

**NAV
TECH
DAYS**
2018

mibuso.com

The future for developers and consultants

DAVID SINGLETON, ERIK P. ERNST

www.navtechdays.com

When you are passionate about
Microsoft Dynamics NAV/365 Business Central

**NAV
TECH
DAYS**
2018

mibuso.com

From kids to dinosaurs

We started in our Twenties now we are in our Fifties

Combined we have:

- 54 years Navision experience
- 48 years Navision community
- 25 years as MVPs
- 300+ Navision projects
- 43 Countries
- Sales, End User, Developer, Analyst, Consultant, Project Manager, Solution Architect, Trainer, Supporter



Erik P. Ernst



David Singleton

What happens to the dinosaurs after the comet hits?



We will cover three topics

- What we did before?
- What is the problem?
- What is the solution?
- The history of Navision
- The current situation with Dynamics NAV
- The future with Business Central



How did we get here?

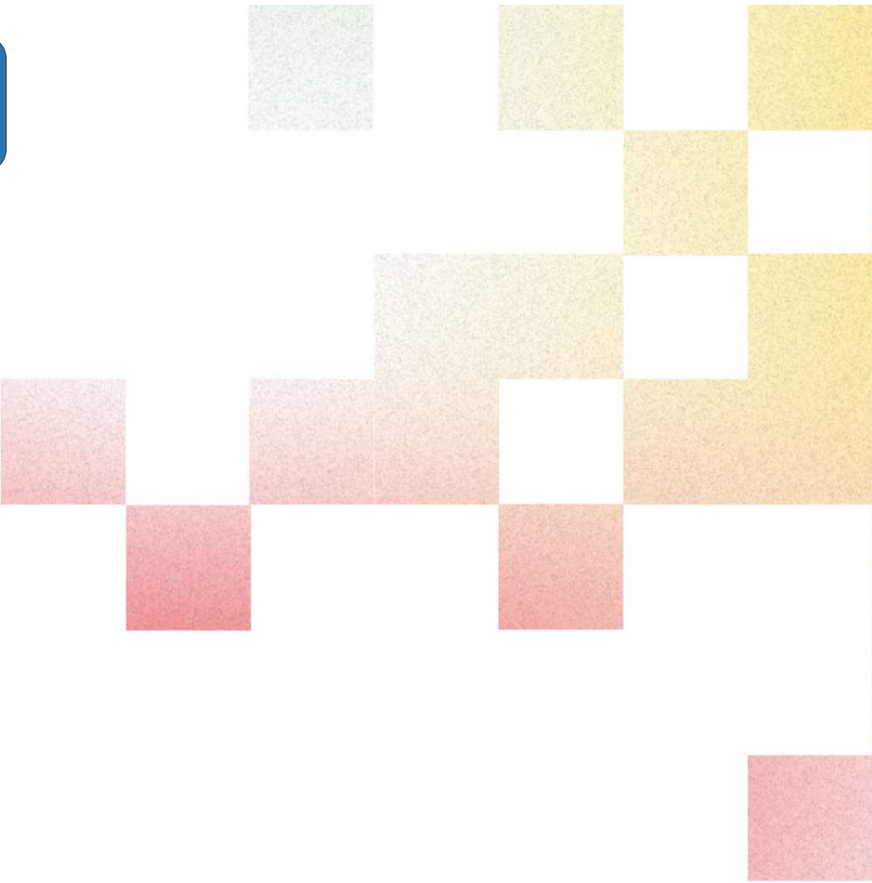
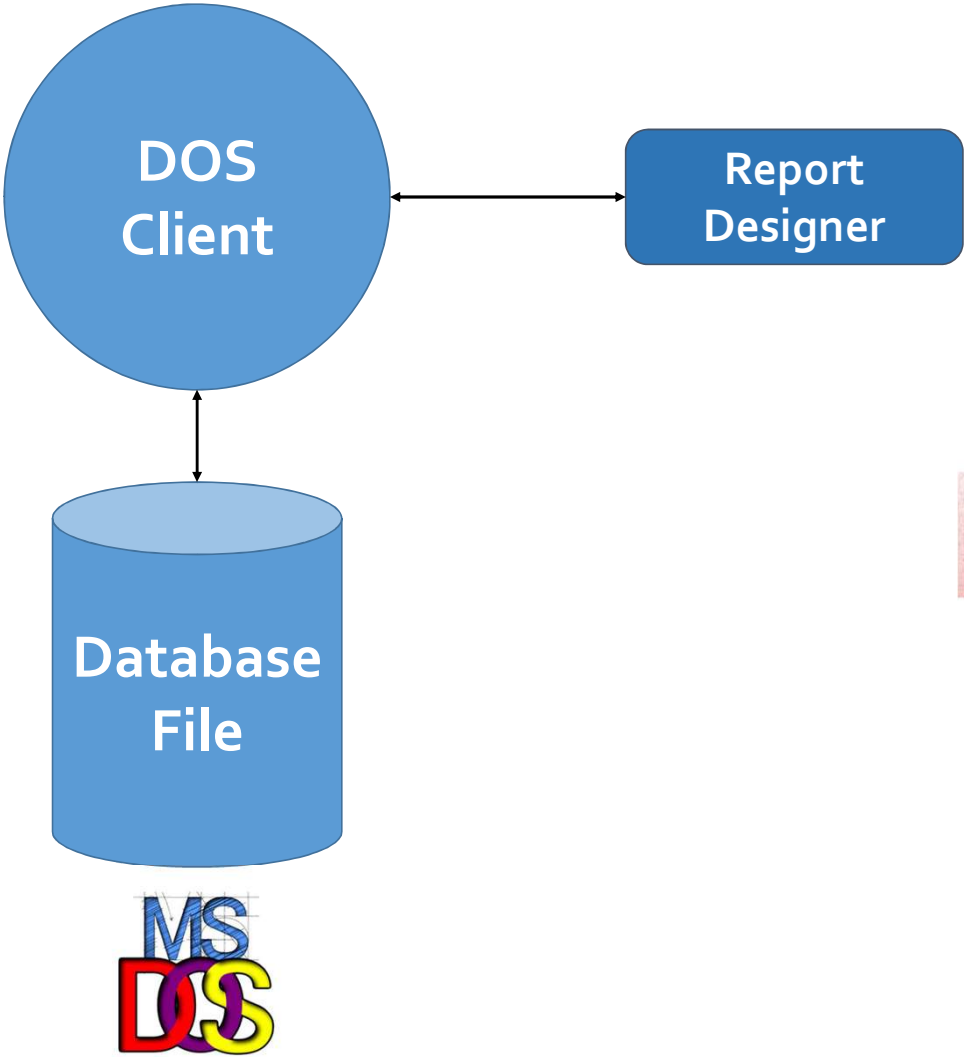
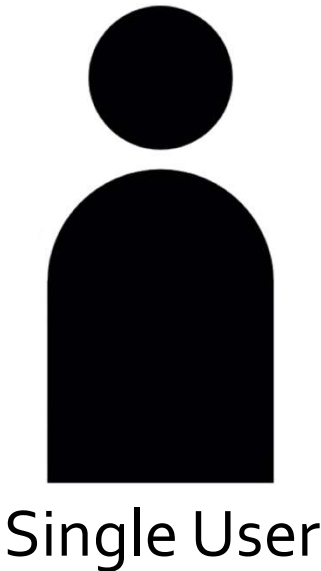
PC-Plus



Our journey to Business Central

PC-Plus

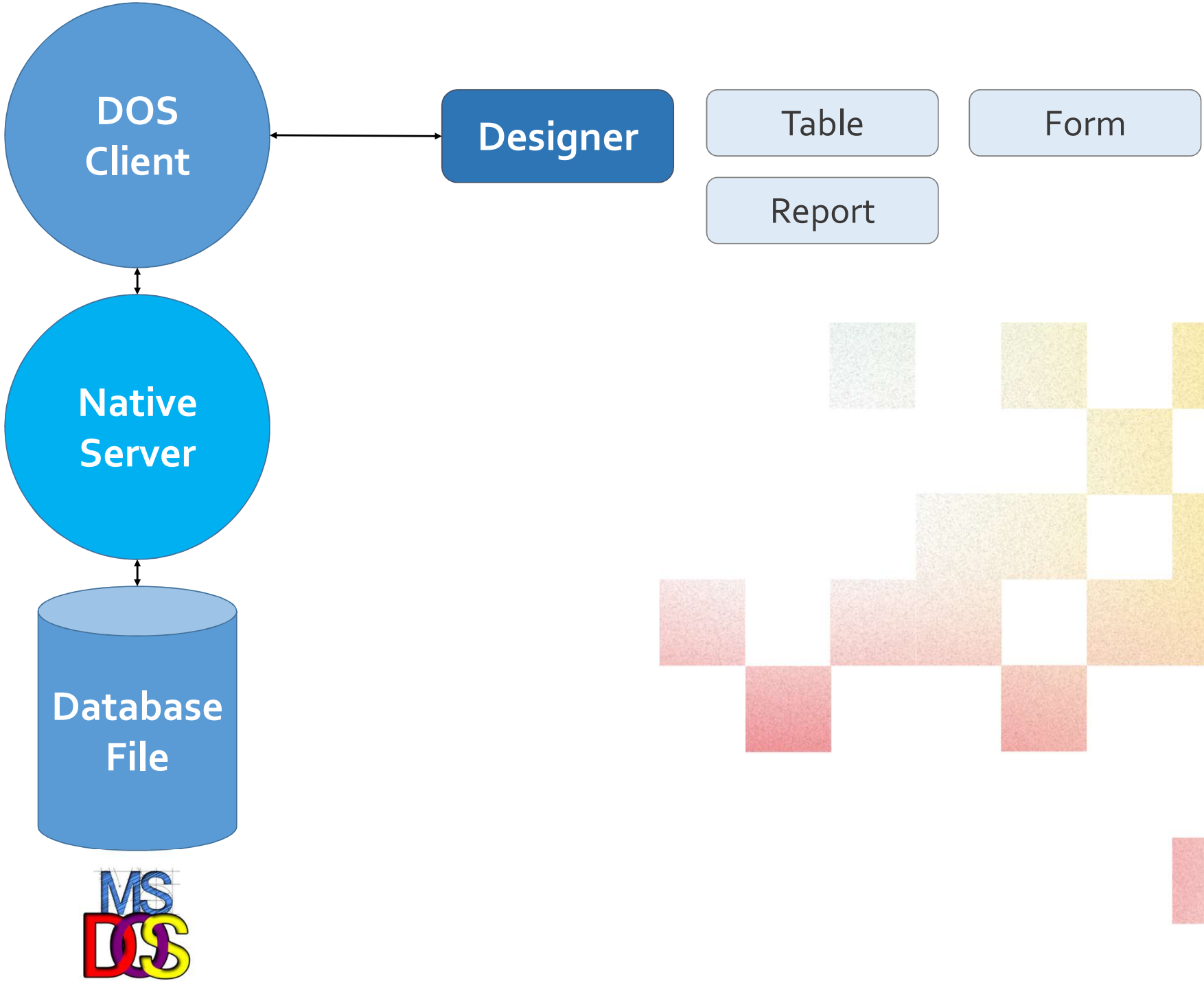
1984



Our journey to Business Central

Navigator 1.0 – 2.0

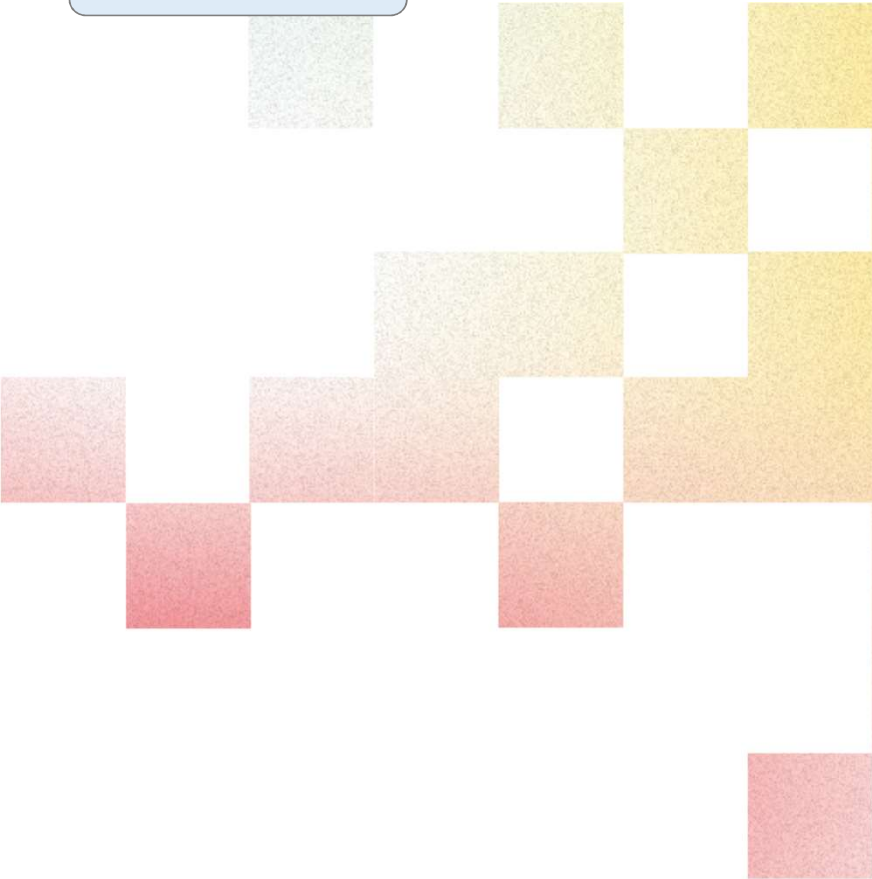
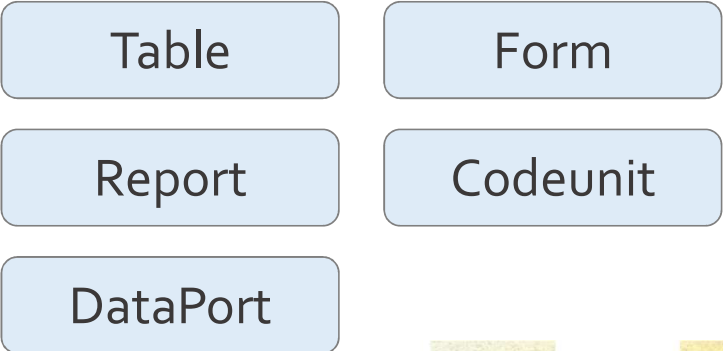
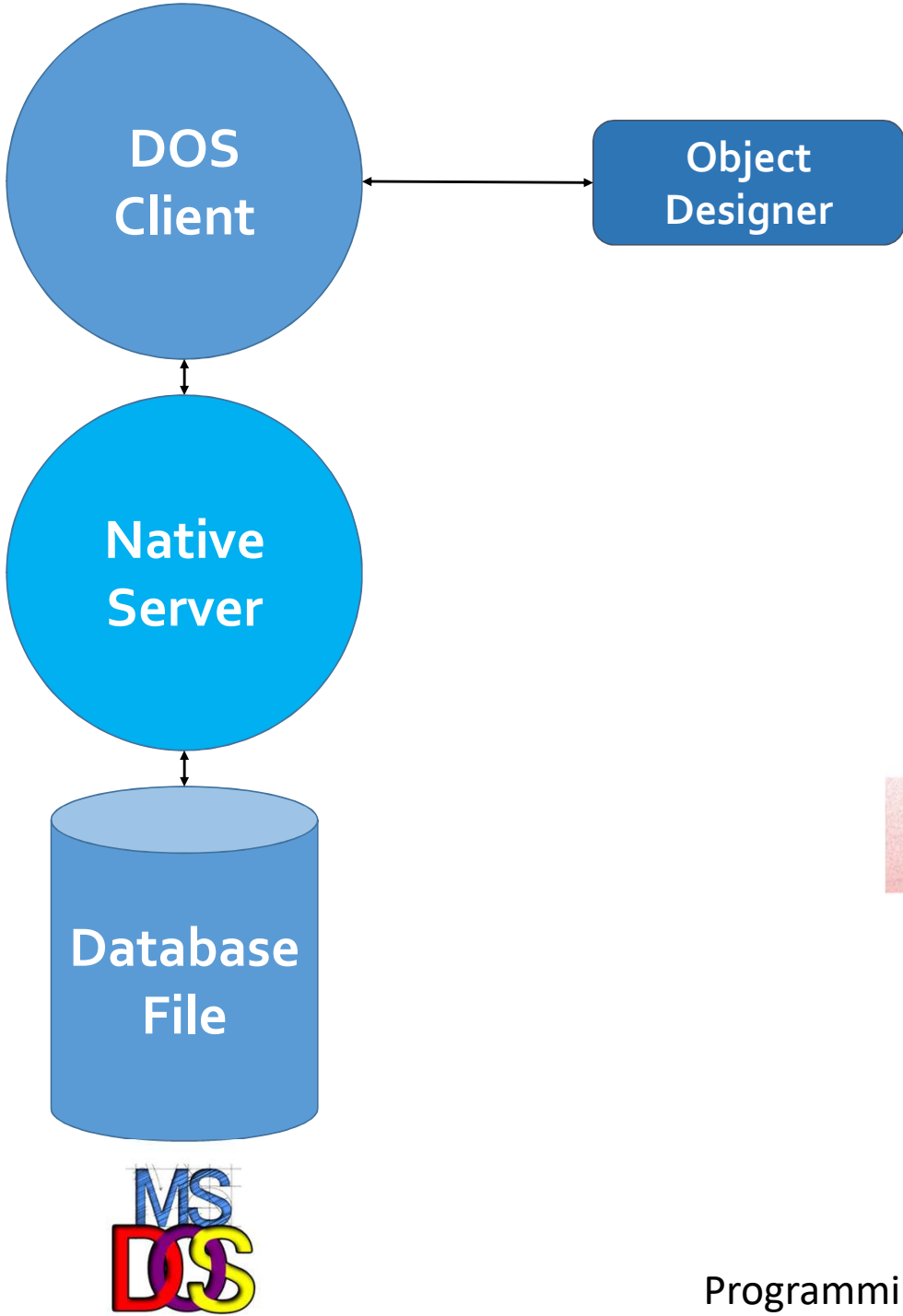
1987



Our journey to Business Central

Navision 3.0

1989

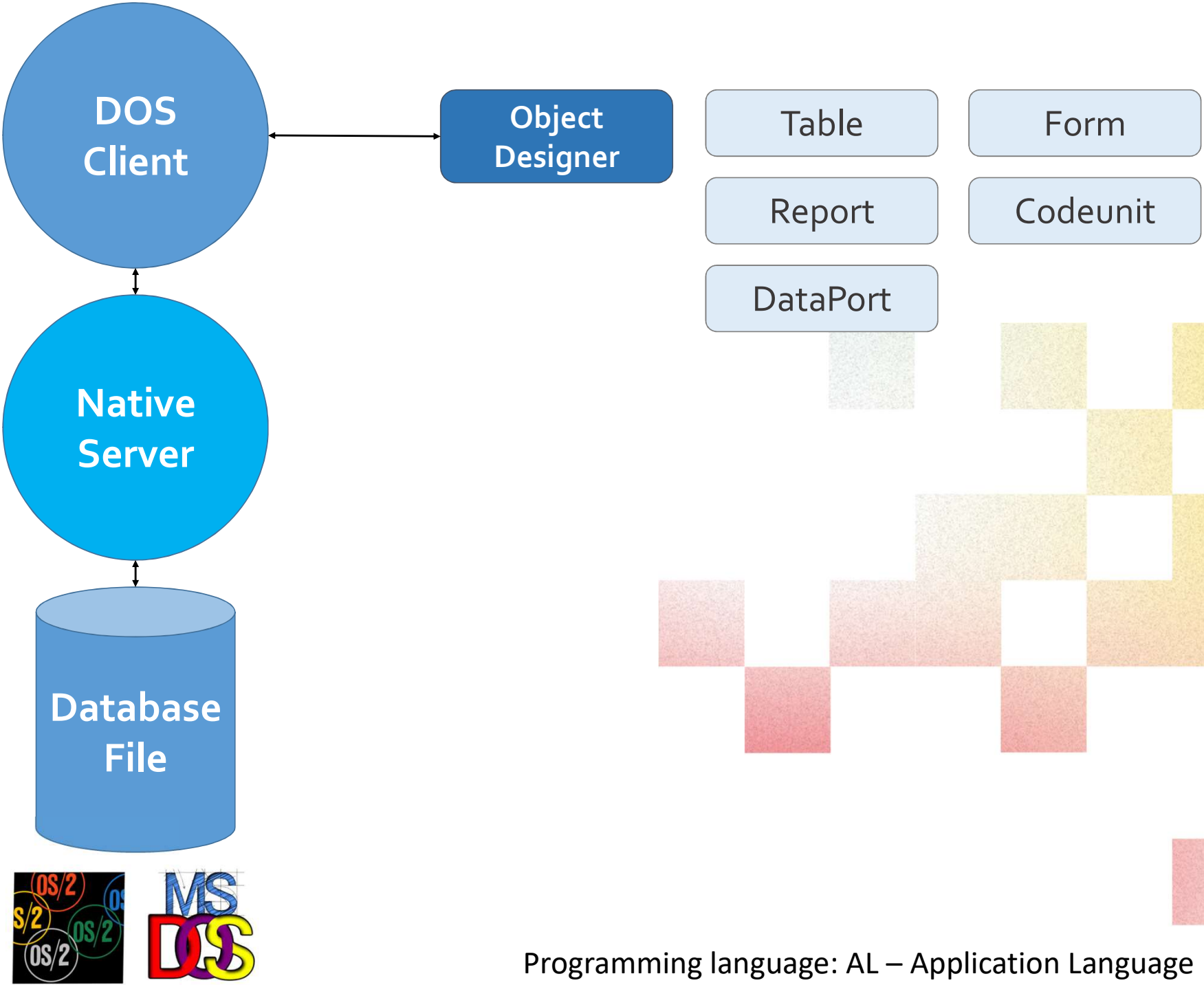


Programming language: AL – Application Language

Our journey to Business Central

Navision 3.04

1991



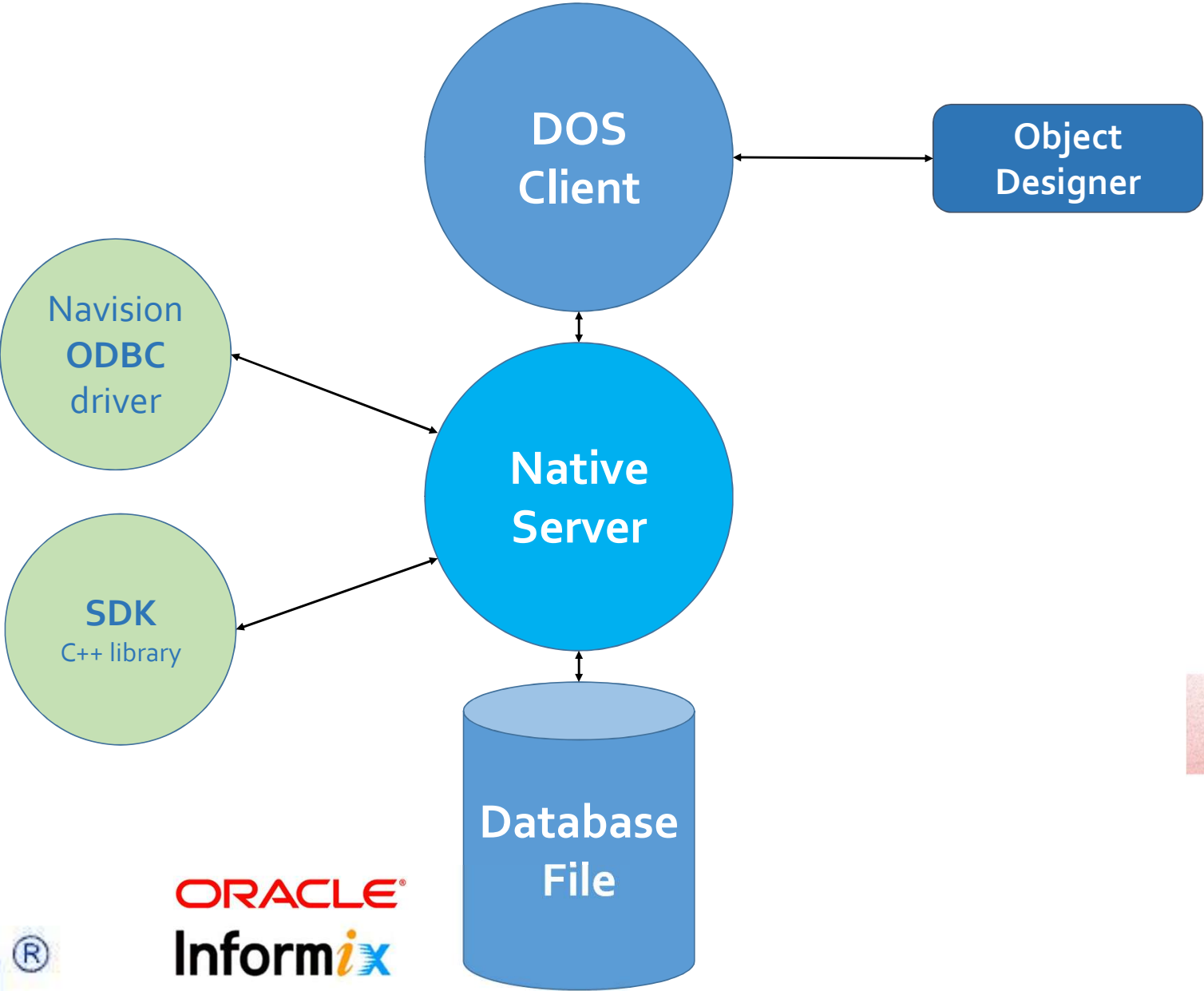
NAVISION[®]
software

Programming language: AL – Application Language

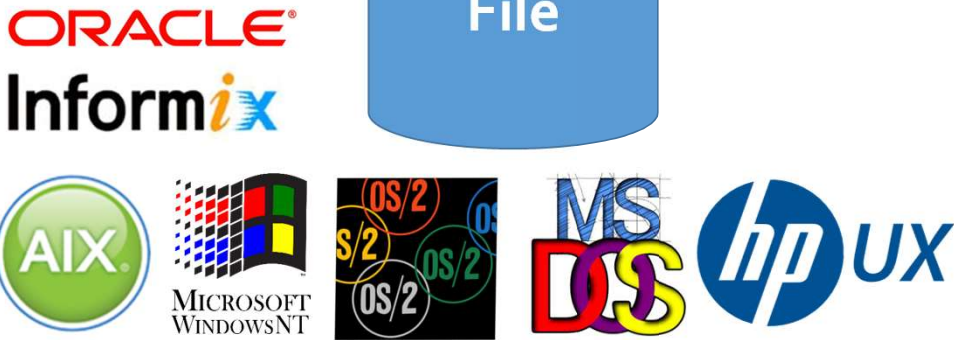
Our journey to Business Central

Navision 3.55

1994



- Table
- Form
- Report
- Codeunit
- DataPort

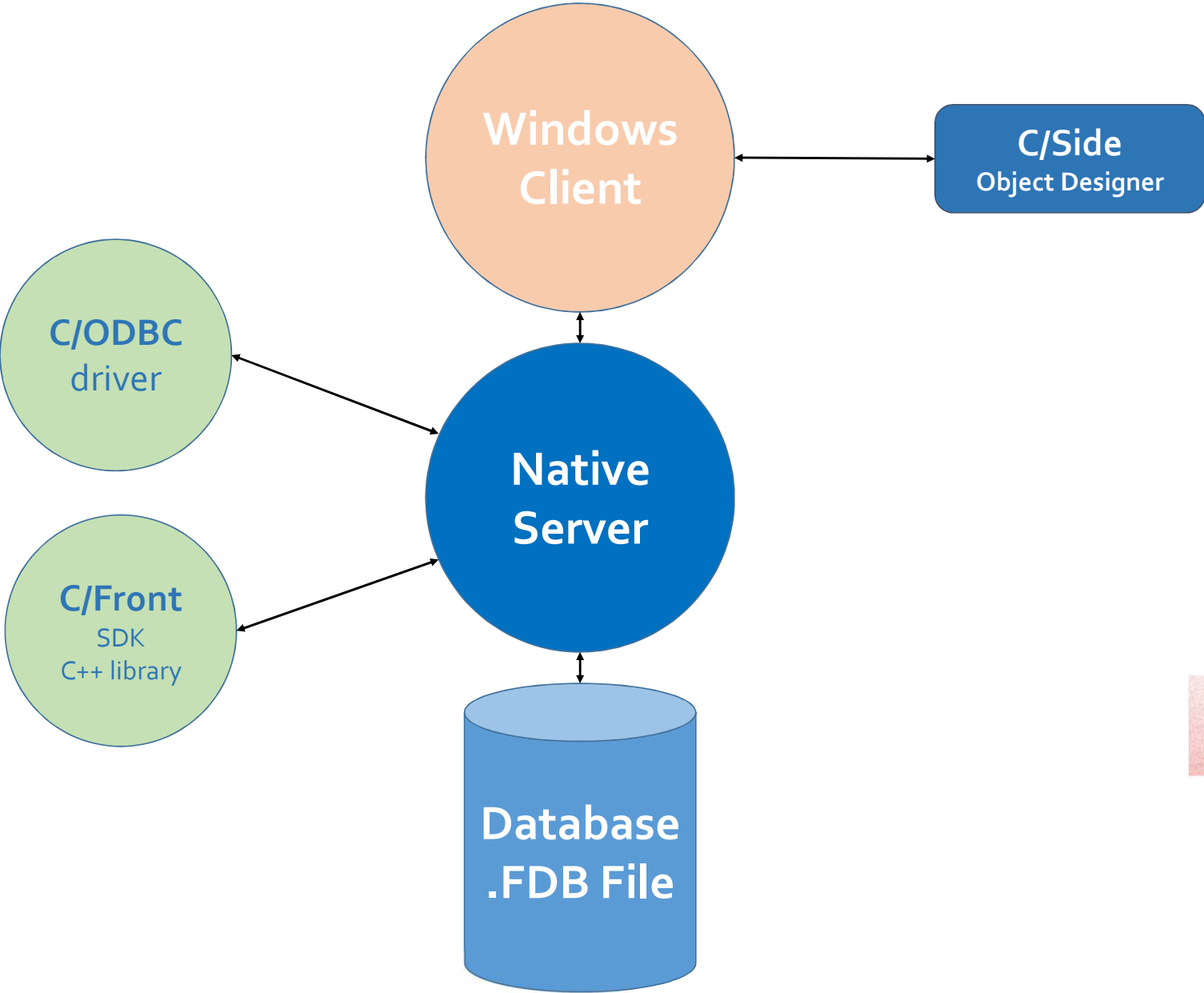


Programming language: AL – Application Language

Our journey to Business Central

Navision Financials 1.0

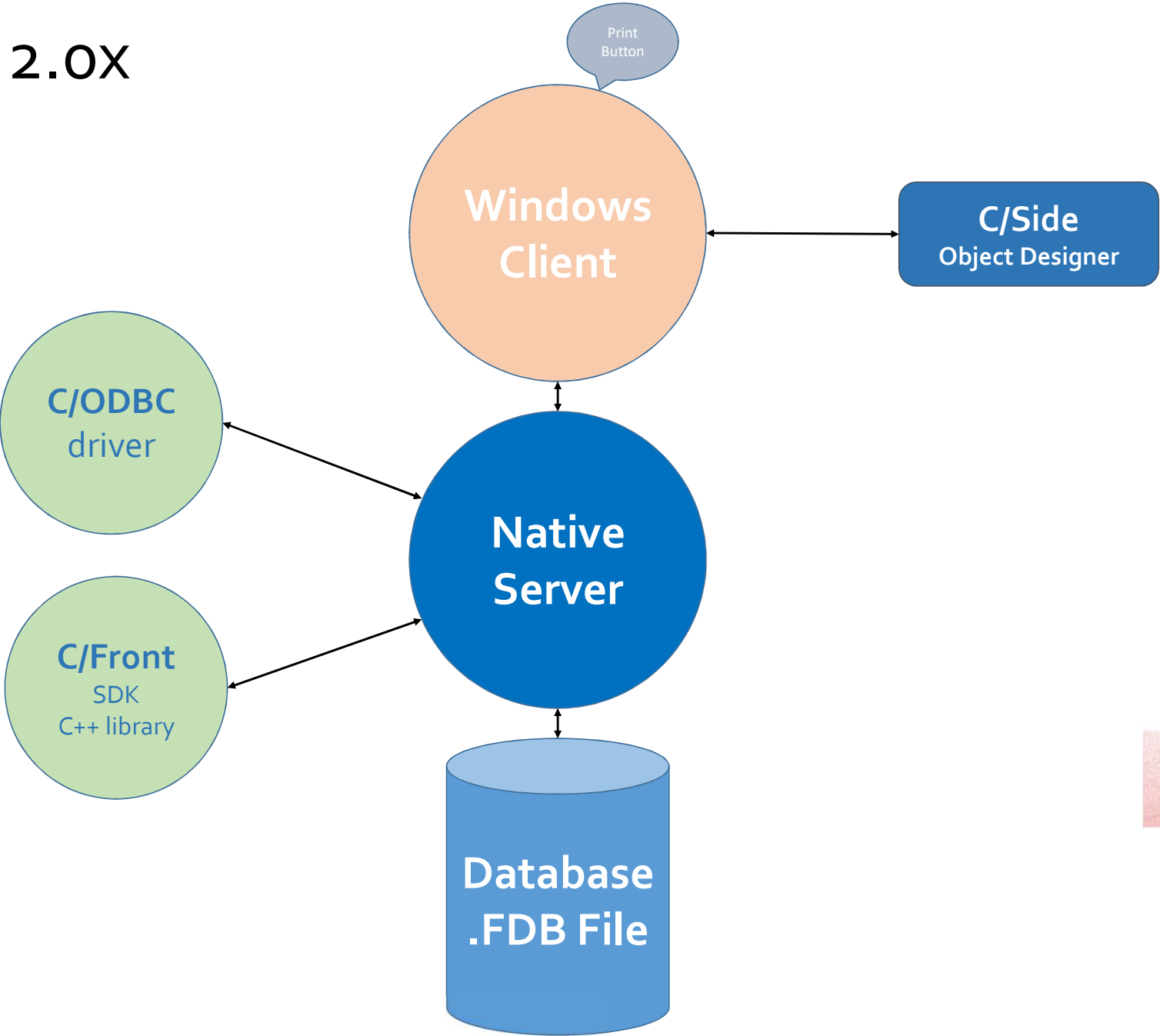
1995



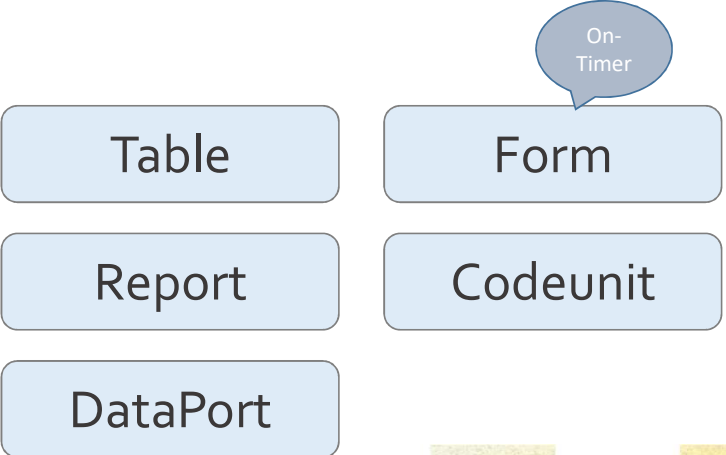
Programming language: C/AL

Our journey to Business Central

Navision Financials 2.0x



1998

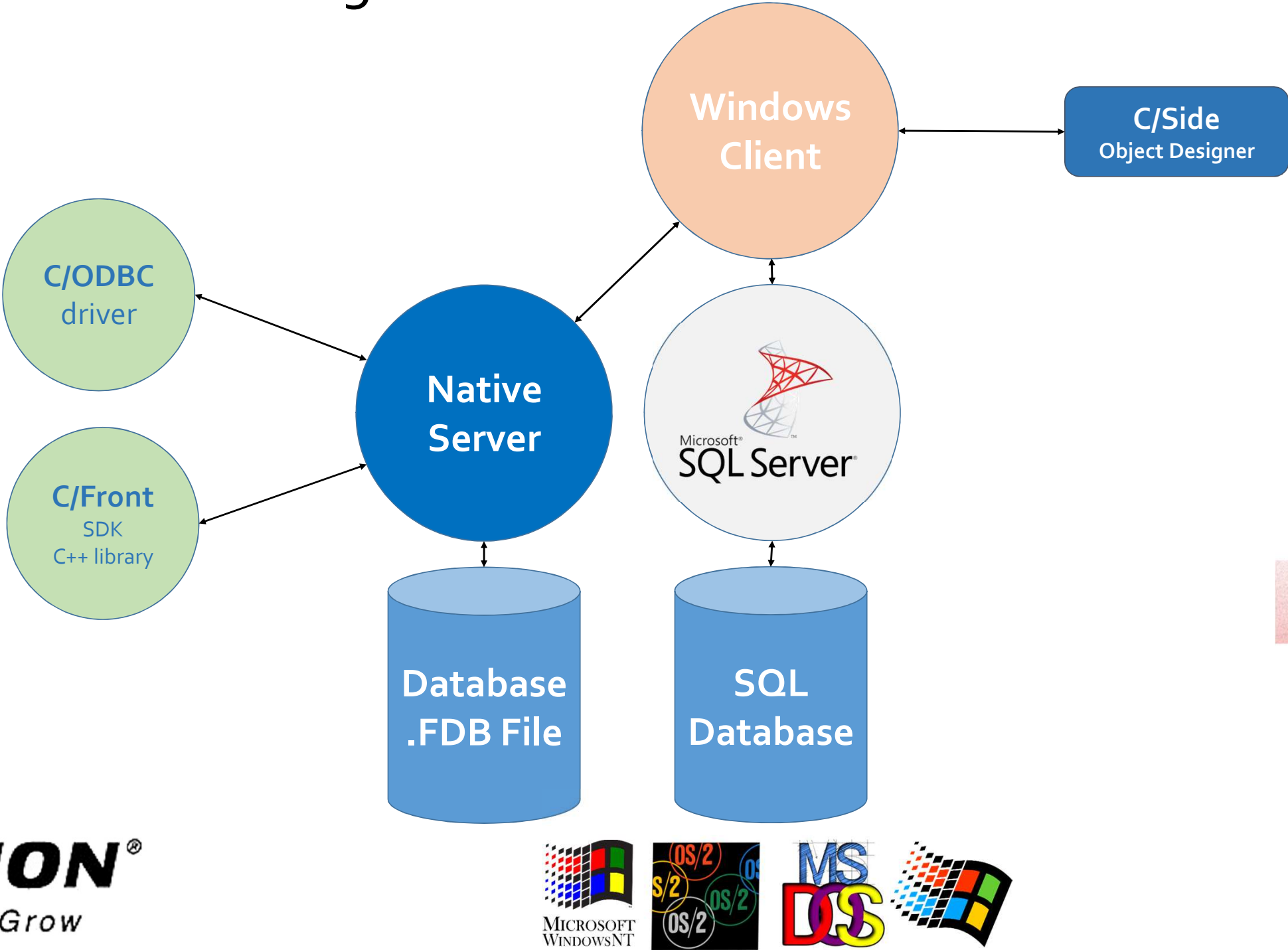


Programming language: C/AL

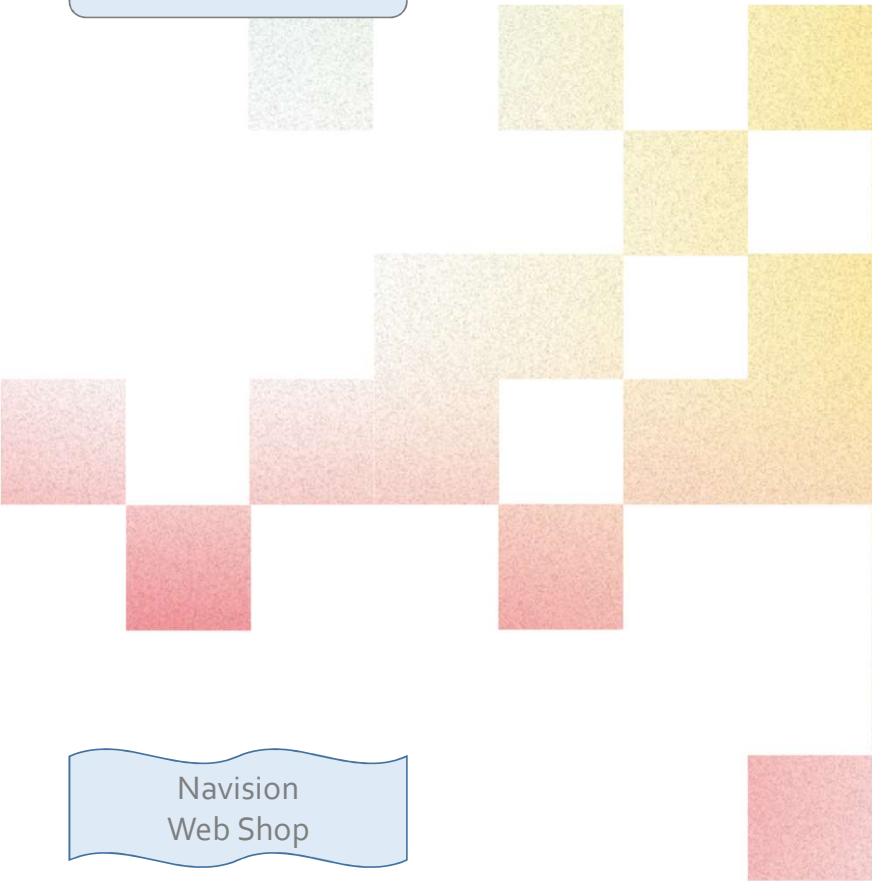
Our journey to Business Central

Navision Financials 2.5x

1999



- Table
- Form
- Report
- Codeunit
- DataPort



Navision Web Shop

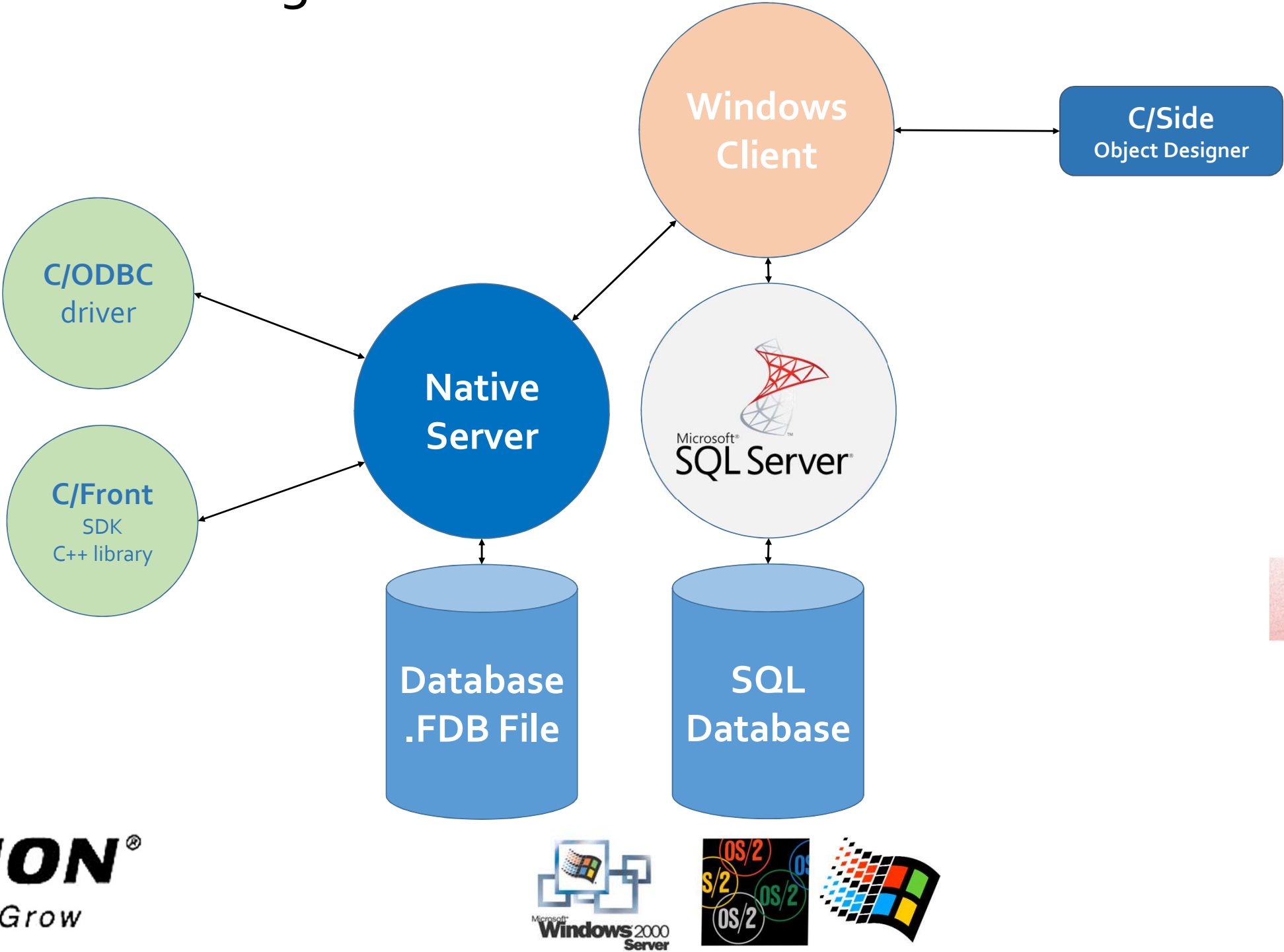
NAVISION®
The Way to Grow

Programming language: C/AL

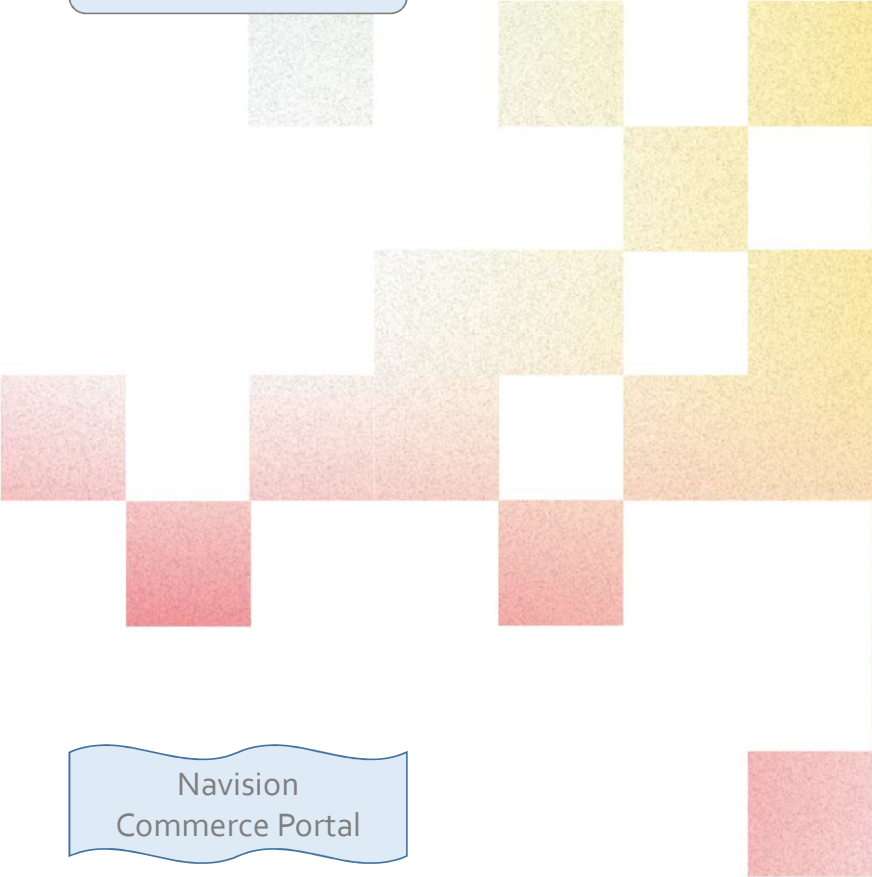
Our journey to Business Central

Navision **Solutions** 3.00

2001



- Table
- Form
- Report
- Codeunit
- DataPort



Navision
Commerce Portal

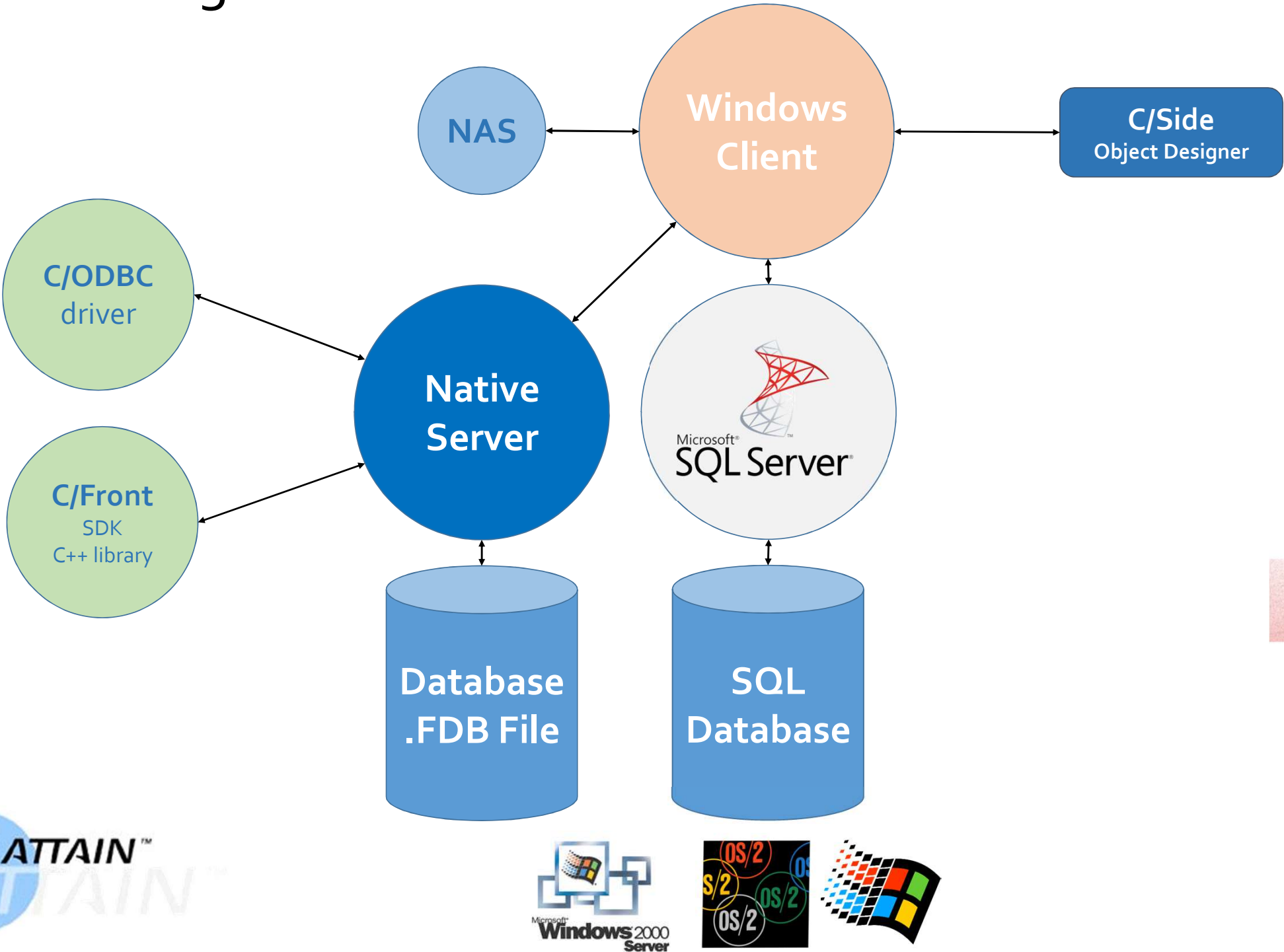
NAVISION[®]
The Way to Grow

Programming language: C/AL

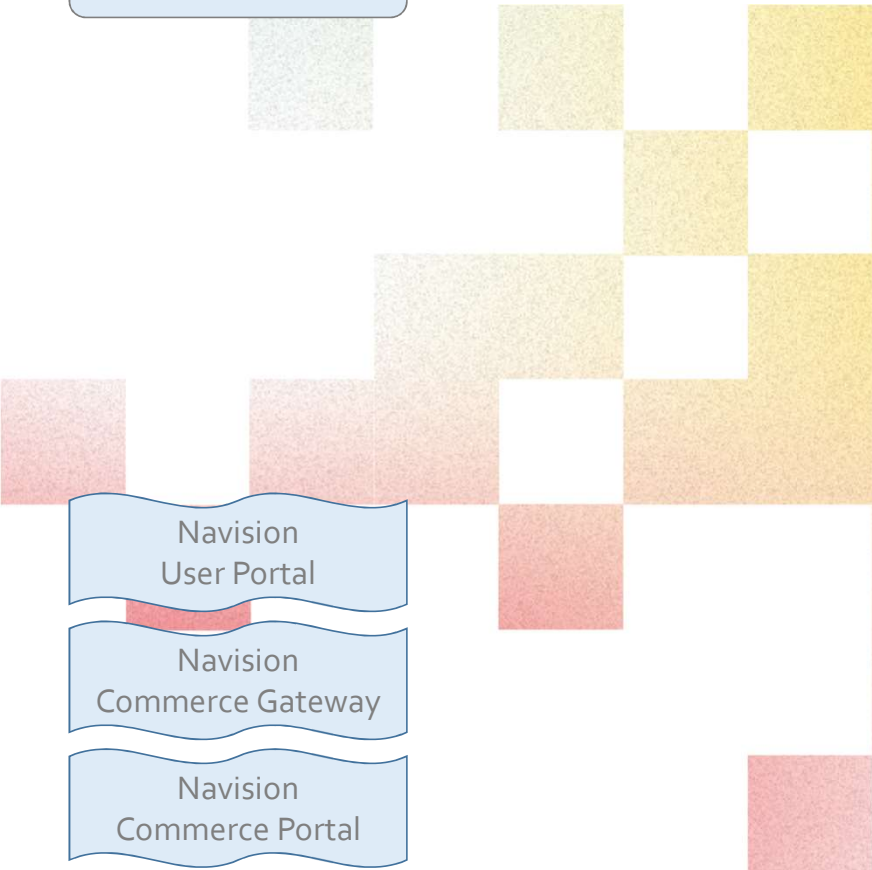
Our journey to Business Central

Navision **Attain** 3.0x

2002



- Table
- Form
- Report
- Codeunit
- DataPort



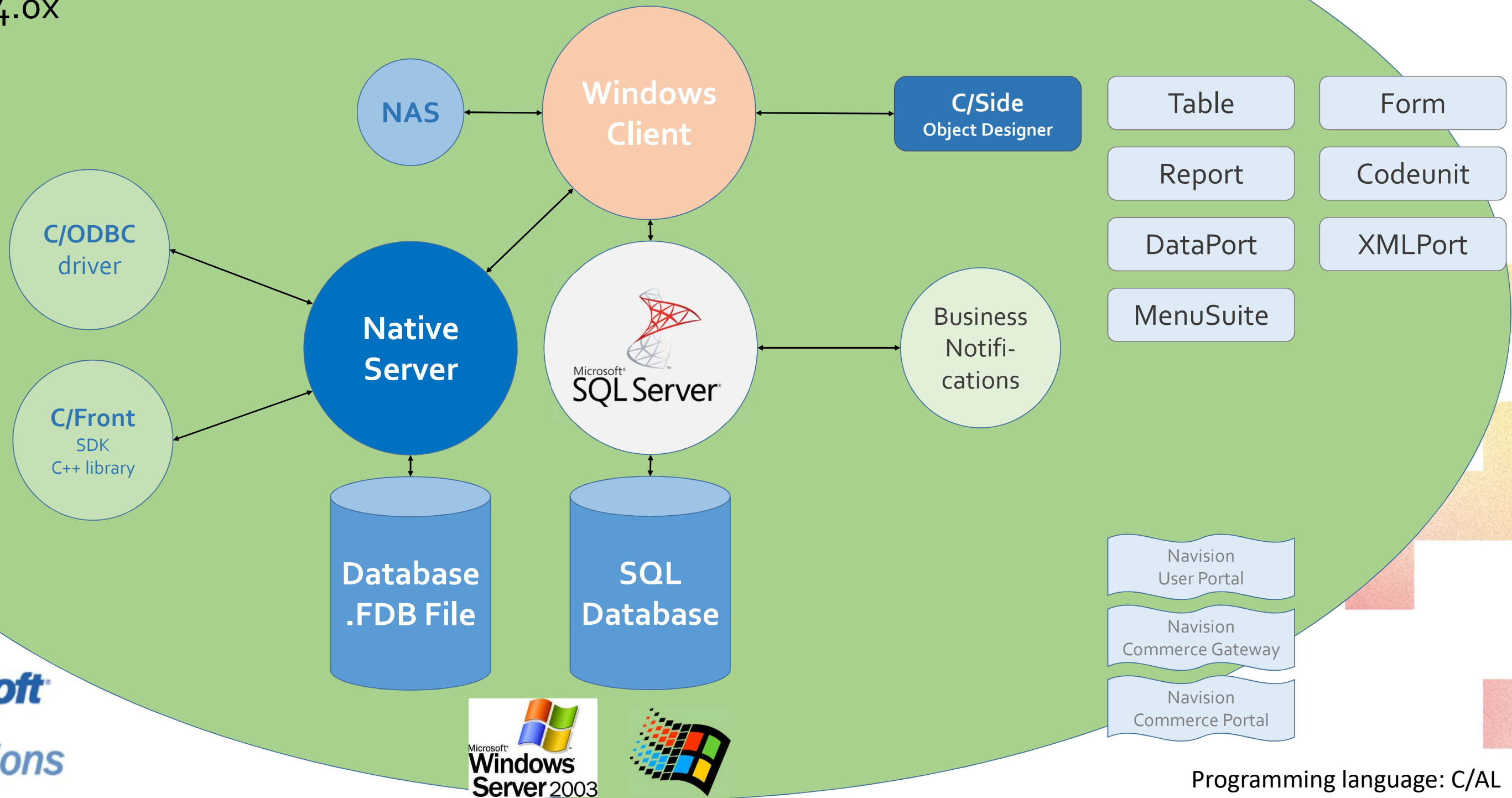
Programming language: C/AL



Our journey to Business Central

Microsoft Business Solutions
Navision 4.0X

2005



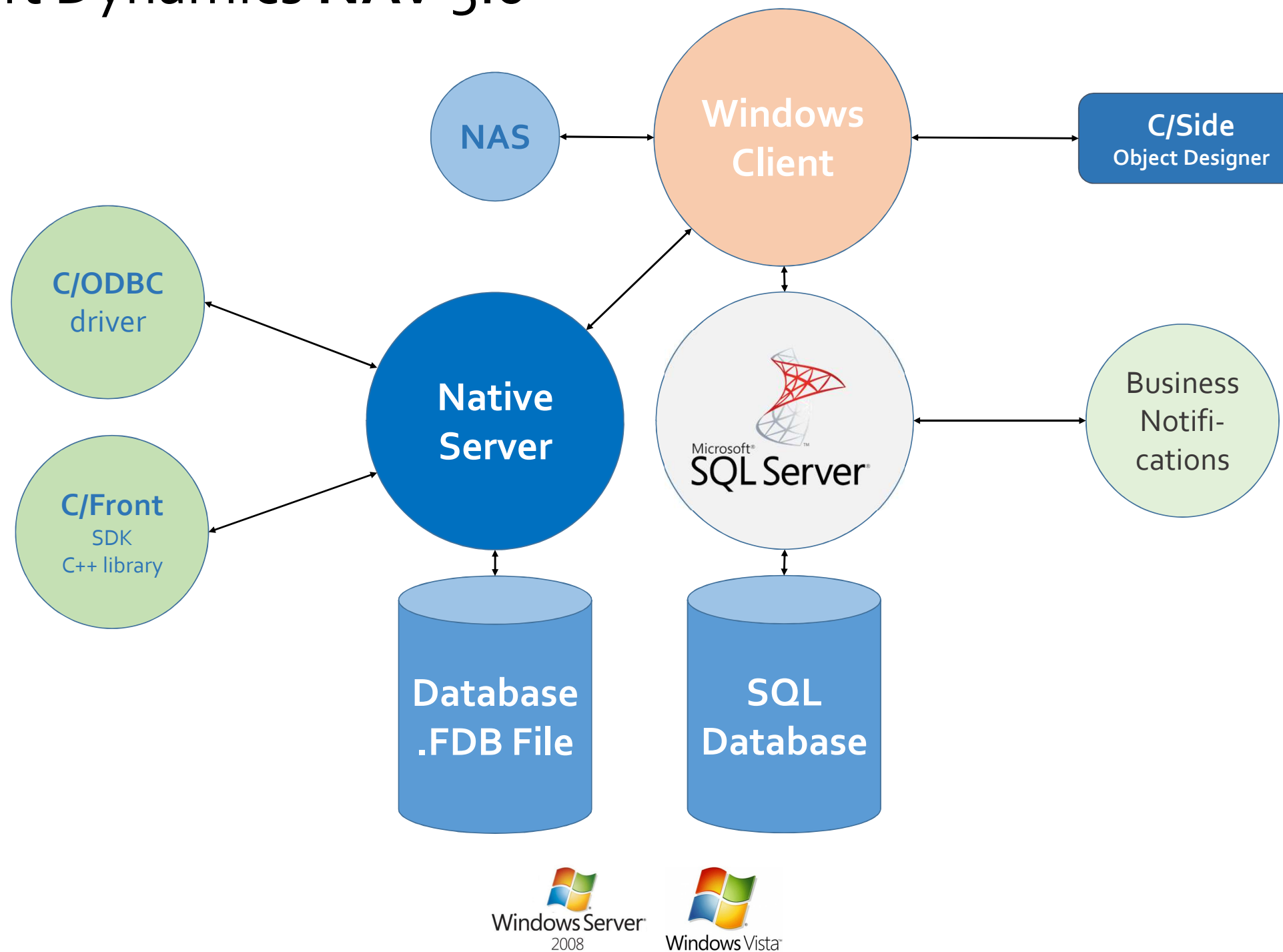
Microsoft
Business
Solutions



Programming language: C/AL

Our journey to Business Central

Microsoft Dynamics NAV 5.0



2007



RIM Tool

XML StyleSheet

Table

Form

Report

Codeunit

DataPort

XMLPort

MenuSuite

Navision
User Portal

Navision
Commerce Gateway

Navision
Commerce Portal

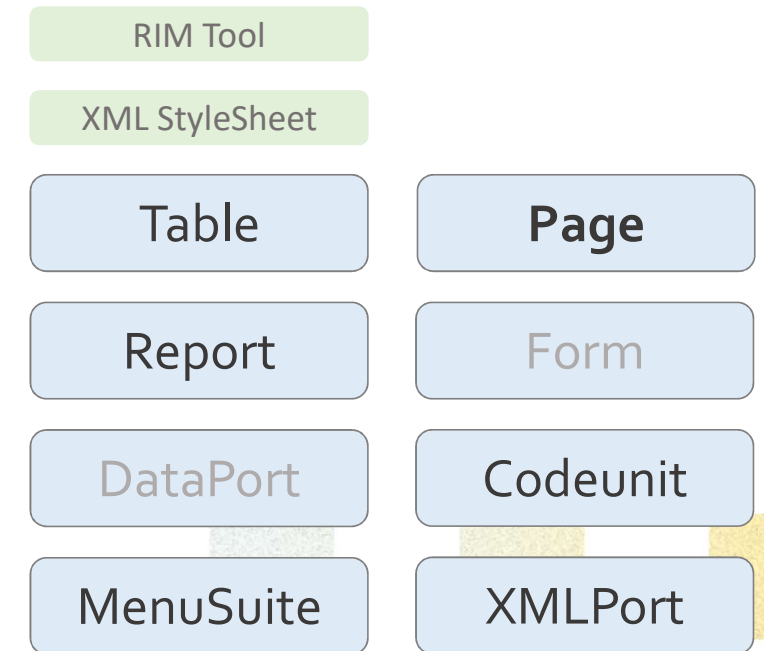
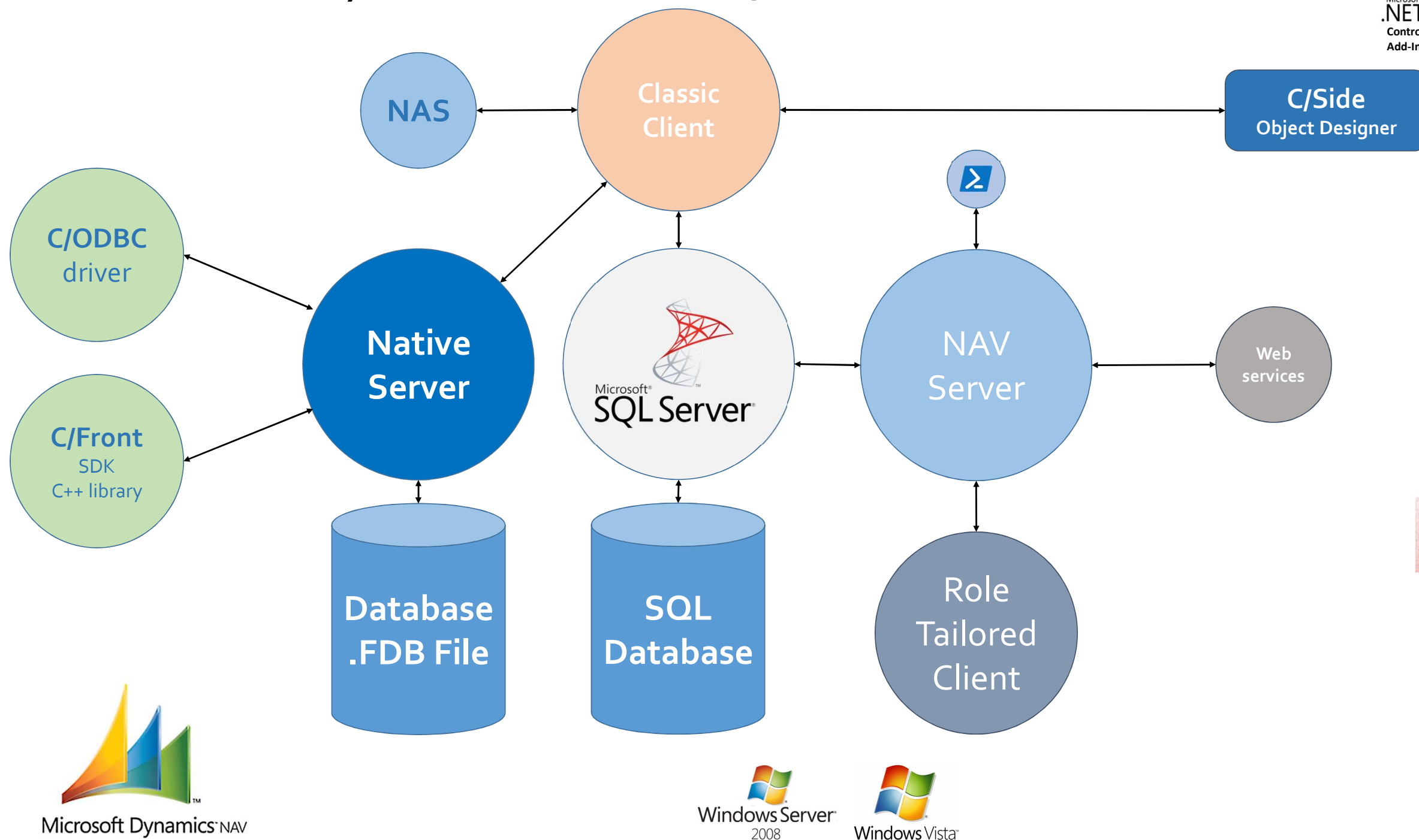
Programming language: C/AL



Our journey to Business Central

Microsoft Dynamics NAV 2009

2009



Programming language: C/AL

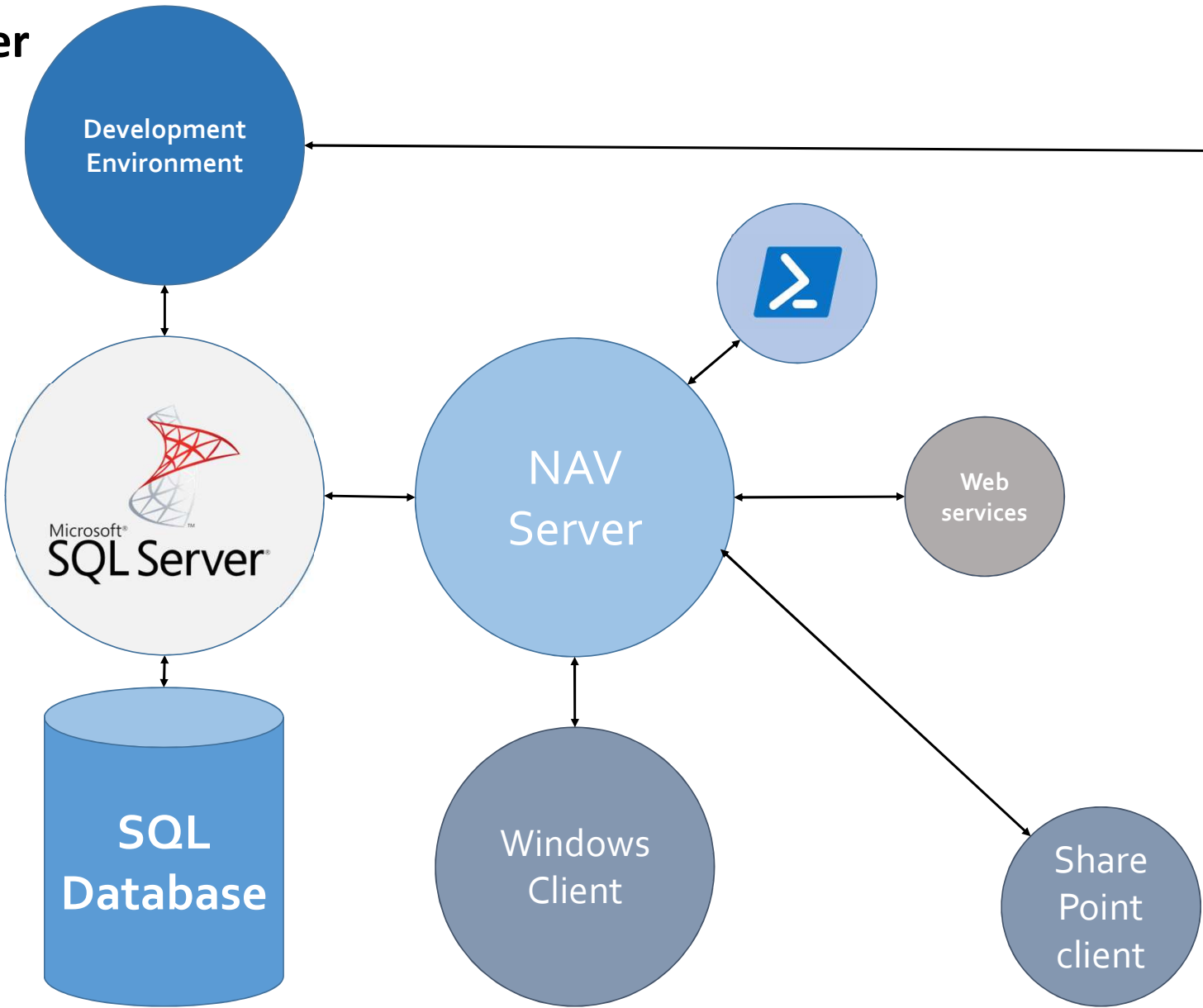
Our journey to Business Central

Microsoft Dynamics NAV 2013

2012



Debugger



- RapidStart
- XML StyleSheet
- Table
- Report
- MenuSuite
- Query

- Test Toolkit
- Page
- Codeunit
- XMLPort

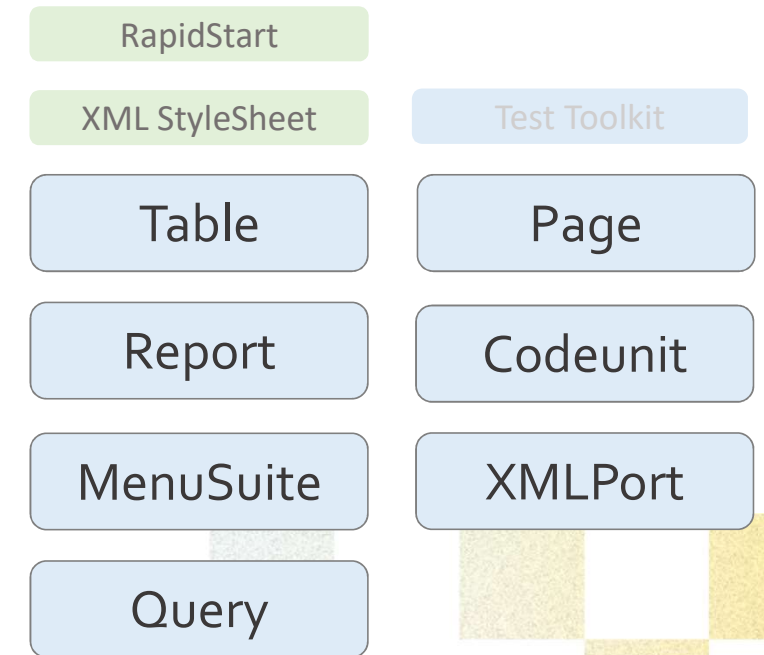


Programming language: C/AL

Microsoft Dynamics **NAV** 2013 R2



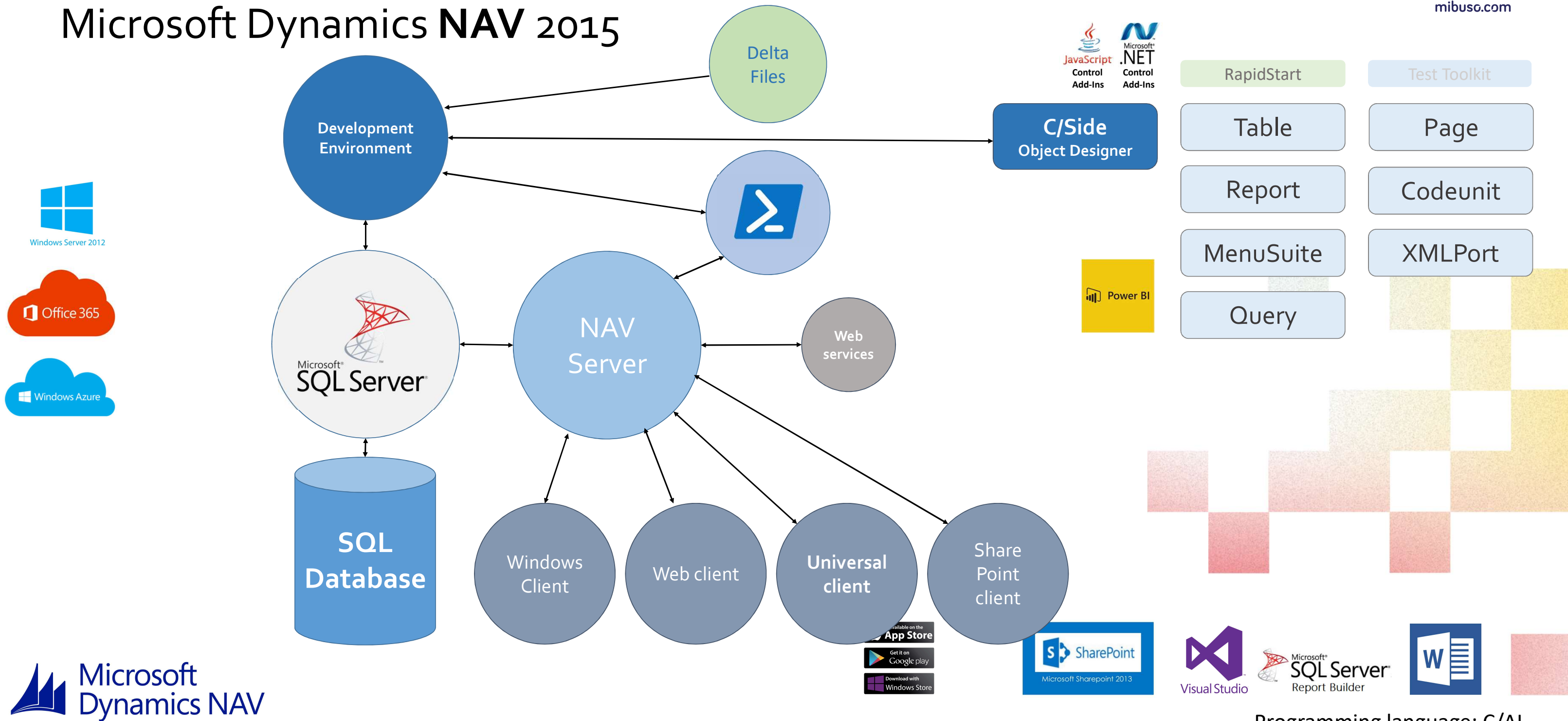
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Programming language: C/AL

Our journey to Business Central

Microsoft Dynamics **NAV** 2015



Programming language: C/AL

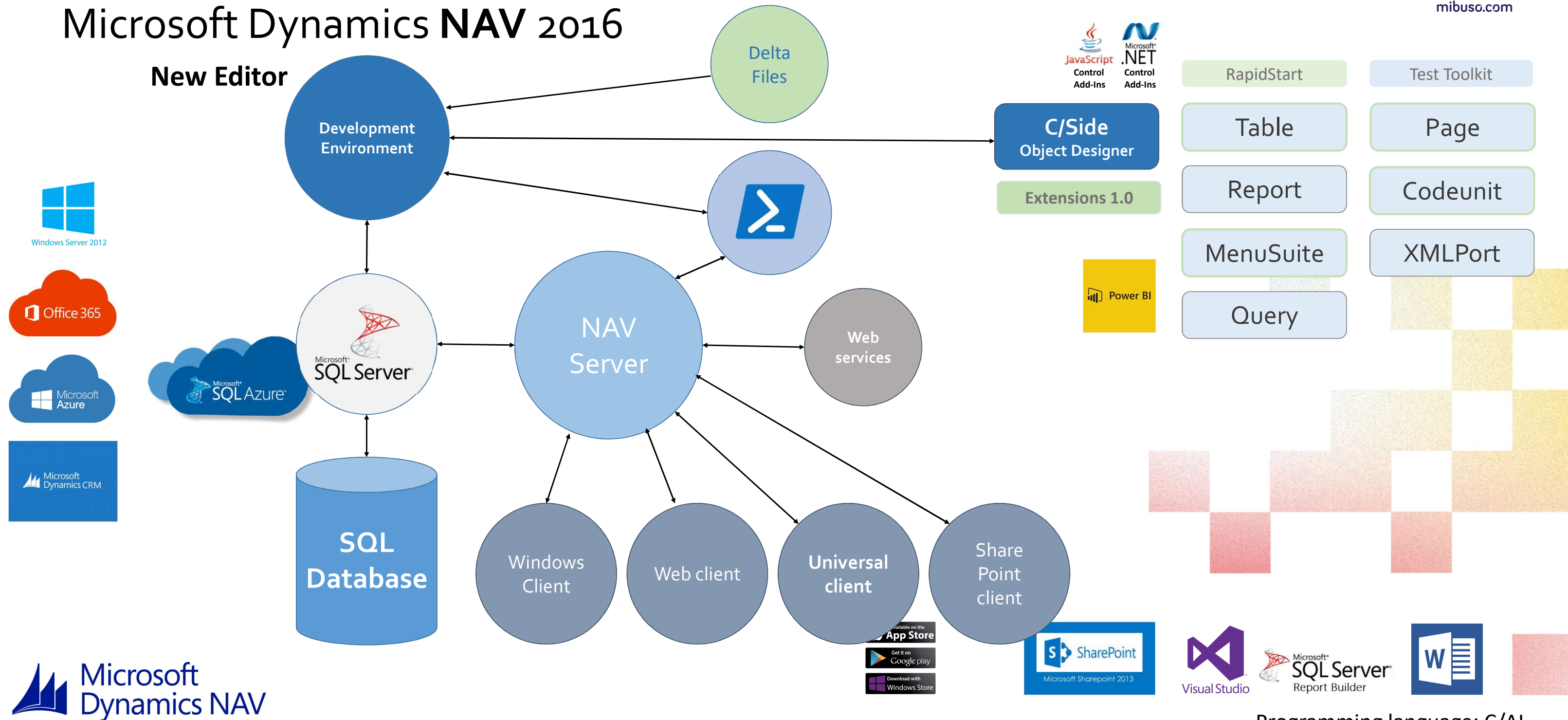
Our journey to Business Central

Microsoft Dynamics NAV 2016

2015



New Editor



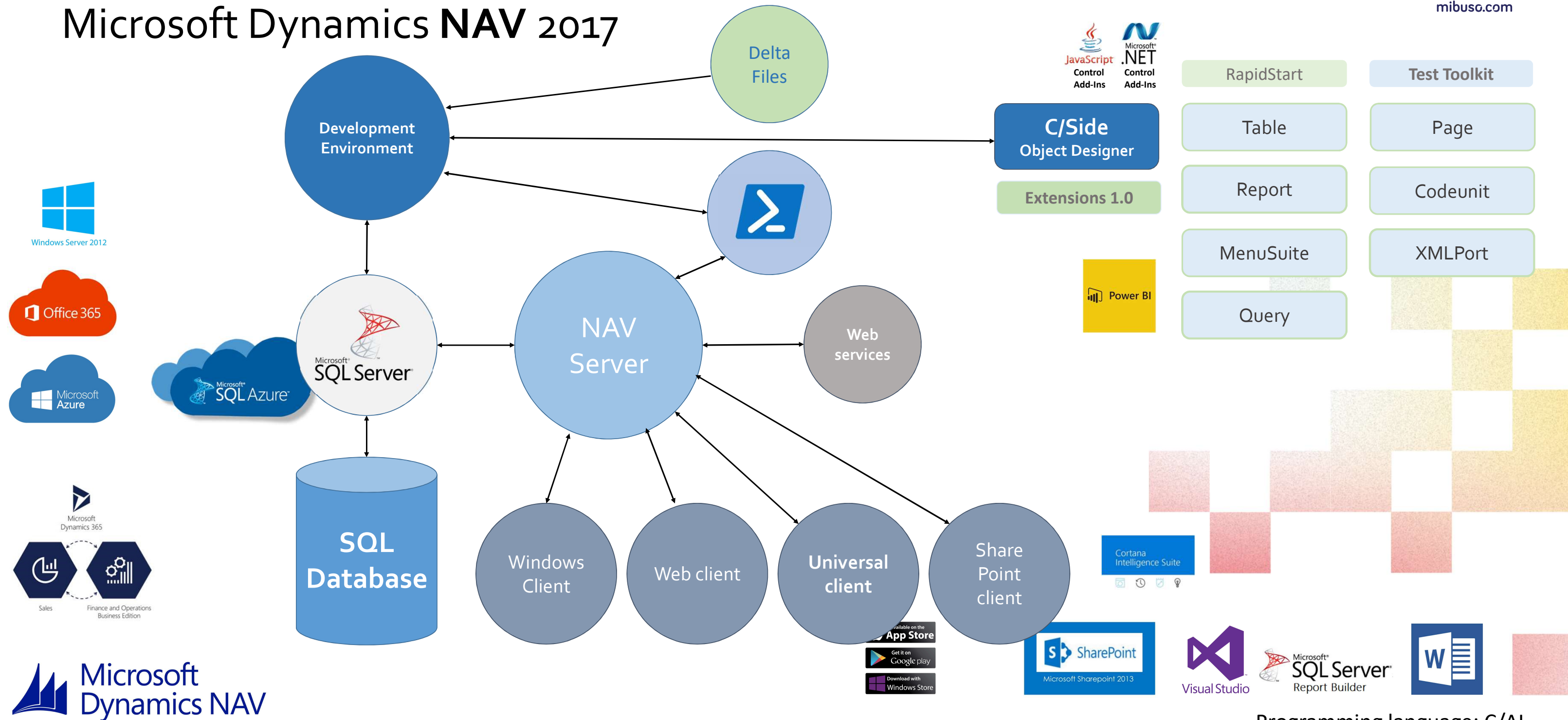
Microsoft Dynamics NAV

Programming language: C/AL

Our journey to Business Central

Microsoft Dynamics NAV 2017

2016



Programming language: C/AL

Microsoft Dynamics NAV 2018



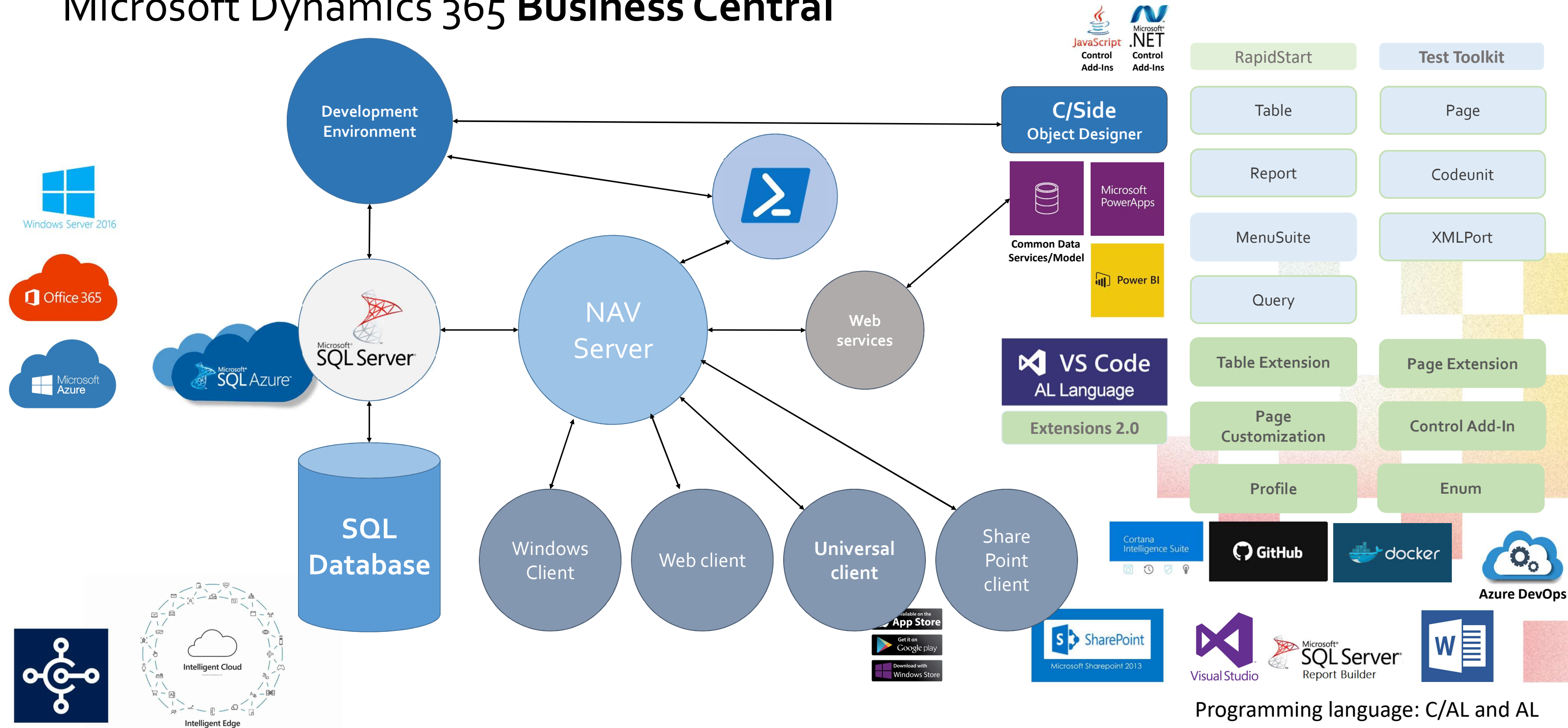
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Our journey to Business Central

Microsoft Dynamics 365 Business Central

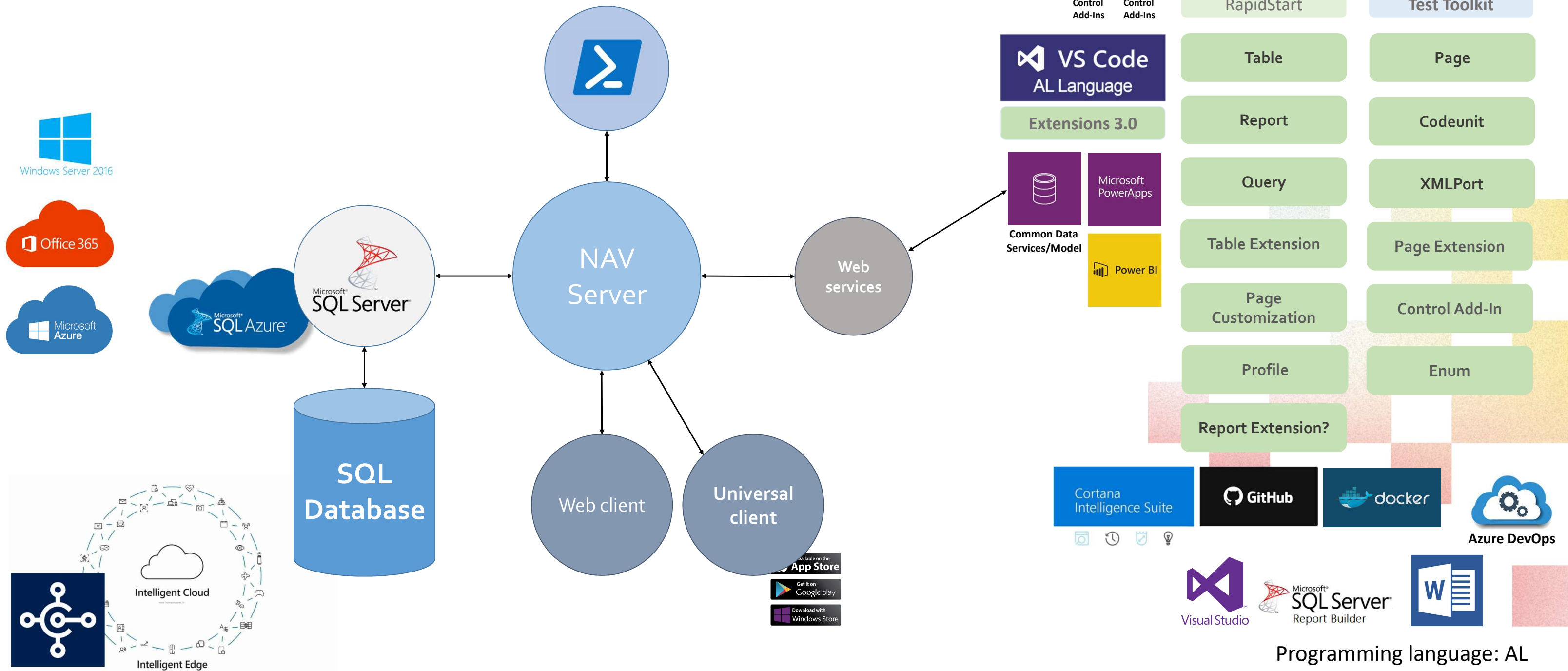
2018



Our journey to Business Central

Microsoft Dynamics 365 Business Central

2020?



So where are we now

- The beauty of simplicity is no more.
- Change is happening much faster.
- Standard tools are replacing proprietary tools.



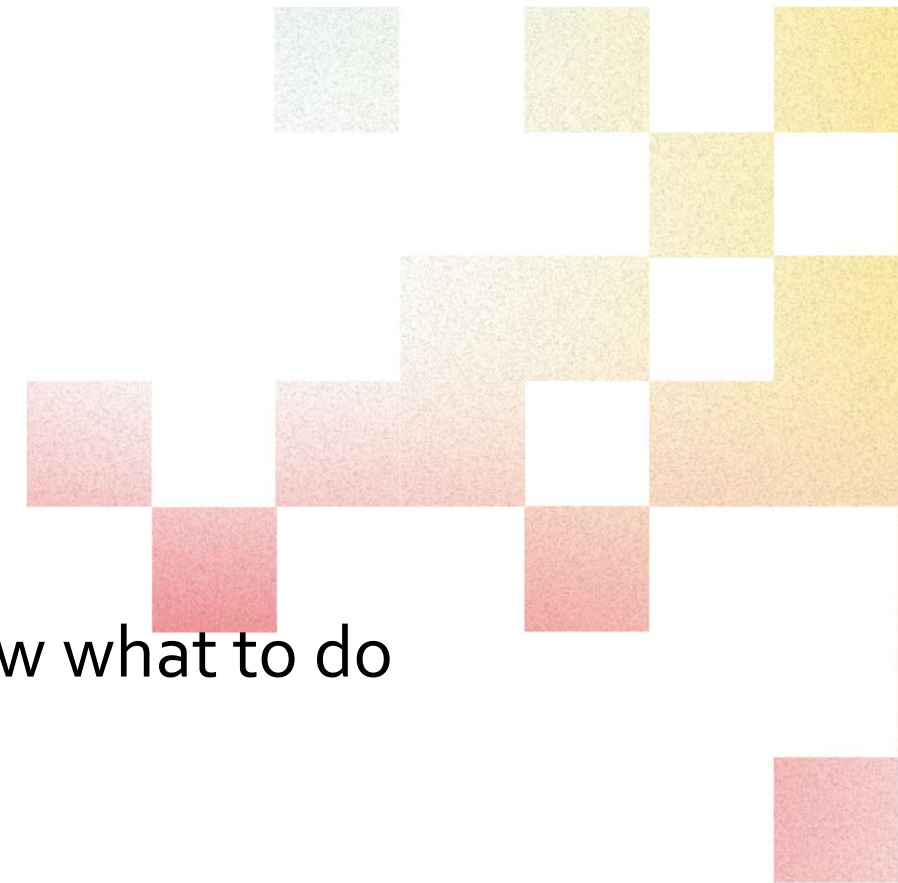
Which of these do you (still) support?

- BC
- 2018
- 2017
- 2016
- 2013
- 2009 RTC
- 2009 Classic
- 5.XX
- 4.XX
- 3.XX
- 2.XX
- 1.XX Financials
- 3.5X OS/2 / DOS / Unix
- 3.0X
- 2.XX
- PC Plus



Changes that affected us

- DOS to Windows
3.56 -> 1.1
1995 – 2000
Lack of technology support
(Adapt)
- Classic to RTC
5.00 -> 2013
2008 -> 2018 still going
Report designer / Pages / Fear
(Transition)
- Native to SQL
2.50 -> 5.00
1999-2012
SQL is better now but was weak
(Wait and See)
- Green
4.00 -> 5.00
2004-> 2007
Confusion
Customers don't know what to do
(The dark ages)



Changes we are facing

- C/SIDE -> AL
2018 -> 2020
Must move
No brainer
- On prem to Cloud
2018 -> how long it might be 10 years
Time to decide
Large investment for recurring revenue

Change is difficult, but missing a mortgage payment is worse



Where did we historically come from?

- Accountants
- End-users
- Engineering
- Some IT / development background
- Very few with formal “computer science” background
- Many just stumbled upon Navision

- Roles often overlapped
 - Consultants coded and developers consulted



Are you a dinosaur?

- Working with Navision for 15+ years
- 50% or more of your billable hours are developing or implementing NAV
- Questions:
 - How did we get here?
 - Why are there so many dinosaurs in our industry?
- How many people in their twenties want to work with software older than they are
- It is very expensive for dinosaurs to retrain compared to those in their 20s



Why are dinosaurs a problem?

- We have 330,000 Navision clients
 - We NEED 3,300,000 BC clients
- We have one off implementations
 - We need repeatable delivery
- We have 150,000 Developers and Consultants
 - We need 300,000
- We need to do this in the next 3-5 years
- This means that by 2023, 50% of all BC developers will have less than 5 years experience.



From a One Man Band



- The one person team
 - Analysis / Design
 - Development
 - Testing
 - Setup and Data Conversion
 - User Training
 - Project Management
 - Support



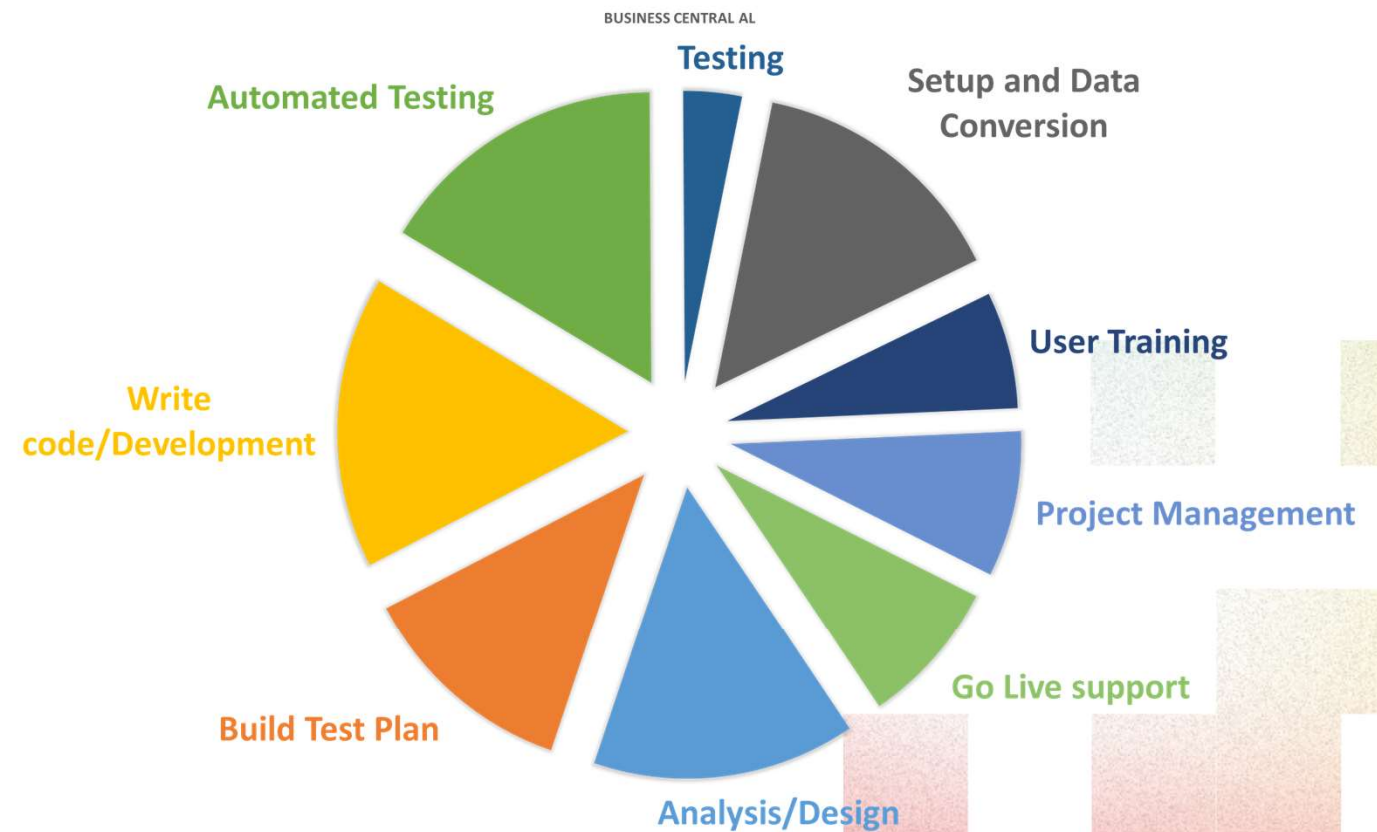
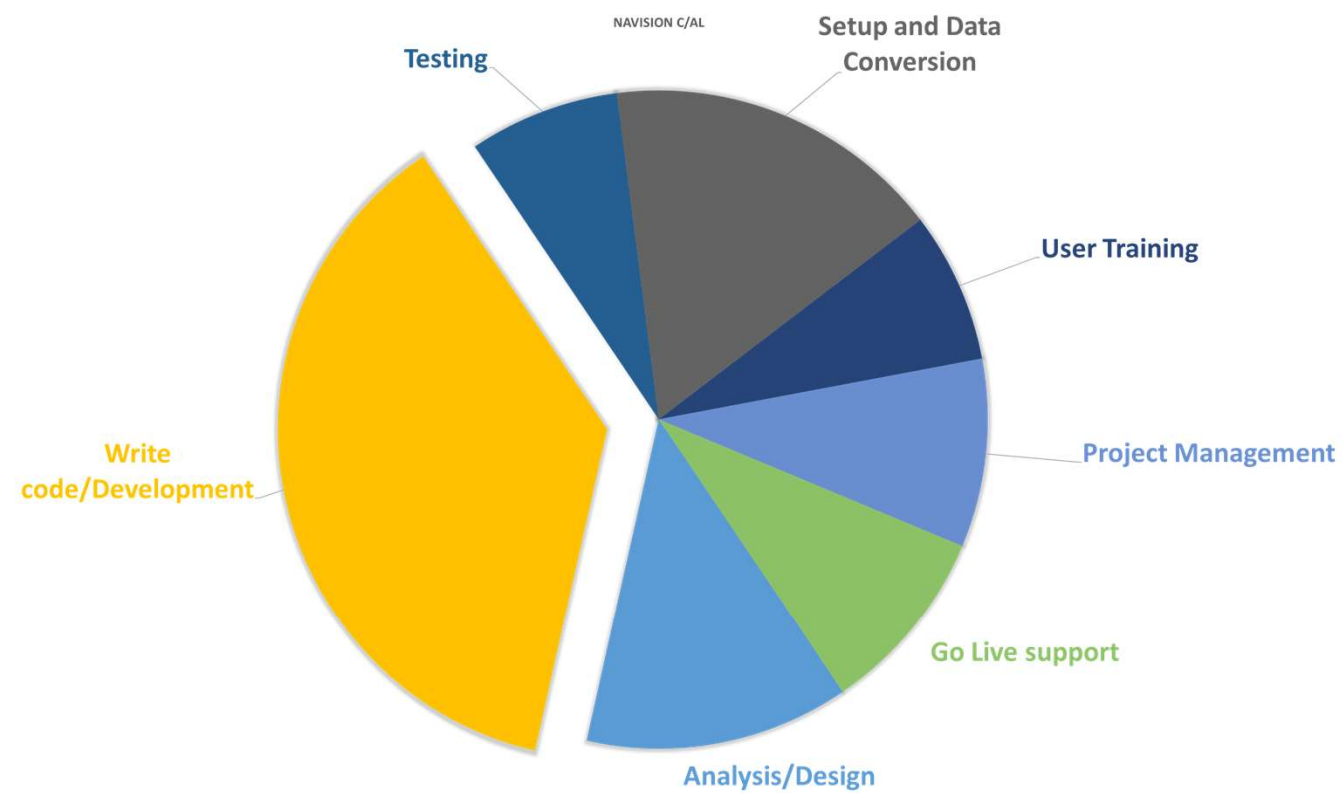
To a Modern Team



- An actual team
 - Analysis
 - Build Test Plan
 - Design
 - Development
 - Unit Testing
 - Automated Testing
 - Setup and Data Conversion
 - User Training
 - Project Management
 - Support



Break down of development cycle



BC App / Vertical



Why do we need to do this?

- The upgrade cycle
 - This was once every 3-5 years
 - Now every 6 months
 - What does this mean
 - You can't put off upgrade to save cost or time
- Repeatability and reproducibility
 - Dinosaurs are not scalable
- Learning curve
 - Need developers to be productive in a shorter cycle
- Ready to use industry standards
- Technical Debt



The beauty of simplicity

- We need to focus less on the unnecessary
- We can deliver good business solutions
- We don't need everyone to be a super hero
 - But we do need a few
- Instead of fixing mistakes we need to do it right
- We need happy customers



Converting Add on code to Extensions

Think before you do it

- Code needs to be refactored
- Get a bigger keyboard
- Learn from the past
 - DOS -> Financials
 - Green
 - SQL
 - Page transformation tool
- Redesign the code to work in the extensions world



Lessons from the past

- Don't upgrade bad designs with good code
- Keep the data model
- Define the process not the tools used to create it
- Evolution is the key, but we need a revolution to get to a point where we can continue to evolve
- Break solutions into many small parts
- Don't worry too much about the tools, focus on the solution
- Verticals are not about code they are about providing a complete ready to go solution
- The old model was to react to the customer need
- The new model is to understand the market and create a product that will create demand
- We need to focus on new blood and not just moving around the old

Lessons for the future

- Certifications
 - This leads to Less skills and more memorizing tests.
- Freelancers
 - Will thrive if they do it right
 - Freelancers must learn to work as a part of a team
- Test Driven Development
 - You will struggle if you don't switch
- F5
 - Have we really lost anything that is truly important
 - AL -> C/AL -> AL
- We didn't learn a skill till we need it
 - Today we need to be ready
 - But we can't learn everything so we need to decide what to learn



The future

- We learnt a lot preparing this presentation
- The BC world is very different than either of us expected
- We came to similar conclusions with different outlooks on them
- Often the most difficult part of a project is to define the problem



Erik summary

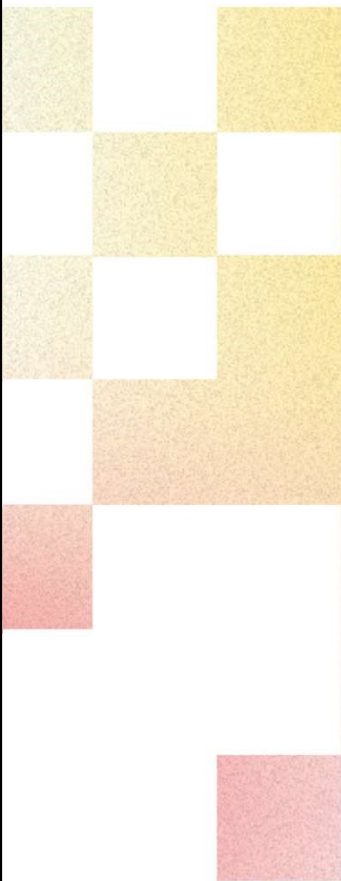
- Focus on industry standards and methodology
 - Test Driven Development, Agile/Scrum
 - Repeatability, quality and growth.
 - Adopt standards and ensure the teams have the skills required.
- Focus on skills and specialty
 - Be aware of what your skill set is and be even more aware of where your skill sets ends and work with others that have that skill.
 - If you have a specialty, then focus on it, learn to work with other specialists.
 - Even if you are a specialist, there is a base level of general skills that everyone must have.
- Not everything has to be done in BC
 - Connected Apps, CDS

David Summary

- Four solid options (of many)
 - *Work as a dinosaur till the grass runs out*
 - *Choose a specialty*
 - *Become an architect*
 - *Pass your skills to the next generation be a teacher*
- Don't upgrade code start new
- In the past we infiltrated every facet of a business till Navision was king. Let's move on from those ERP Dinosaur days.
- Remember that what matters is that the customer has a system that helps their business to succeed giving them an ROI. Everything else is just fluff to fill in the gaps.
- It is not about super heroes, it is about mass production.
- It's always better to be happy than to be right.

Any Questions?

I'm not dead yet



Thank
THANK YOU
you

Resources

- History of Navision, from PC-Plus to Business Central
<https://dynamicsuser.net/nav/w/history>
- The Mythical Man Month
https://en.wikipedia.org/wiki/The_Mythical_Man-Month
- Robert Martin, aka Uncle Bob
<https://www.youtube.com/watch?v=ecIWPzGEbFc>
- NavTechDays on YouTube
<https://www.youtube.com/channel/UCeFUrL4JZsOa3gTQVmrw2ww>

