

# CA GEN migration at Kadaster

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# Kadaster (Dutch Land Registry)

- Registering real estate
  - Public registers (mortgage, legal status)
  - Cadastral register (index, owner, purchase price)
- Registering moveable properties
  - Ships (tankers, leisure vessels and houseboats)
  - Aircraft
- Providing information
  - Boundaries
  - Restrictions in public law (monuments)

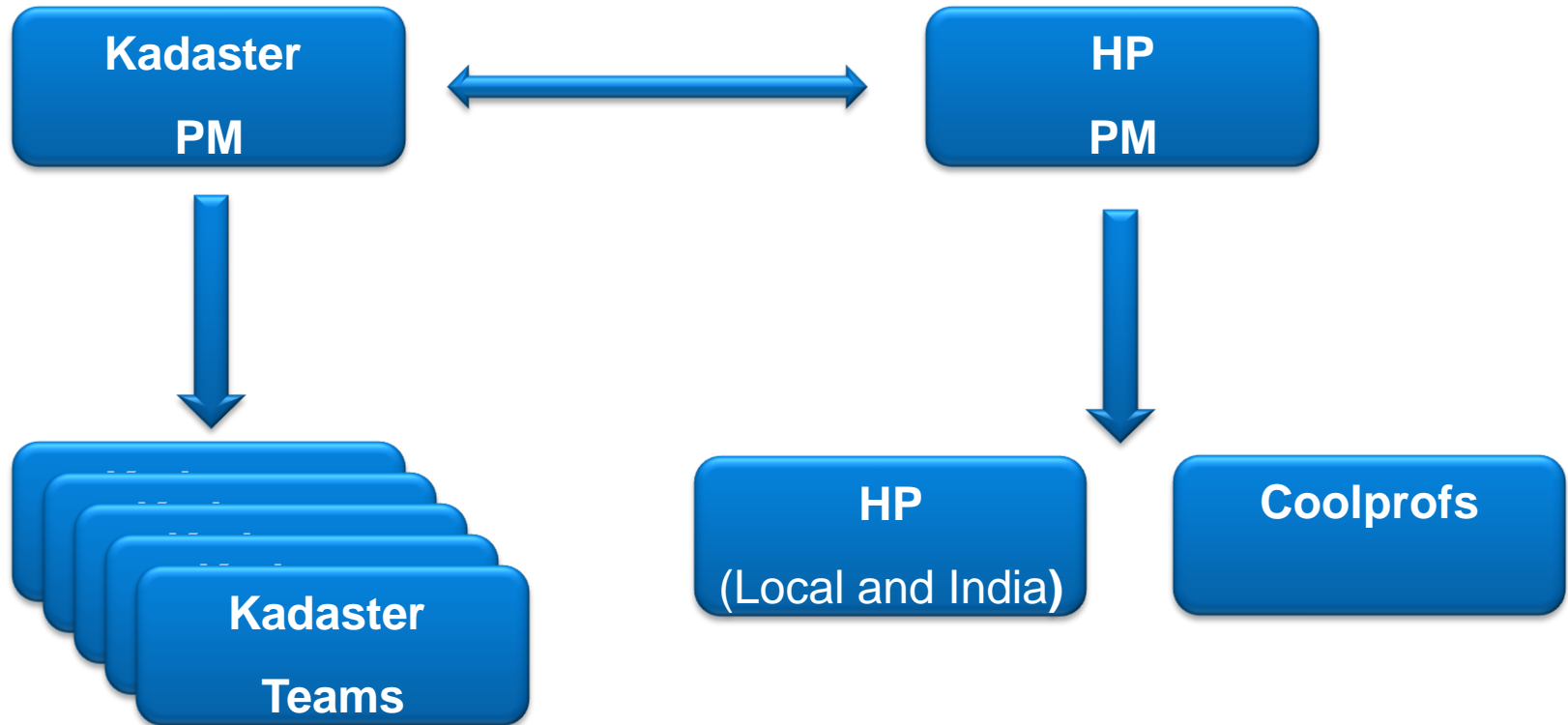
# Introduction

- Kadaster INP program
  - Platform migration Tru64 -> HP-UX
  - Phase 1 – Hardware / software configuration
  - Phase 2 – Migration SAP applications
  - Phase 3 – Migration all other applications
- Phase 3
  - Standard software (e.g. Oracle)
  - Tailor made applications (including CA GEN)

# CA GEN

- Initially CA GEN was not available on Itanium / HP-UX
- Confirmation from CA that CA GEN would be available, but it appeared that it was a 32 bits version
- Kadaster defined a migration strategy
  - Migrate applications with major CA GEN portion
  - For applications with limited CA GEN components, remove / replace CA GEN

# Project structure



- Middleware, Databases
- Operations, Conf. Management
- Test team, etc, etc.

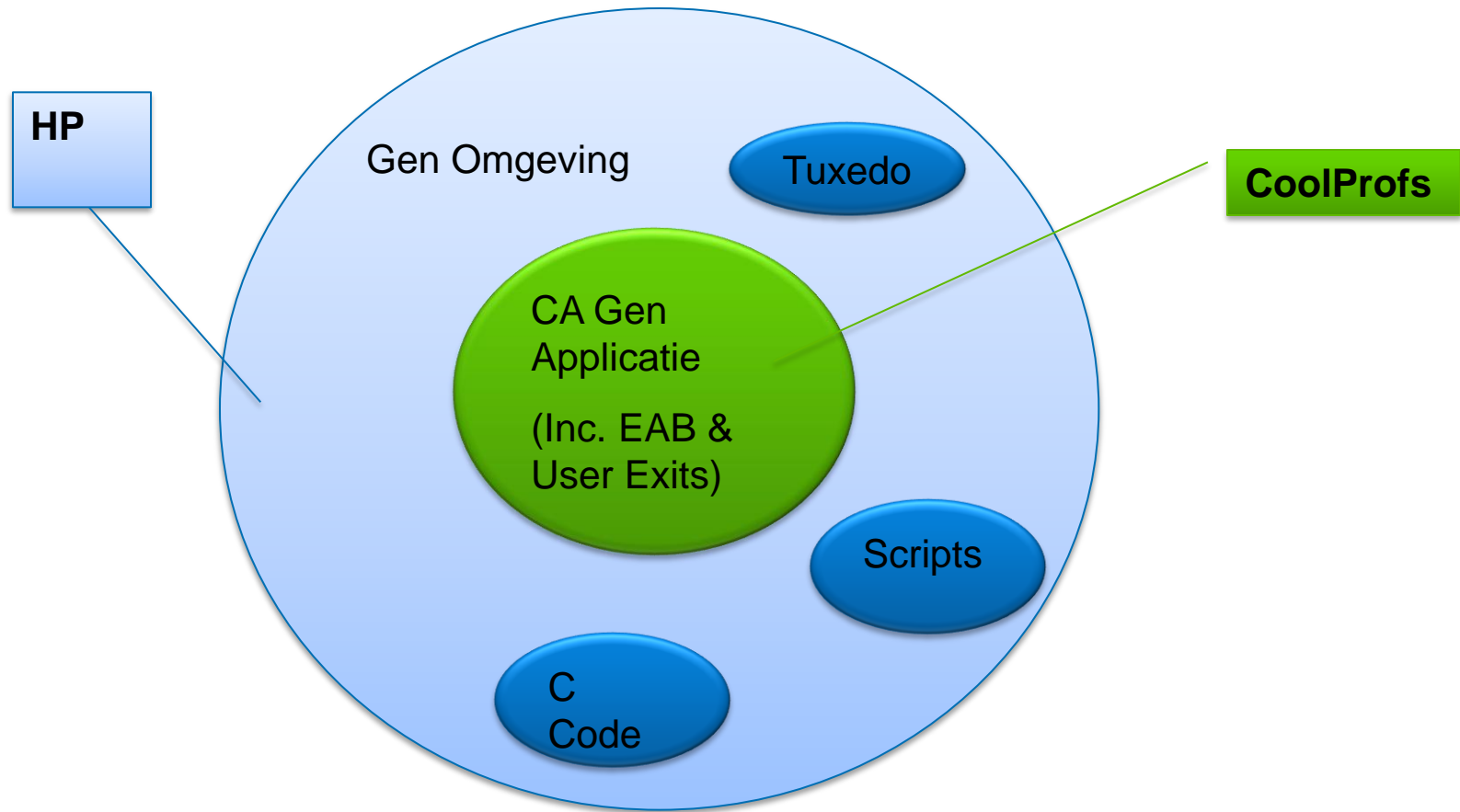
# Phased approach

- Phase 1 – Preparation and infrastructure
  - Configure CA GEN V7.6 development environment
  - Configure C/Tuxedo proxy for GEN applications
  - Inventarisation and conversion 32-bits C components of Gen application GSK and IAA
  - Inventarisation GSK / IAA environment
- Phase 2 – Migration GSK / IAA
  - Support during testing
- Phase 3 – Migrate other CA GEN applications
  - Three increments
  - In total 9 applications (see next slide)

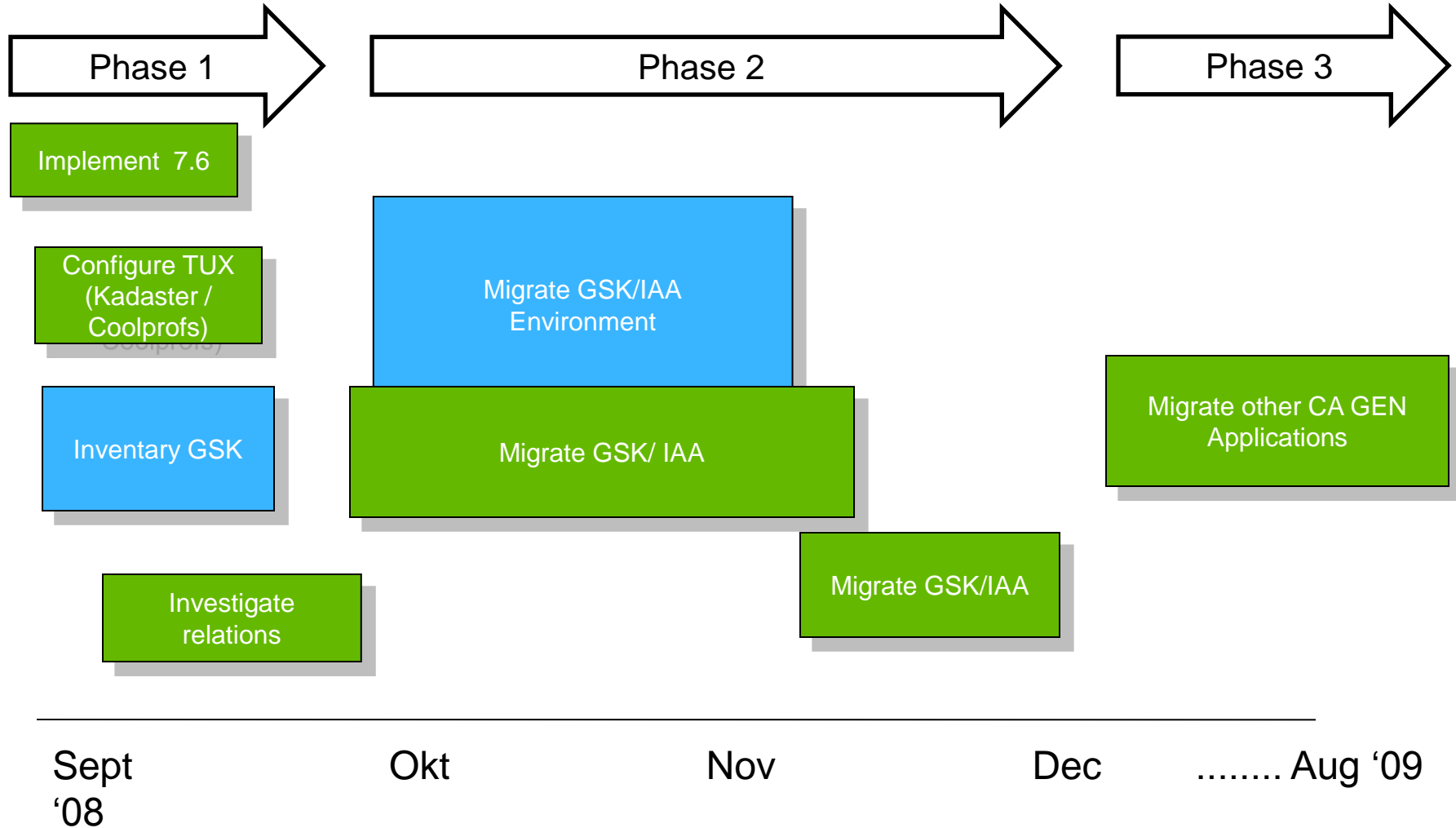
# Project Scope (CA GEN Migration)

| Applicatie | #PSTEP | #AB* | #EAB | #CRUD<br>Stmts | #DB<br>tabellen | Componenten (alleen server)   |
|------------|--------|------|------|----------------|-----------------|---|
| Elan       | 740    | 649  | 26   | 953            | 108             | PID   |
| Persoon    | 174    | 724  | 23   | 357            | 49              | AAG, ANG, BEP, BRO, BST, HVS, KBR, KKC<br>MUV, PBG, PPG, PRG, STU, SVI, TAO, VEP,<br>VGB, WST |
| KOL        | 318    | 69   | 7    | 342            | 52              | POL   |
| GSK        | 410    | 167  | 2    | 482            | 31              | GSK   |
| AA         | 32     | 173  | 4    | 175            | 18              | BZE, ISV, KOB, MBF, RCH, ZRE  |
| Adres      | 56     | 312  | 1    | 214            | 32              | ADR,TPG   |
| Dig.bijl.  | 19     | 63   | 4    | 34             | 5               | DPM, DPS  |
| IAA        | 63     | 35   | 2    | 99             | 11              | IAA   |
| Infra      | 17     | 115  | 26   | 24             | 4               | GBC, GEN, STF, TSS, XML   |

# Application Environment



# Global Planning



# HP / Coolprofs project team

- Coolprofs

- Rogier van Appelen (PM and SPE)
- Michel Coudron (SPE)

- HP

- Wilbert Kroon (SA)
- Rende Luitjes (SPE)
- Harald Tempelman (SPE)
- Frans Hartgring (SPE)
- Wim Pijnenburg (PM)

# The CA GEN migration

- Migration GEN applications supported by GEN
  - Smooth migration process
  - Some attention points (see next slide)
- 32 / 64 bits configuration
  - Complex Tuxedo configuration
  - Interfacing issues GEN – 3GL
- Global transaction issues due to 32 / 64 environment

# CA Gen migration challenges

- Decimal precision (new math-lib)
- Mix of 6.5 and 7.6 Gen clients
- Read-only fields (Gen 6.5 default grey – Gen 7.6 default white)
- Timestamps in Oracle (microseconds are used)

# Decimal precision (new math-lib)

- New math-library
- New **internal** data-type
- Replacement of RWFixed

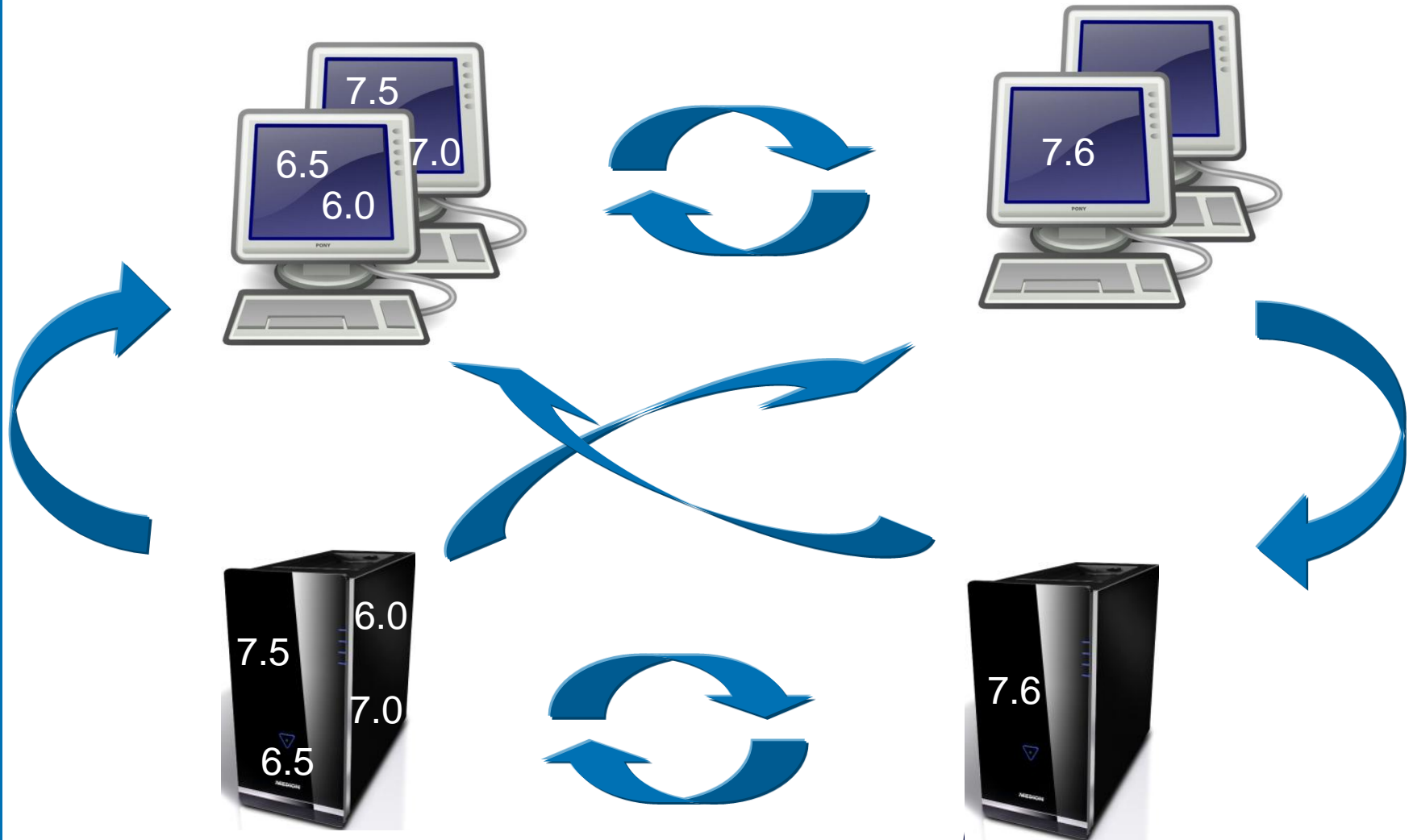
```
char attrib1_001as;  
rwfixed attrib1_001;  
(Old)
```

```
char attrib1_001as;  
DPrec attrib1_001[21];  
(New)
```

- Actions to take:
  - Generate new EAB stub
  - Replace and adjust code in EAB code

```
3.14159265358979323846264338327950288419716939937510582097494`.  
4592307816406286208998628034825342117067982148086513282306`.  
6470938446095505822317253594081284811174502841027019385211`.  
0555964462294895493038196442881097566593344612847564823...
```

# Mix of 6.5 and 7.6 Gen clients



# Situation at Kadaster

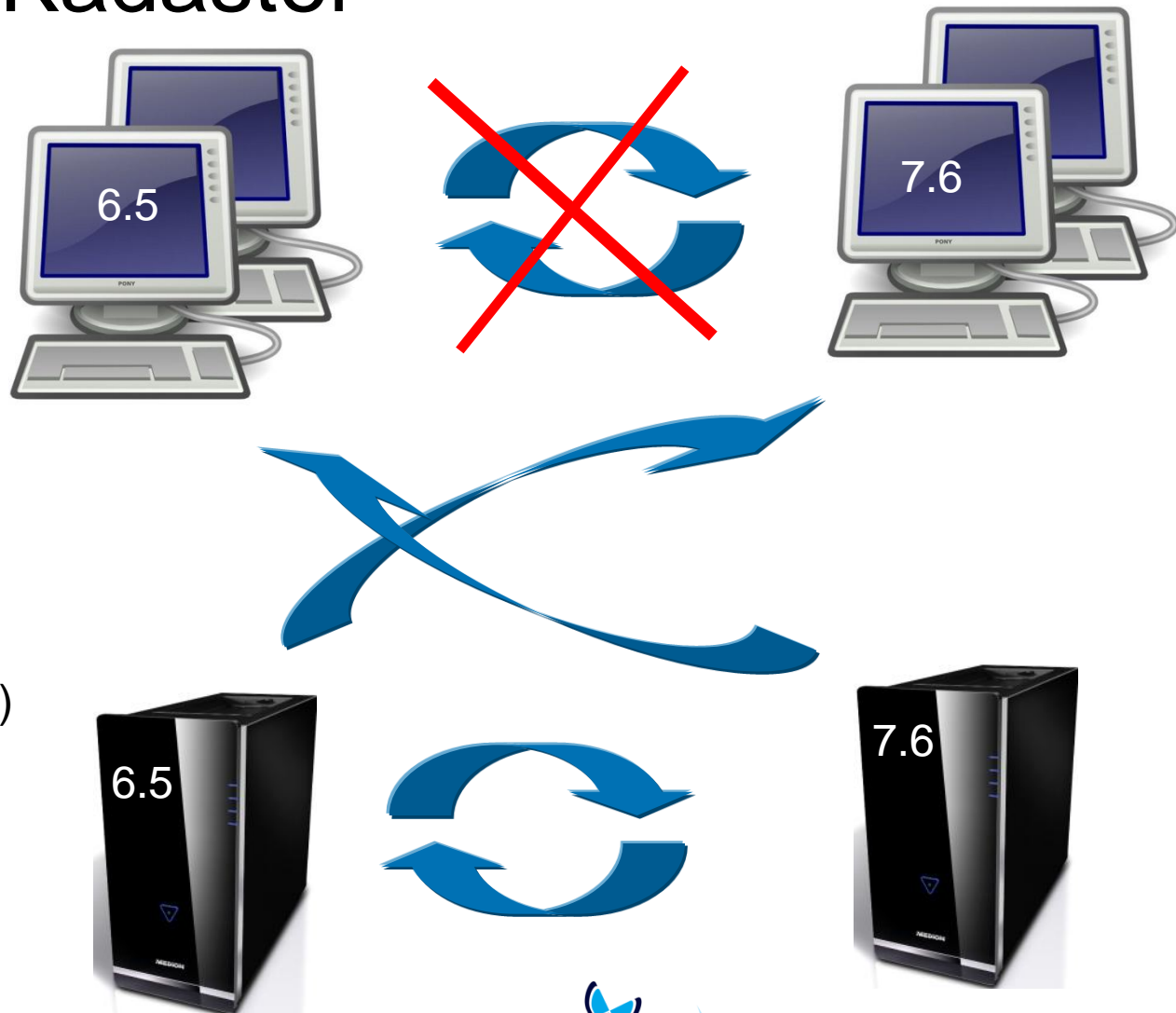
No Big Bang

Components have client and server part

How to handle client dependencies between clients of different components?

A solution:

Rename client load-modules (dll's/exe's) in 7.6



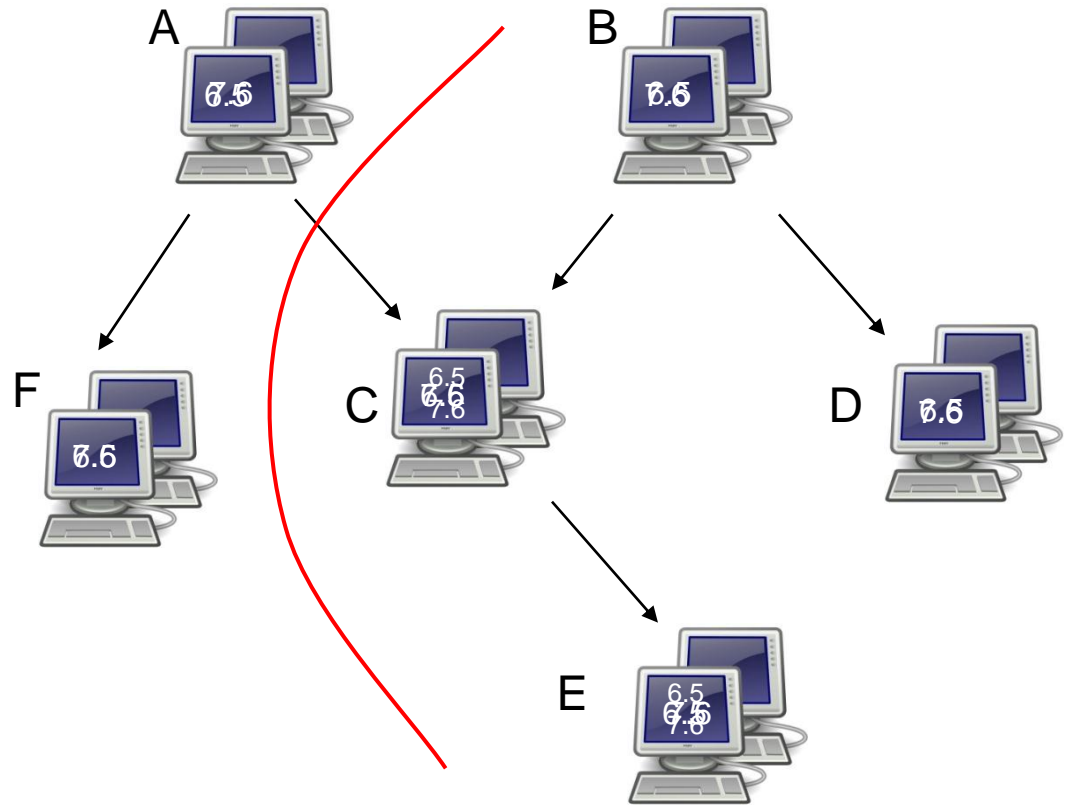
# Solution for dependancies clients

How to handle client dependancies between clients of different components?

A solution:  
Rename client  
load-modules (dll's/exe's)  
in 7.6

Steps to perform:

- Migrate B first
- C,D and E have to go too
- But C and E are called from A as well
- **Temporary** deployment of identical 6.5 and 7.6 clients of C and E until A is also migrated



# Contract structure

- Fixed price, Fixed date arrangements
- The good news.....we delivered on time and within budget!
  - Why ? ..... See next slides

# What went well...

- Phased approach
- Good inventory of application components
- Working relationship HP – Coolprofs – Kadaster
  - Open communication
  - Good working arrangements (CA GEN – 3 GL)
- One working location (HP and Coolprofs in one room)
- Close cooperation with Functional Owners of Kadaster
  - Agreement on freeze period
  - Agreement on work arounds



# Area of improvement

- Get all disciplines in one room earlier in the project
- Verify promises made by business (freeze period)
  - Open changes / development
- Demand that everything is tested from beginning

# Summary

- Very good project (for everybody)
- Good cooperation
- Let the specialist do his specialism
- Migration doesn't have to be a scary thing

# Q & A