



Interfaces in AL



Components



Define



Replace



Extend



Why Interfaces? -> Componentization!

Price calculation with forecast

The base application

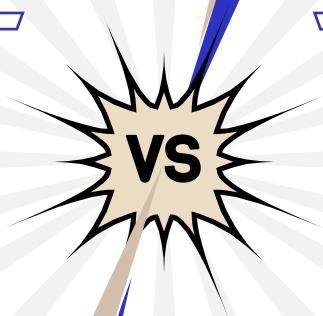
- 1. **Define** a component
- → Describe the purpose (what does it do?), not the implementation (how is it done?)
- → Allow to think more easily and clearly about the architecture of your solution and how different parts (components...) interact
- 2. Replace a component (runtime / design time)
- → Allow to switch implementation very easily (German tax calculation vs. Danish tax calculation, standard price calulation vs. advanced price calculation)
- → Allow to override standard code by replacing the whole component
- 3. Extend a component
- → Add functionality

Coupling

Loosely coupled code

Coupling level





Tightly coupled code

Coupling level



Sports evaluation report

GetBasketballEvaluation()

GetTennisEvaluation()

Basketball evaluation codeunit

Tennis evaluation codeunit

Sports evaluation report

var BasketballCodeunit

•••

BasketballCodeunit.GetEvaluation()

var TennisCodeunit

•••

TennisCodeunit.GetEvaluation()

Basketball evaluation codeunit

GetEvaluation()

Tennis evaluation codeunit

Sports evaluation report

var BasketballCodeunit

•••

BasketballCodeunit.GetEvaluation()

var TennisCodeunit

•••

TennisCodeunit.GetEvaluation()

Basketball evaluation codeunit

GetEvaluation()

Tennis evaluation codeunit



Sports evaluation report

var BasketballCodeunit

BasketballCodeunit.GetEvaluation()

var TennisCodeunit

TennisCodeunit.GetEvaluation()

Basketball evaluation codeunit

GetEvaluation()

Tennis evaluation codeunit

Sports evaluation report

var BasketballCodeunit

•••

BasketballCodeunit.GetEvaluation()

var TennisCodeunit

•••

TennisCodeunit.GetEvaluation()

Interface GetEvaluation()

Implementation list

Call mechanism / implement. selection

Basketball evaluation codeunit

GetEvaluation()

Tennis evaluation codeunit

Sports evaluation report

var BasketballCodeunit

•••

BasketballCodeunit.GetEvaluation()

var TennisCodeunit

•••

TennisCodeunit.GetEvaluation()

Interface GetEvaluation()

Implementation list

Call mechanism / implement. selection

Basketball evaluation codeunit

GetEvaluation()

Tennis evaluation codeunit

Sports evaluation report

var EvaluationInterface

•••

EvaluationInterface.GetEvaluation()

Interface GetEvaluation()

Implementation list



Call mechanism / implement. selection

Basketball evaluation codeunit

GetEvaluation()

Tennis evaluation codeunit

Why Decoupling? Removing

Sports evaluation report

var EvaluationInterface

EvaluationInterface.GetEvaluation()

Interface GetEvaluation()

Implementation list

Call mechanism / implement. selection

Basketball evaluation codeunit



Why Decoupling? Replacing

Sports evaluation report

var EvaluationInterface

•••

EvaluationInterface.GetEvaluation()

Interface GetEvaluation()

Implementation list

Call mechanism / implement. selection

Basketball evaluation codeunit

GetEvaluation()

NEW Tennis evaluation codeunit

Why Decoupling? Adding

Sports evaluation report

var EvaluationInterface

•••

EvaluationInterface.GetEvaluation()

Interface GetEvaluation()

Implementation list

Call mechanism / implement. selection

Basketball evaluation codeunit

GetEvaluation()

NEW Tennis evaluation codeunit

GetEvaluation()

Soccer evaluation codeunit

Why Decoupling? Extending (breaking)

Sports evaluation report

var EvaluationInterface

•••

EvaluationInterface.GetEvaluation()

Interface GetEvaluation()

XY evaluation codeunit

Why Decoupling? Extending (breaking)

Sports evaluation report

var EvaluationInterface

•••

EvaluationInterface.GetEvaluation()

EvaluationInterface.GetGraph()

Interface
GetEvaluation()
GetGraph()

XY evaluation codeunit

GetEvaluation()

GetGraph()

Why Decoupling? Extending (nonbreaking)

Sports evaluation report

var EvaluationInterface

•••

EvaluationInterface.GetEvaluation()

Interface GetEvaluation()

XY evaluation codeunit

Why Decoupling? Extending (nonbreaking)

Sports evaluation report

var EvaluationInterface

•••

EvaluationInterface.GetEvaluation()

var GraphInterface

•••

GraphInterface.GetEvaluation()

Interface GetEvaluation()

Interface GetGraph() XY evaluation codeunit

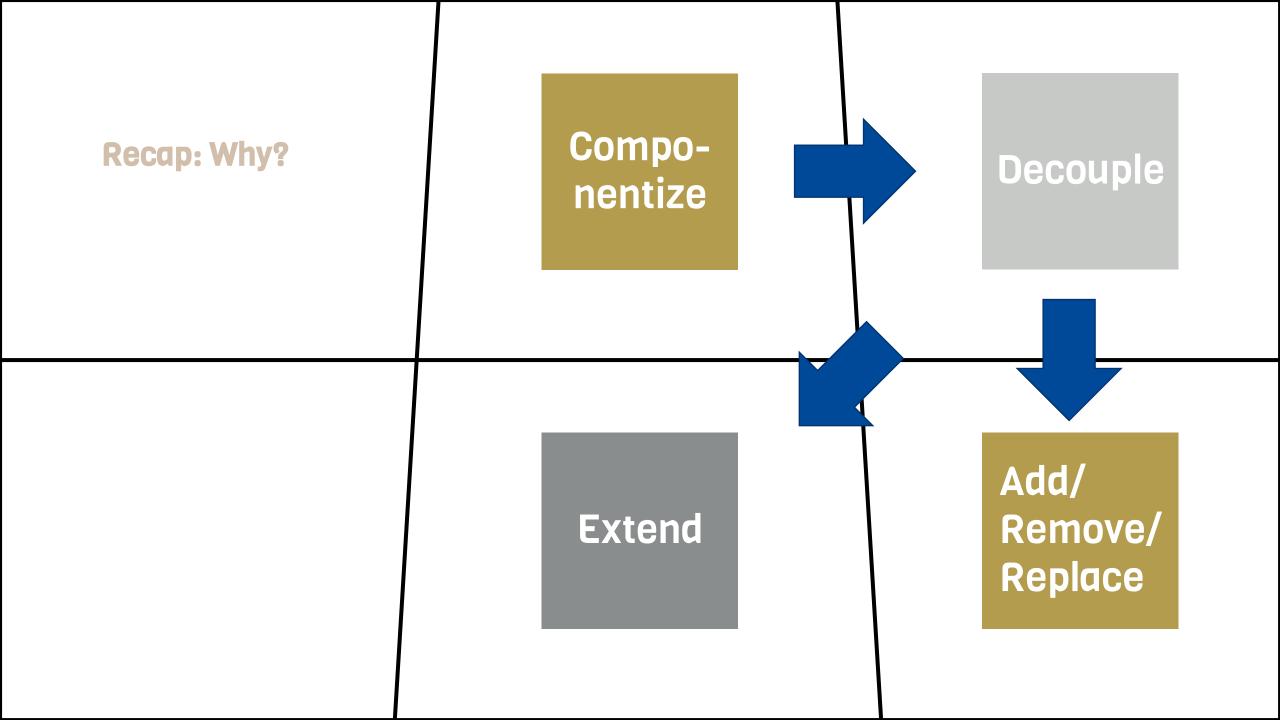
GetEvaluation()

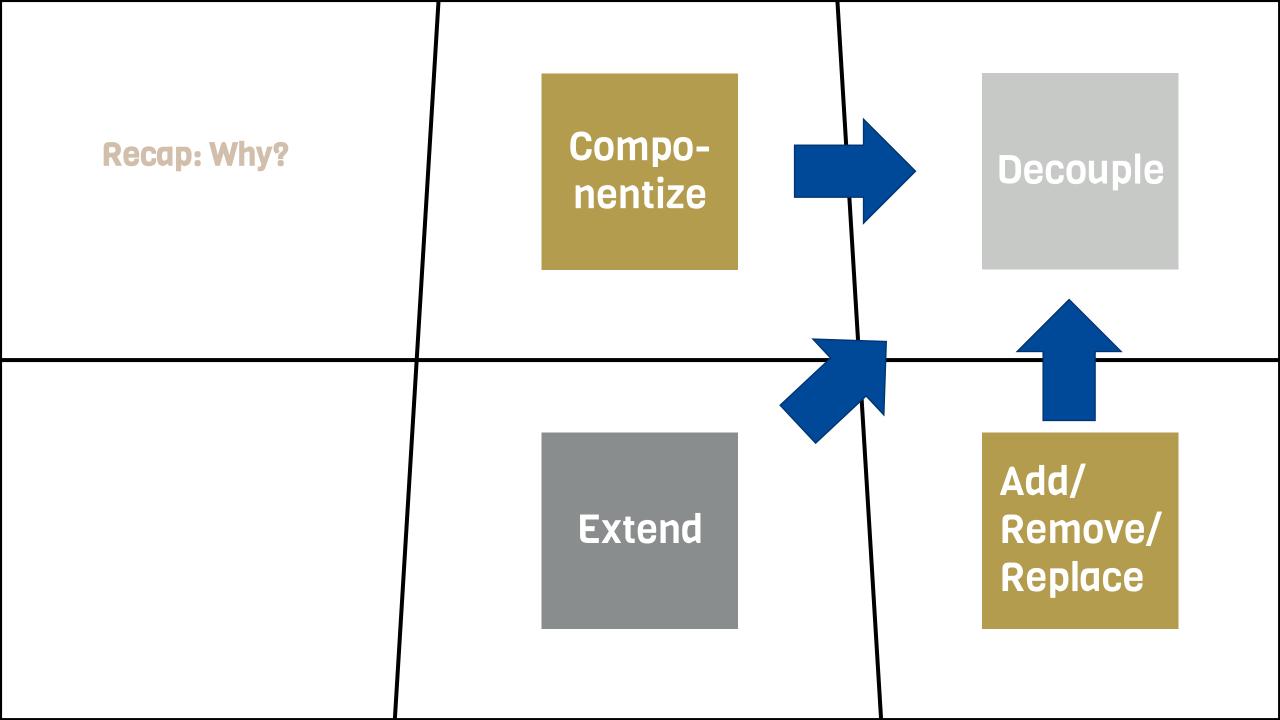
GetGraph()

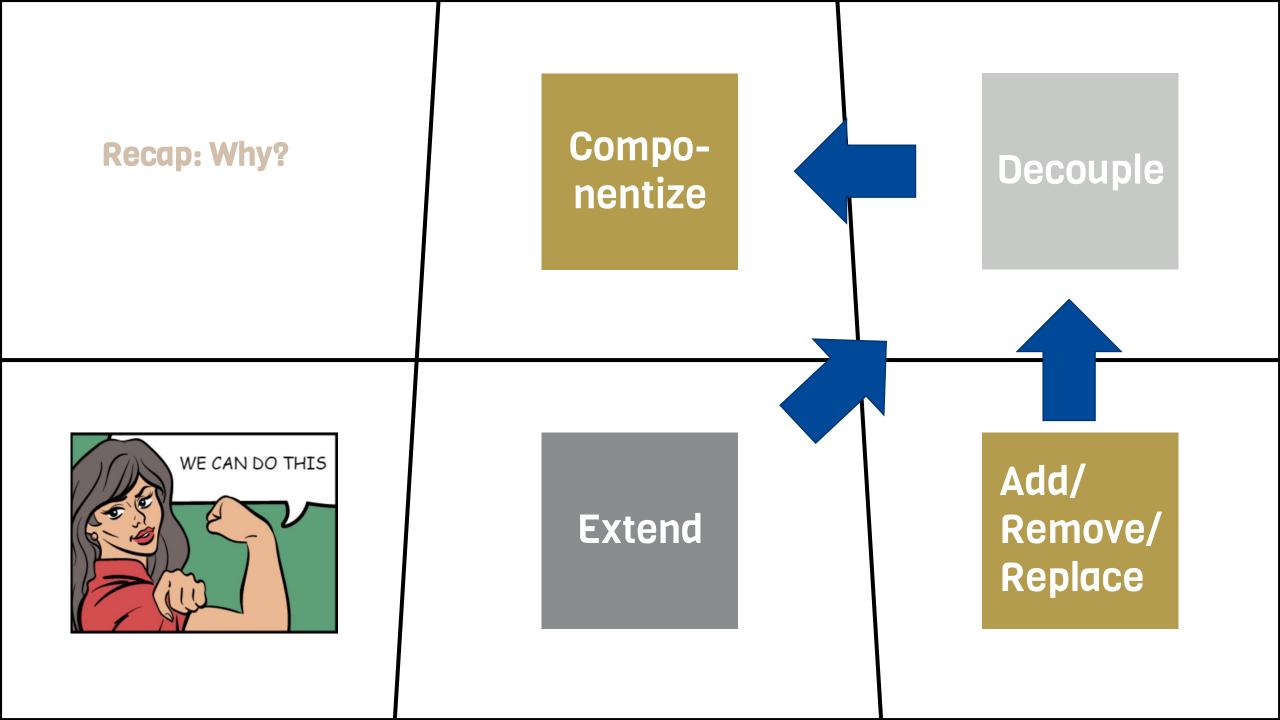
Demo



- Define the interface
- Implement the interface
- Create the implementation list and handler
- Use the interface
- Add a new implementation
- Extend the interface (breaking / non-breaking)







More information

Session on interfaces at the 2020 wave 1 virtual event for BC

aka.ms/virtual/businesscentral/2020rw1