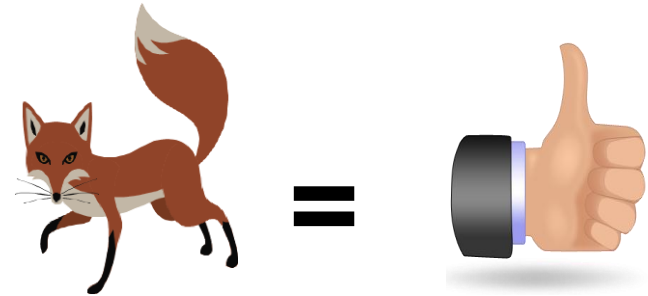
- CURC (currency conversion)
- CP, CO, CA, CS (string operations)
- Call Function (calling ABAP function module)

Transient master data; virtual key figures and characteristics

# Implementation Recommendations 1

## Fox rules

Use Fox formulas instead of ABAP exists

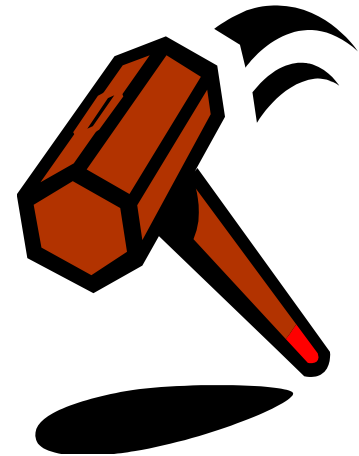
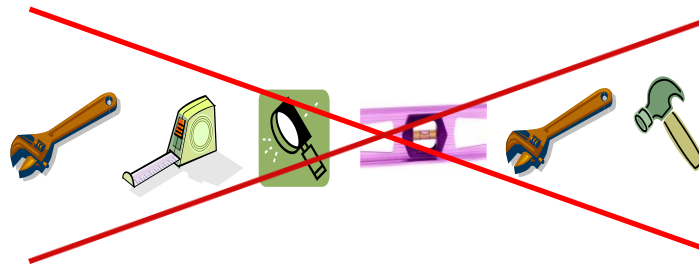


## Think Big

Think of new scenarios

Use few large planning functions instead of several small ones

Enlarge filters to reduce planning functions and complexity





# Implementation Recommendations 2

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## **Avoid shifts between In-Memory and ABAP execution of planning functions**

If ABAP (custom-defined) planning functions are necessary, try to pool them

## **Reduce complexity**

Disaggregation in query can make additional aggregation levels unnecessary

## **Be up-to-date regarding which features are supported by PAK**

See SAP Note 1637199



# Thank you

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