

# To be an IT Architect

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## Agenda

- Your Presenter
- Definition of Architecture Work
- Engagement lifecycle
- Performing Architecture work and delivery
- Example

Purpose: To talk about something from the life as architect and not to show stuff from school books (My school books are way to old any way)

## Your Presenter

- Mogens Kyllesbech, 62 year living in Copenhagen
- **Education**
  - Master degree in geology - KU
  - Graduate Diploma in Business Administration in Information Technology and Economy - CBS
  - A lot of courses during the years. SAP certified, WebSphere certified
- **Experience**
  - +33 years in IT Business in IBM
  - 28 years as IT Consultant
  - 38 different customers in sectors like
    - **Finance and Insurance** – Nordea, Danske Bank, Visa, Nets, Bankdata, Top Danmark
    - **Government** – DSB, Skat, NAV, Serbian Customs
    - **Health** – Region Hovedstaden, Norsk Helse
    - **Sales and Distribution** –Ikea, APMM, DSV, Semler Gruppen
- **Free time**
  - Family and Sailing

## The Company - IBM

*Some companies **survive longer than others***



**IBM is operating since 1911**

## The Company - IBM

### ▪ Business

- IT Hardware, Software and Service
- Employees: 380.000
- Operating in more than 170 countries
- Revenue: 79.139 billion US\$

### ▪ Innovation

#### – Mainframe

- A leading computer platform for decades
- Development cost = two years of company revenue

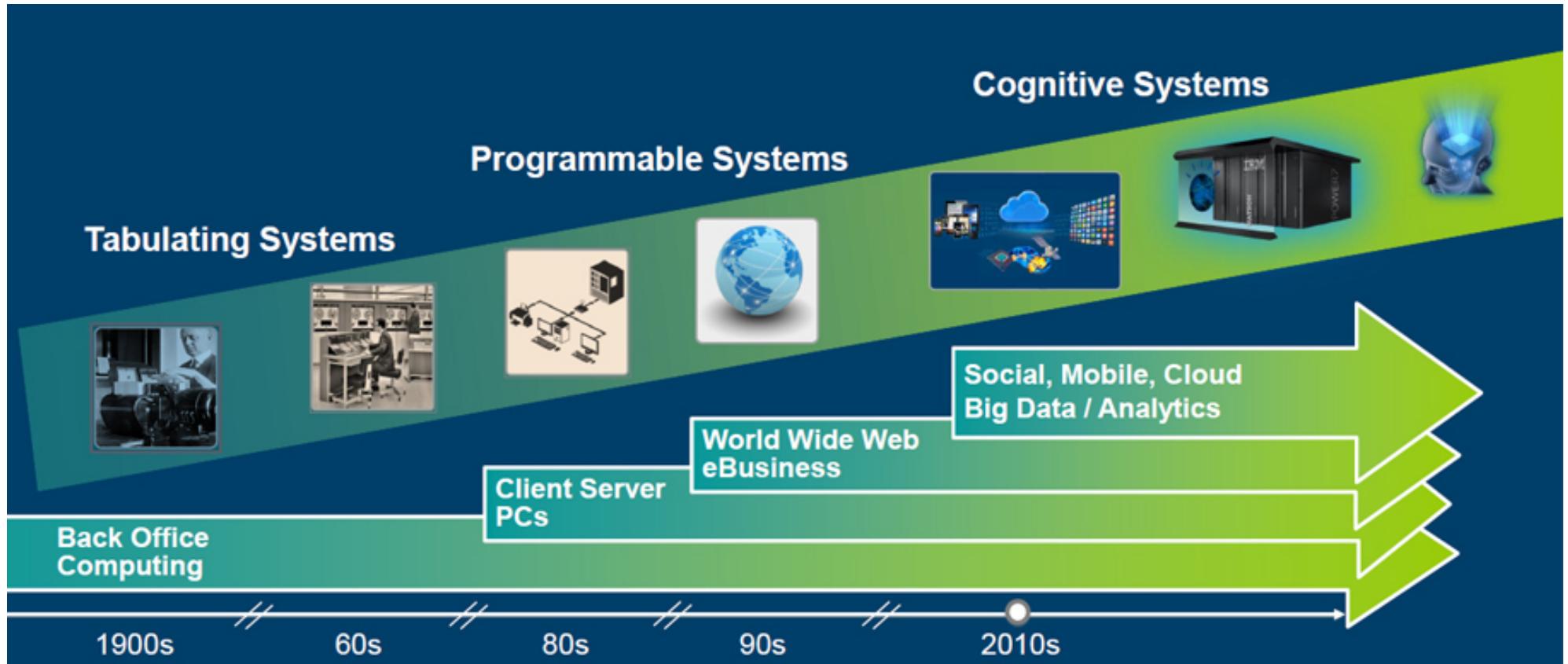
#### – Patents

- 9043 in 2017
- >100000 in the last 25 years
- 6 Nobel price laureates

#### – Business strategy today

- Cloud Computing
- Cognitive Computing (Watson)

# The Company - IBM



## Definition of architecture work

- Preparing and presenting design proposals to clients
- Advising clients
- Producing detailed drawings and documents
- Negotiating with development teams, contractors and other IT professionals
- Attending regular meetings with clients, contractors and other IT professionals
- Technical coordination of the work
- Check-up on progress
- Dealing with problems that might come up during the build of the IT solution



### In Short

- An (IT) architect performs design, He creates the big picture and follows up on it
- It is not
  - Programming
  - Project management
  - Running the business

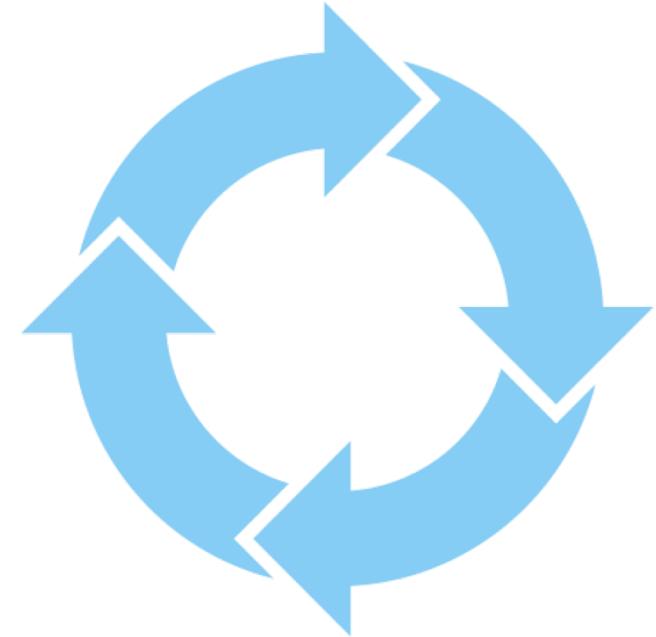
# Why do Companies hire IT Architects as Consultants

- **A second set of eyes**
  - Do we miss something obvious – Like when you ask a friend for an opinion
    - Part time lead architect
- **Need more resources**
  - If needed for a limited amount of time like a project
  - If it is only a part time job
- **Special skills**
  - If skills are needed short term for a specific task or knowledge transfer
    - GDPR Security architect for a taskforce
    - Lead the implementation of a newly released AI product
- **Provide bullets for unpopular work**
  - Review of troubled project or single persons
    - Sometime the outcome are already known but the decision maker needs to make the decision legitimate
  - Provide arguments for starting a project that are not aligned with company strategies
    - Change of platform from Mainframe to Unix
    - Internet commerce project in a warehouse company

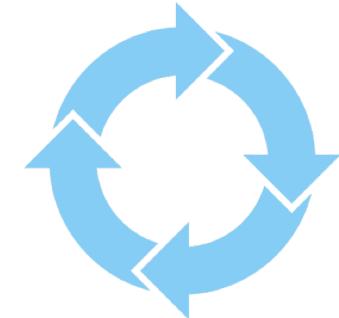
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## Engagement Lifecycle as Consultant

1. Search for new assignment
2. The Interview
3. First 2-8 weeks
4. Architecture work and delivery



# Engagement Lifecycle as Consultant



## 1. Search for new assignment

- Can be quite difficult
  - 1. Look for old friends and colleges
  - 2. Online marketing (like LinkedIn)
  - 3. Call your manager
  - 4. Initiate a new strategic initiative

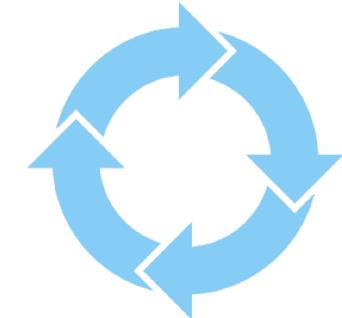
## 2. The Interview

- Be prepared. Performing at the interview can be difficult but you will become superior in the long run
  - Who will be the interviewer
  - Who else will participate
  - Get insights from your account representative
  - Be prepared for hidden agendas

## Engagement Lifecycle as Consultant

### 3. First 2-8 weeks

- Access to IT systems
- Learn to know the clients company culture
  - Decision making: Formal or Garbage Can
  - Believes:
    - Novo: Scientific Research – No shortcuts
    - Ikea: Price competitive business – Cost conscious
  - Unwritten Rules:
    - The known: Flexible hours means from 8 to 18 at least
    - The unknown: You may find them by breaking them
- Network building
  - Key stakeholders
- Consultancy approach
  - Do you know the real issue: [Do not take for granted that you already know it](#)
  - Design Thinking?
  - Goal is to end up with some kind of Statement of Work



### 4. Architecture work and delivery

- Let us go into more detail on the next pages

# A day at the Office

## Coordination and management meetings

- Weekly meeting with my architect team
- Management meeting
- Status reporting with customer management



## Work meetings

- Workshop with test architect regarding workflow requirements
- Introduction to collection of CMDB data by Discovery tool
- Design Authority meeting

## Work

- Architecture Decision draft document regarding server setup for North America and China regions

## Learning Webinar

- Drones, Inspections and Monitoring with Watson AI!

## Selection of Tool's

- **Do the customer have a preferred tool?**

- Yes=The preferred tool is often chosen. It is easier for one consultant to learn a tool than for a number of the clients employees to learn a new tool.
  - No=Maybe it is time to introduce a new tool

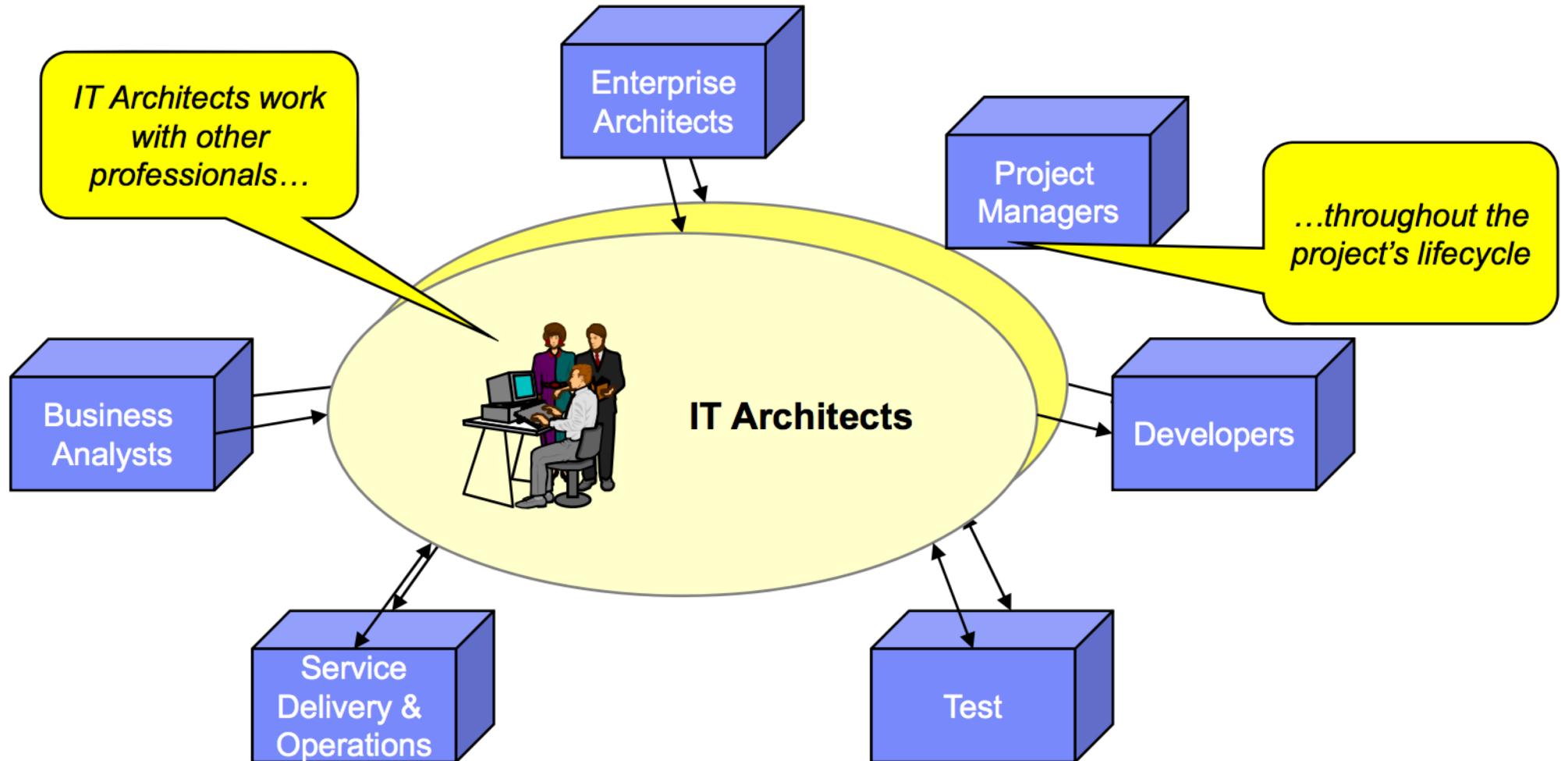
- **Shall the work be delivered to the client?**

- Yes always: Use client preferred tools or easy to use tools.  
It is not fun to see the work you have done just ending up unused in a drawer just because of the selection of the wrong tool.

Examples:

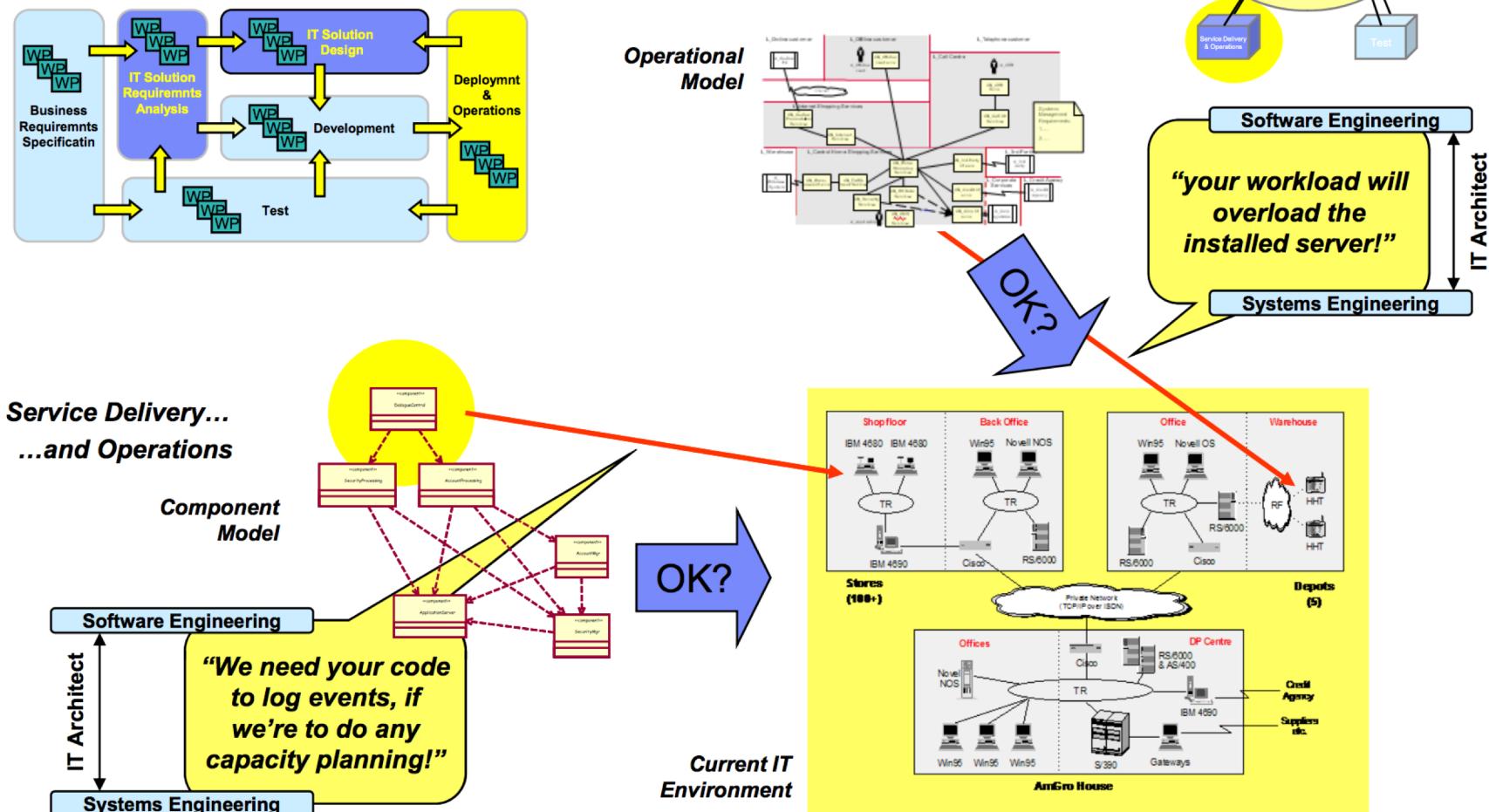
- Enterprise Architect
    - Togaf+Archimate
    - IBM Rational System Architect
  - Project Lead Architect
    - Powerpoint
  - Application Architect
    - Visio
    - IBM Rational Software Architect
  - Business Architect
    - IBM Bluetools Live

## Methodology: IBM Architectural Thinking



# IBM Architectural Thinking - Deployment

IT Architects must be confident that their designs can be deployed, and can be operated within the existing (or target) delivery environment (→ Service Delivery and Operations)



## Lead the implementation of the architecture

- What do we need architects for?
  - The IT Specialist - We are fine without!
- Fortified areas
  - The PM for the Legacy system - It is not the right time for changes now
- Firefighters
  - The Release Manager - We need to solve this issue. We do not have time now
- **Conflicts – Fight or Flight**
  - As Architect you are responsible
  - Do not expect the problem to go away
    - Sometimes it can be solved by better communication
    - People are different
    - Cultures different
    - People have different interests
  - If Fight – be prepared
    - Build alliances (Get aligned with other stakeholders)
    - Do your architecture work well
    - Be prepared for (stupid) questions
- The sponsor is always right

# Maturing a Business Critical Application at a large Nordic Bank

## The Job

- 11 month assignment
- **Maturing runtime platform**
  - Design and implementation of Performance Monitoring
  - Implementation of error tracing software
  - Education in usage of runtime platform
- **Maturing of development environment**
  - Establish best practices for development
  - Education in the usage of the development platform
  - Establish source code repository
- **Automation of new deployment procedures**
- **Negotiate terms and conditions with the provider of the underling software**

Example

## Challenges

- Finnish is a difficult language
- Cultural differences between the different Nordic countries
- The Miracle man
- To be counterpart to IBM in negotiations

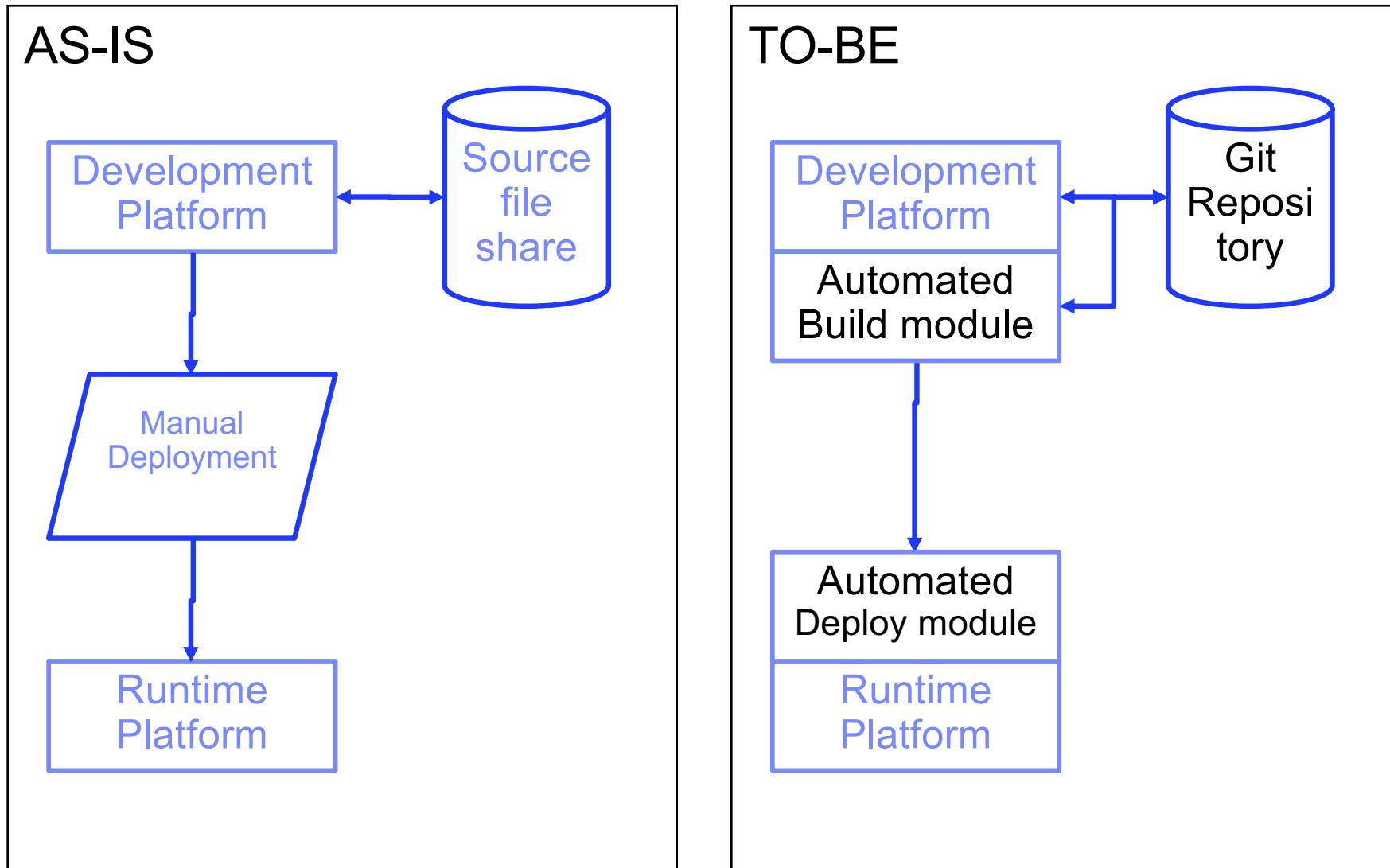
## What was good

- To work close together with the clients management and the members of the team I was assigned to

## Findings from Consultancy Step

Topic	Findings	Priority
Source repository	<ul style="list-style-type: none"> <li>Source code on file system. If source deleted no options for recovery</li> </ul>	2
Development Skills	<ul style="list-style-type: none"> <li>General skill level needs to be increased</li> <li>Additional best programming practises is needed</li> </ul>	2
Performance/ Capacity monitoring	<ul style="list-style-type: none"> <li>No automated alerts in case of performance issues</li> </ul>	3->1
Deployment	<ul style="list-style-type: none"> <li>Manual deployment</li> <li>No link between source versions and binaries</li> <li>Development-Operations mis-communication</li> </ul>	2
Runtime Platform	<ul style="list-style-type: none"> <li>No error tracing capabilities</li> </ul>	3->1
SW Licences	<ul style="list-style-type: none"> <li>SW Licences and support may not be in place</li> </ul>	1->3

## Automated Deployment



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## Questions

- Q & A