



D# Engine



Model based DW automation



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- Data Vault And Automation
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The Big Picture





Automated Data Vault 2.0



Analyze, Simulate, Forecast and Understand.

Decision Support

Reporting Models

Smarter and Sharper Decisions

Step 1: Models and Configurations

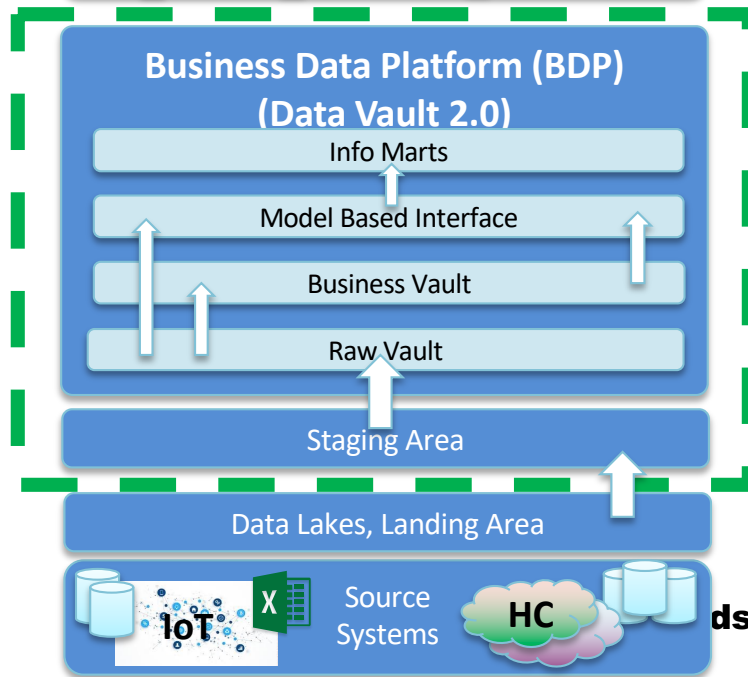
Step 2: Push Button to Deploy and Document



Deploy



Documentation



Modeling

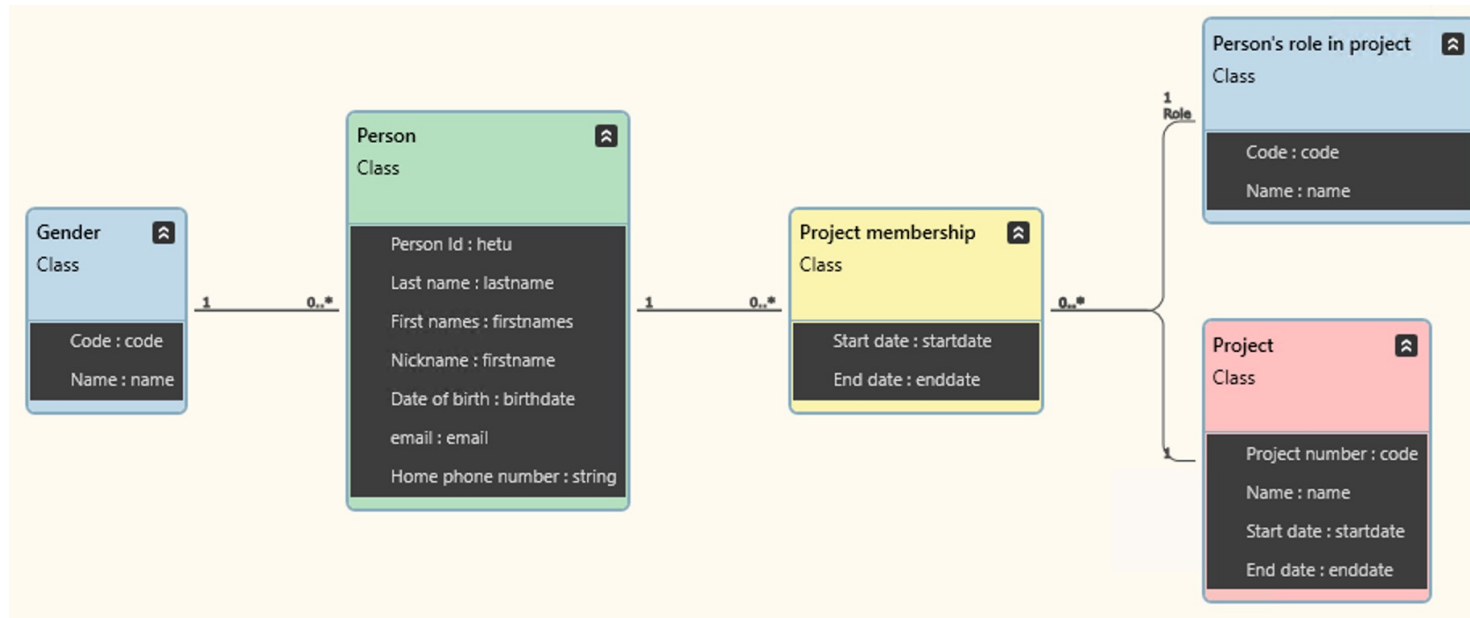


Conceptual Model

- Normalized model describing business phenomena using established business terminology
- Non-technical
- Informative
- Modeled using standardized methodology
- Specification document for the implementation phase – input for automation mechanism



Target model – Iterations 1 - 3



Data Vault And Automation



Data Vault

- Structure and method specifically designed for Data Warehouse solutions
- Data Vault 2.0 de facto standard for new solutions
- Implementation and use requires special knowledge



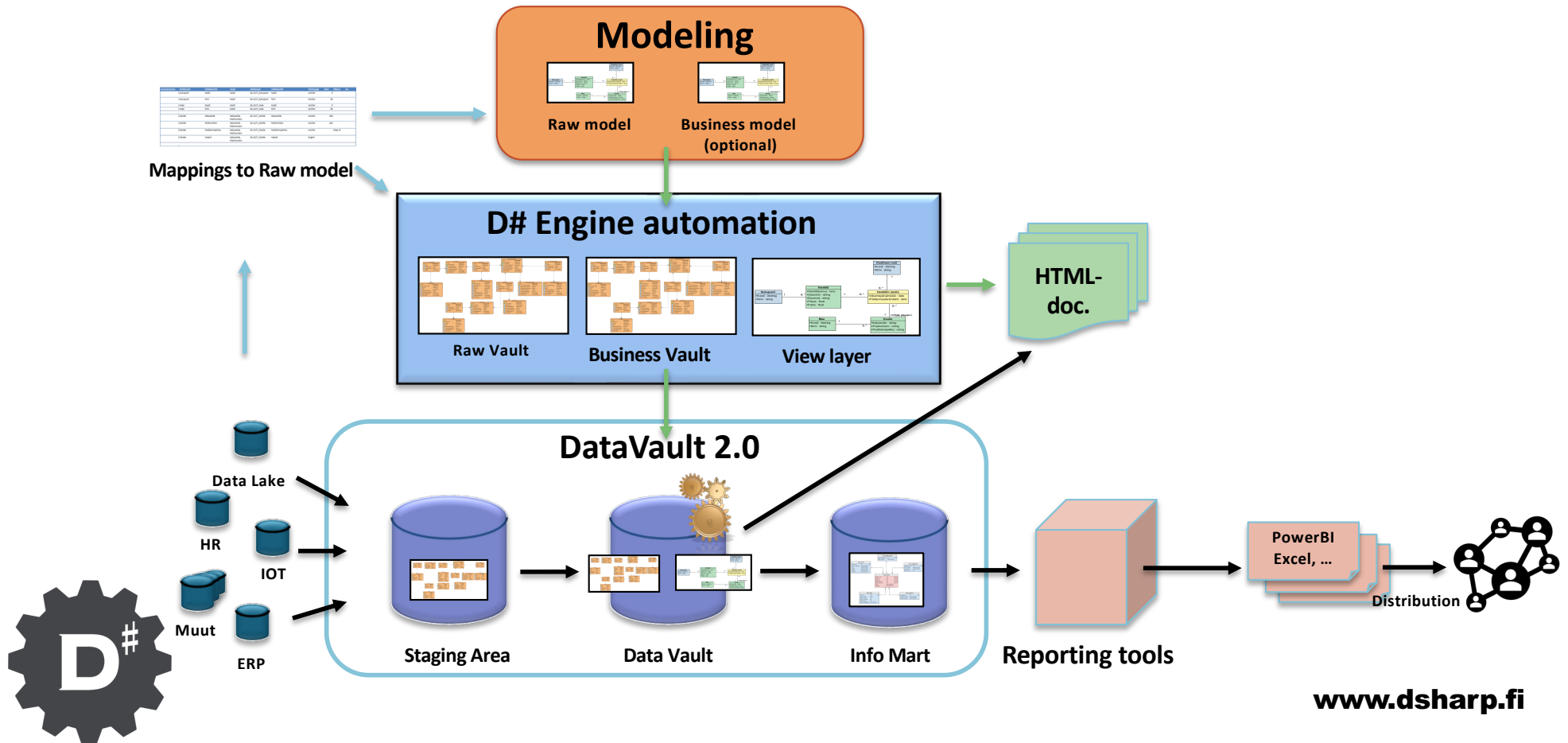
Data Vault 2.0 And Conceptual Models

- **Raw Model**
 - **Basis for the Raw Vault**
 - **Dependent on raw data**

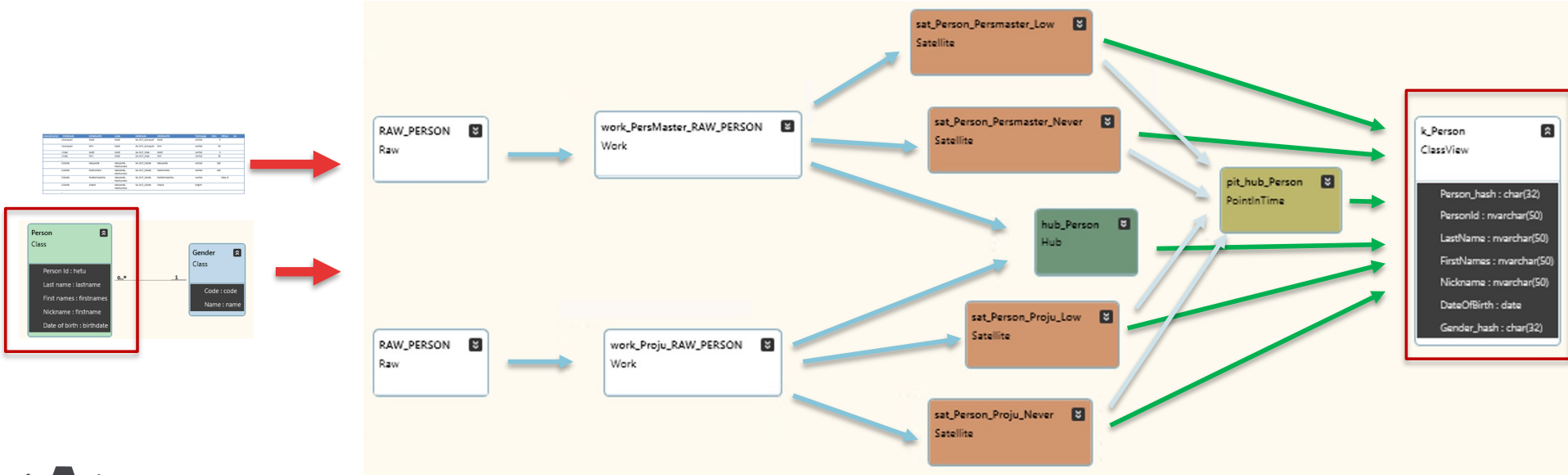
- **Business model**
 - The world as we want to see it, designed for a specific purpose
 - Publishes the contents of the Raw model in a managed structure
 - Technically, all data processing happens before this layer: what comes out of it is "approved for usage"



D# DevOps Process



Generated Objects

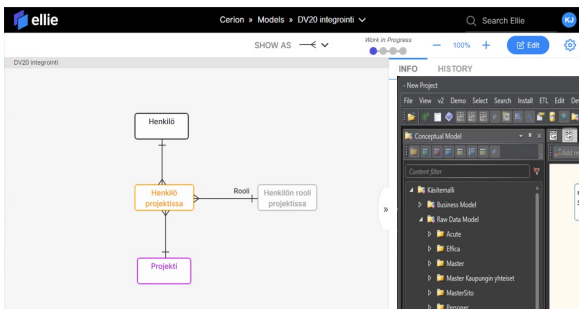


Hands-on

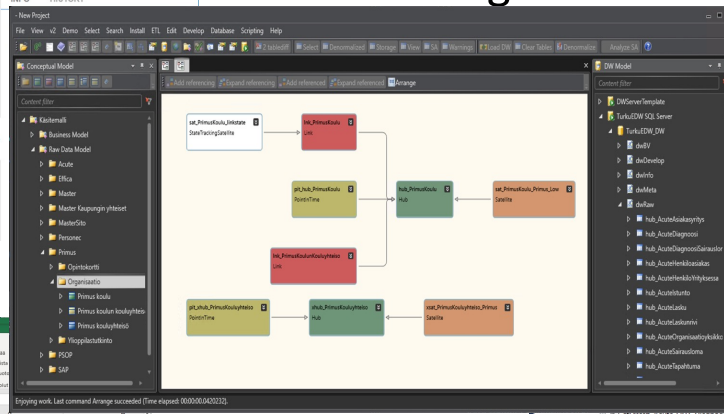


Toolbox

Ellie / Visual Paradigm



D# SmartEngine



SQL Server / Azure

```
set @loadTime = getDate()
exec [TurkuEDW_Log].[log].StartTask
@taskID
@loadTime
'Hash calculation'
['TurkuEDW_SAS].[Acute].[RAW_BD_VISIT_TYPE]',
['et1].[work_Acute_RAW_BD_VISIT_TYPE]',
null,
'Starting hash calculation into work_Acute_RAW_BD_VISIT_TYPE'

-- check if there are rows in the working table
-- if it is empty, the table should be loaded
if @reloadStrategy = 0
select @reload = 1 - count(*) from (
select top 1 * from [et1].[work_Acute_RAW_BD_VISIT_TYPE]
) as cntQuery
) as cntQuery

else if @reloadStrategy = 1
set @reload = 1

else if @reloadStrategy = 2
-- find out if the working table has been loaded after the current load has been initi.
-- if this is the case, its contents are current, otherwise they may not be
select top 1 *
from
[et1].[work_Acute_RAW_BD_VISIT_TYPE] as workingTable
where
workingTable.[LoadDate] > @loadTime as cntQuery
```

.CSV

ID	Name	Class
1	Primus	Primus enen syy
2	Primus	Primus enen syy
3	Primus	Primus enen syy
4	Primus	Primus enen syy
5	Primus	Primus koulu
6	Primus	Primus koulu
7	Primus	Primus koulu
8	Primus	Primus koulu
9	Primus	Primus koulu
10	Primus	Primus koulu
11	Primus	Primus koulu
12	Primus	Primus koulu
13	Primus	Primus koulu
14	Primus	Primus koulu
15	Primus	Primus koulu
16	Primus	Primus koulu
17	Primus	Primus koulu
18	Primus	Primus koulu
19	Primus	Primus koulu
20	Primus	Primus koulu
21	Primus	Primus koulu
22	Primus	Primus koulu



Steps

- All in all 10 tutorials
 - 3 during online course
 - 7 at own convenience
- Modeling
 - Iteration 1: Person, Gender
 - Iteration 2: Add attributes to Person
 - Iteration 3: Project, Person's role in project, Project membership
- Mappings
 - OpenOffice Calc, two simulated source systems
- SmartEngine for Data Vault 2.0
 - Imported models, diagram
 - Generated Data Vault diagram
 - Installation package
- MS SQL Server
 - Load DW with simple demo data
 - Simple DW based queries





Contact information

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