

Naar de Universal UI...

En daar voorbij!

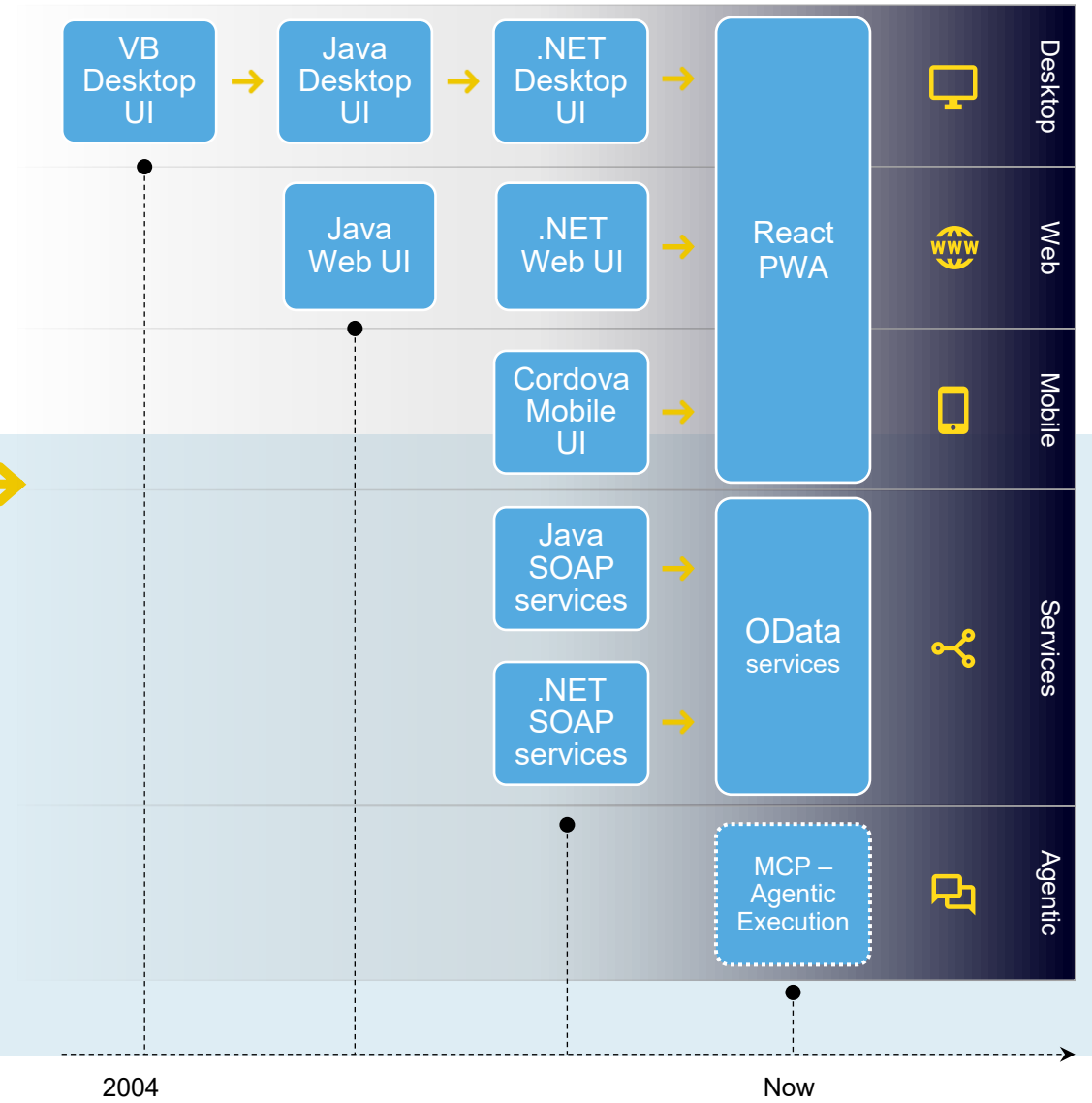
Remco Kort
Platform Ambassador

Technology as a Service

We deliver an infinite technological lifespan of your unique, business-critical Applications

Application blueprint
A technology-independent description of the application

Runtime Interpretation



Agenda

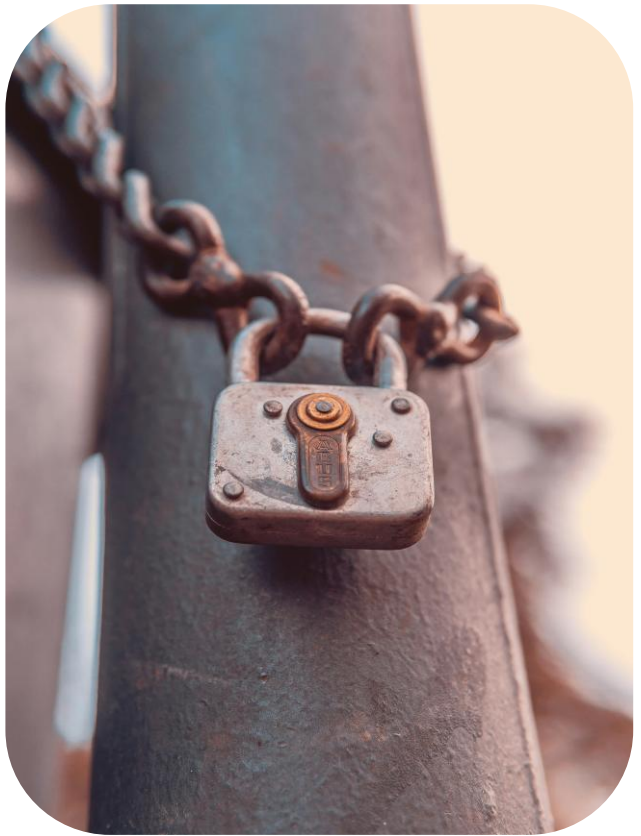
De kracht van de Universal UI

Hoe maak ik de transitie?

1. Verify model quality
2. Replace extenders and deprecated features
3. Apply model enrichments
4. Deploy the Universal UI
5. Run in Parallel
6. Sunset the Windows GUI
7. Accelerate

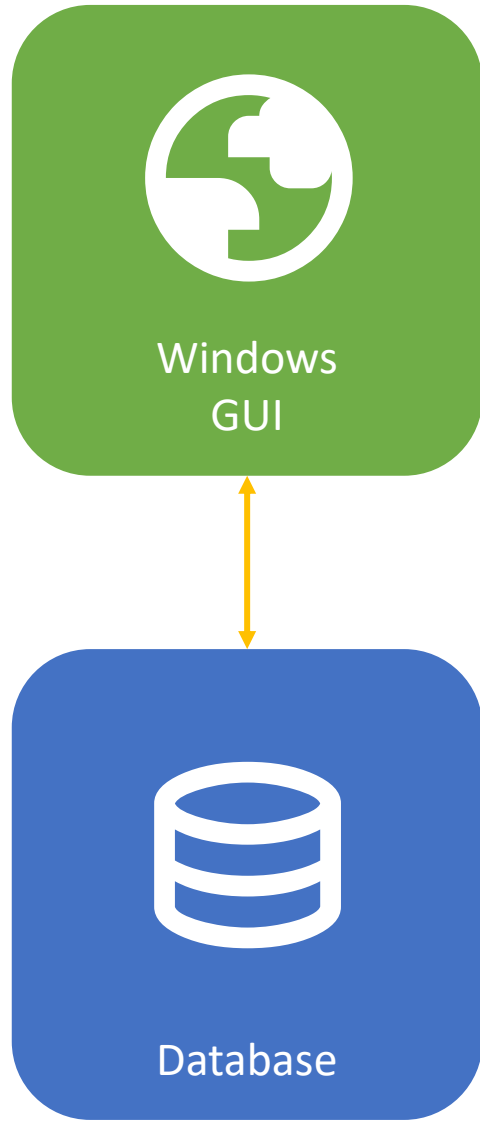
De kracht van de Universal UI

De kracht van de Universal UI



Security

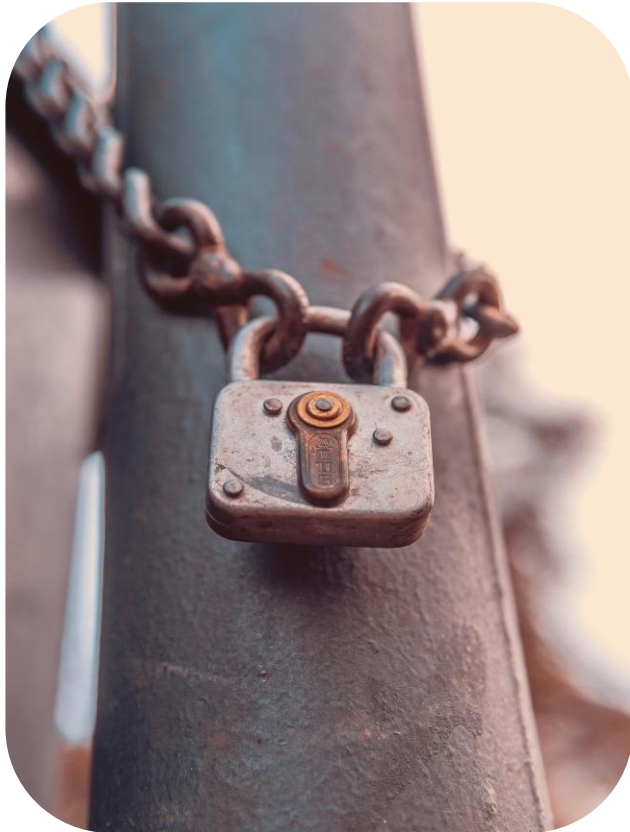
2-tier



3-tier



De kracht van de Universal UI

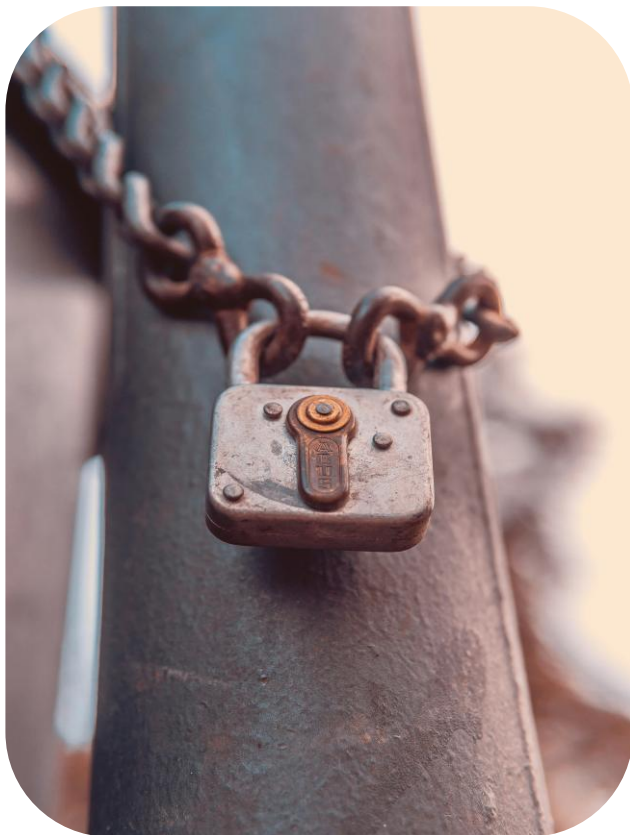


Security



Scalability

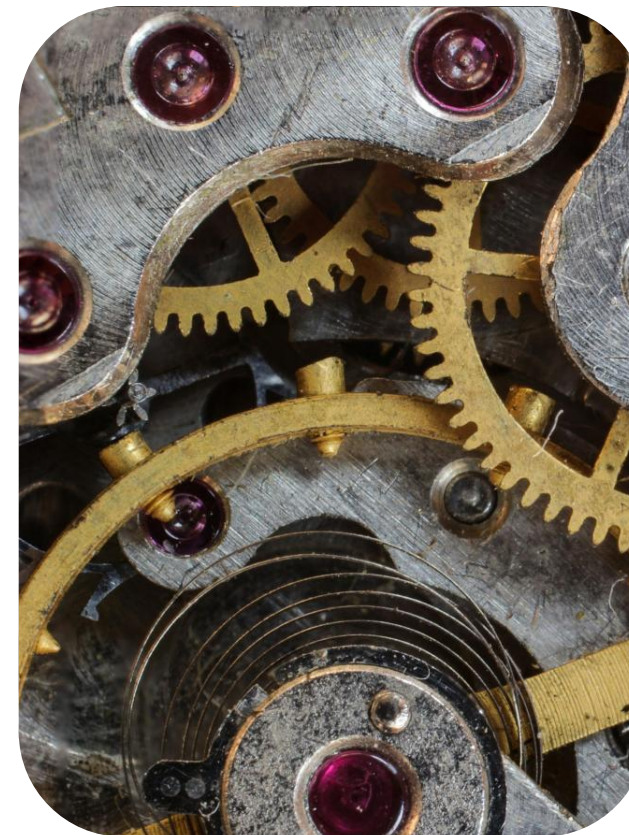
De kracht van de Universal UI



Security



Scalability



Features

Windows GUI 2-tier

Lifecycle policy

- End of Development: 2024.2
- End of Life: 2025.3
- End of Service Life: mid 2027

Hoe maak ik de transitie?

- 0 Upgrade to platform version 2025.3 (developers)**
- 1 Verify model quality (developers)**
- 2 Replace extenders and deprecated features (developers)**
- 3 Apply model enrichments (developers)**
- 4 Deploy the Universal UI (infrastructure)**
- 5 Run in parallel (key users)**
- 6 Sunset the Windows GUI (infrastructure)**
- 7 Accelerate (developers)**

THINKWISE 

Software Factory

2025.3

A component of the Thinkwise Platform



1. Verify model quality

Search

- Open documents
- Smoke tests
- Models
 - Switch branch
 - Launch application
 - Model overview
 - Model content
 - Merging
 - Difference analysis

- Data
- User Interface
- Processes
- Business Logic
- Quality
- Access Control
- Deployment
- Integration & AI
- Enrichments
- Analysis
- Documentation
- Maintenance

Smoke test

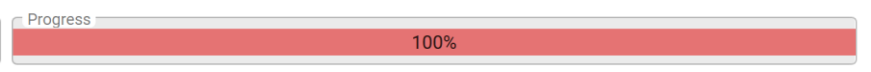
Runtime configuration
default

Developer
TSF\rkort

Progress

Failed

Finished
Just now



Start smoke test

Smoke test steps

List Form

Search

Re-run selected smoke test step(s)

Test step	Error message	Duration (ms)
✓ Badge procedure: email		94
✓ Badge procedure: generate_sales_invoice		63
✓ Badge procedure: meeting		47
✓ Badge procedure: open_hours_per_customer		47
✗ Badge procedure: sales_invoice_report_detail	Technical message: Could not find stored procedure 'bdg_sales_invoice_report_detail'. Extra information: The st...	63
✓ Badge procedure: task		79
✓ Context procedure: booking_hour		63
✗ Context procedure: customer	Information: Procedure or function 'ctx_customer' expects parameter '@report_sales_invoice_type', which was ...	48
✓ Context procedure: email		47
✓ Context procedure: project_employee_customer_map		47
✓ Context procedure: sales_invoice		47
✓ Context procedure: task		47
✗ Default procedure: activity	Information: Procedure or function 'def_activity' expects parameter '@book_or_print', which was not supplied.	47
✓ Default procedure: activity_translated		48
✓ Default procedure: application_settings		47
✓ Default procedure: calculate_route		47
✓ Default procedure: copy_data		47
✓ Default procedure: country		38

Search

Generate definition Validate definition 33 Generate source code Execute source code Run unit tests Run smoke tests

- Open documents
- Creation
- Models
- Data
- Domains
- Data model
- Data sensitivity
- Sequences
- Data migration
- User Interface
- Processes
- Business Logic
- Quality
- Access Control
- Deployment
- Integration & AI
- Enrichments
- Analysis
- Documentation
- Maintenance

Search

- Table does not have any references
 - Table has no primary key
 - company_address
 - Table is not used in diagrams
 - Domain is not used
 - Lookup reference does not contain the full primary key of the source table
 - Detail reference does not contain the full primary key of the source or target table
 - Data sensitivity
 - User interface
 - Functionality
 - Integral definitions
 - Performance
 - Access control

Validation Related object

Description	Consequence	Solution
Table has no primary key	In a relational database a primary key must always be provided with a table. For a view or snapshot this is not required for the database or not even possible. However the GUI does require this to determine the current row. The table is refreshed after adding, modifying or deleting a row. When there is	Check the primary key for the columns that ensure that a row can be uniquely identified. If the validation message concerns a view and it is certain that this view is not accessible in the GUI and via the API, this validation message may be approved.

Failed

Progress 100%



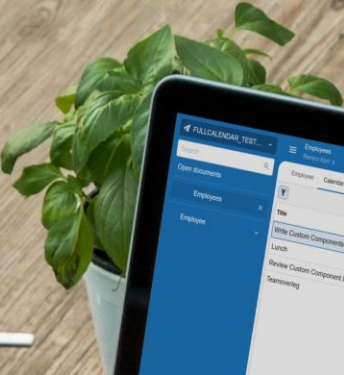
2. Replace extenders and deprecated features

Extenders

- Double click tasks and grid task links
- Disable multirow selection
- Detail null comparison
- Custom display formats

- Scheduler
- Maps
- Editable cubes

Daily				September 1 – 30, 2025																													
Full name	Function	# Hours avai	# Hours plan	2025 - 36					2025 - 37					2025 - 38					2025 - 39					2025 - 40									
				01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Logistics																																	
Team Alpha																																	
Aaron Small	Team Manager	14	10															2 - Preparing packaging															
Alexis Massey	Warehouse staff	7	15																														
Heather Ortiz	Engineer	14	13																														
Rebecca Howard	Engineer	15	6	2 - Machine bushings																													
Thomas Washington	Warehouse staff	15	17										4 - Shipping		5 - Install on location																		
Team Bravo																																	
Charles Gallegos	Team Manager	7	7	2 - Prepare shipment																													
Nicholas Myers	Engineer	8	5																														
Theresa Lloyd	Warehouse staff	15	10																														
Team Charlie																																	
Austin Beard	Engineer	14	5	1 - Create machining plan					2 - Test macl		3 - Fabrication																						
Daniel Sanchez	Warehouse staff	6	17																			4 - Pr		5 - Shipping									
Donald Rodriguez	Engineer	10	11																														
Donna Roberts	Engineer	14	11																														
Jenny Ibarra	Team Manager	16	5																														
Paige Scott	Warehouse staff	6	9	1 - Order picking																													



FullCalendar Test

Employees

Employee	Calendar
Employee	Calendar

Open Accounts

Employee

Title	Start time	End time
10hr Custom Component Mtg	01/05/2026 09:30:00	01/05/2026 10:30:00
Lunch	01/05/2026 12:00:00	01/05/2026 12:30:00
Review Custom Component Mtg	01/05/2026 13:00:00	01/05/2026 14:00:00
Teamworking	01/05/2026 15:00:00	01/05/2026 16:30:00

January 5, 2026

Monday

Today

all-day

8am

10am

11am

12pm

1pm

2pm

3pm

4pm

5pm

6pm

10hr Custom Component Mtg

Review Custom Component Mtg

Teamworking

10hr Custom Component Mtg

Review Custom Component Mtg

Teamworking

10hr Custom Component Mtg

Review Custom Component Mtg

Teamworking

HOLLY
PRODUC
DIRECTO
CAMERA
DATE

Search

Open documents

- Company
- Crm
- Fleet management
- Base data

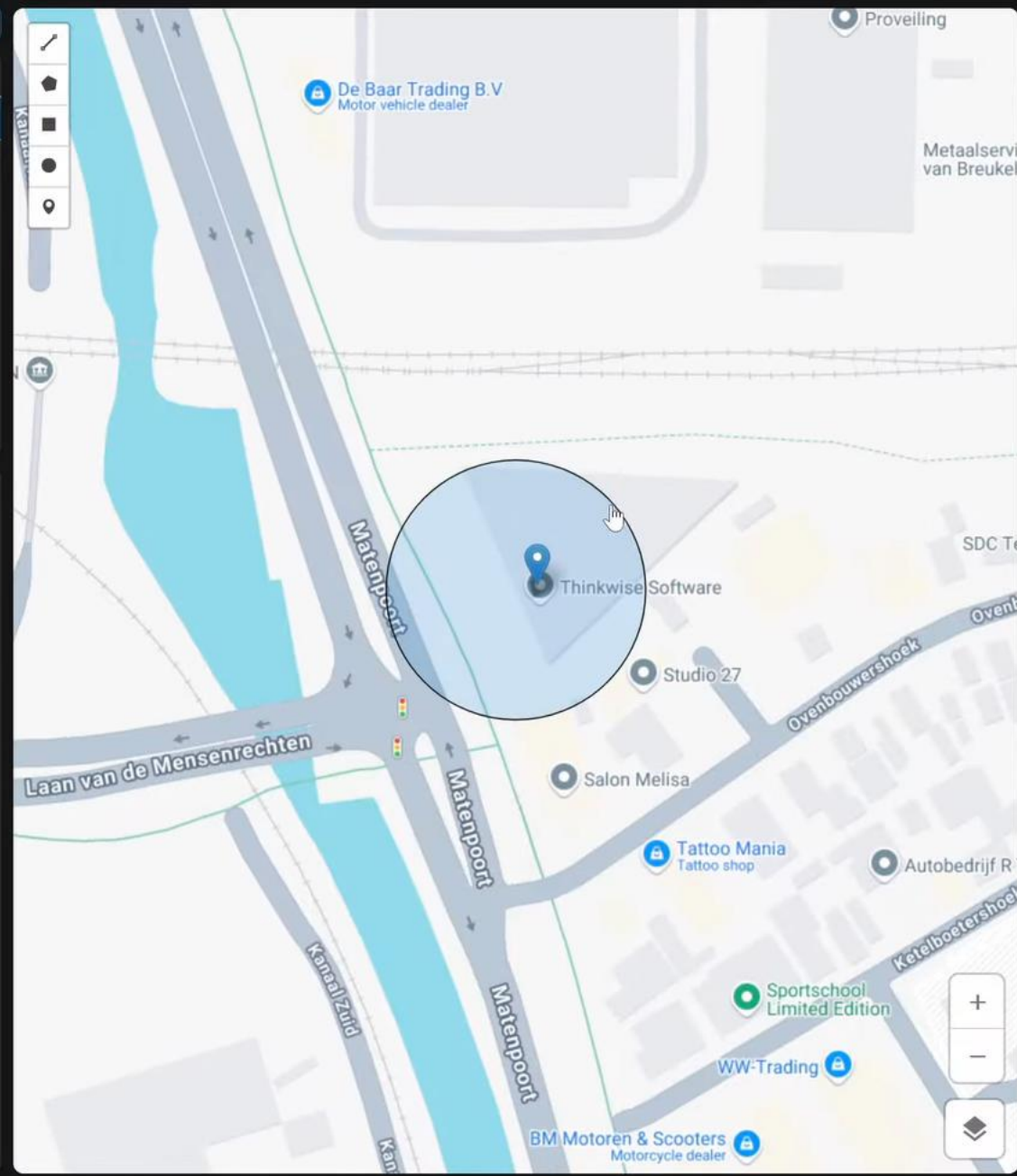
Company Company address

Search

Name	Address type	Street name	Postal code
Kantoor Thinkwise	Office	Ovenbouwershoek 9	7328 JH
Rotterdam	City		

Name Kantoor Thinkwise	Postal code 7328 JH
Address type Office	City Apeldoorn
Street name Ovenbouwershoek 9	Country id

Trace



Open documents

- My inventory manage... X
- Product Management ^
 - Collections
 - Products
 - Import products
 - Inventory management
 - My inventory manage...
- Inbound v
- Outbound v
- CRM v
- Master data v

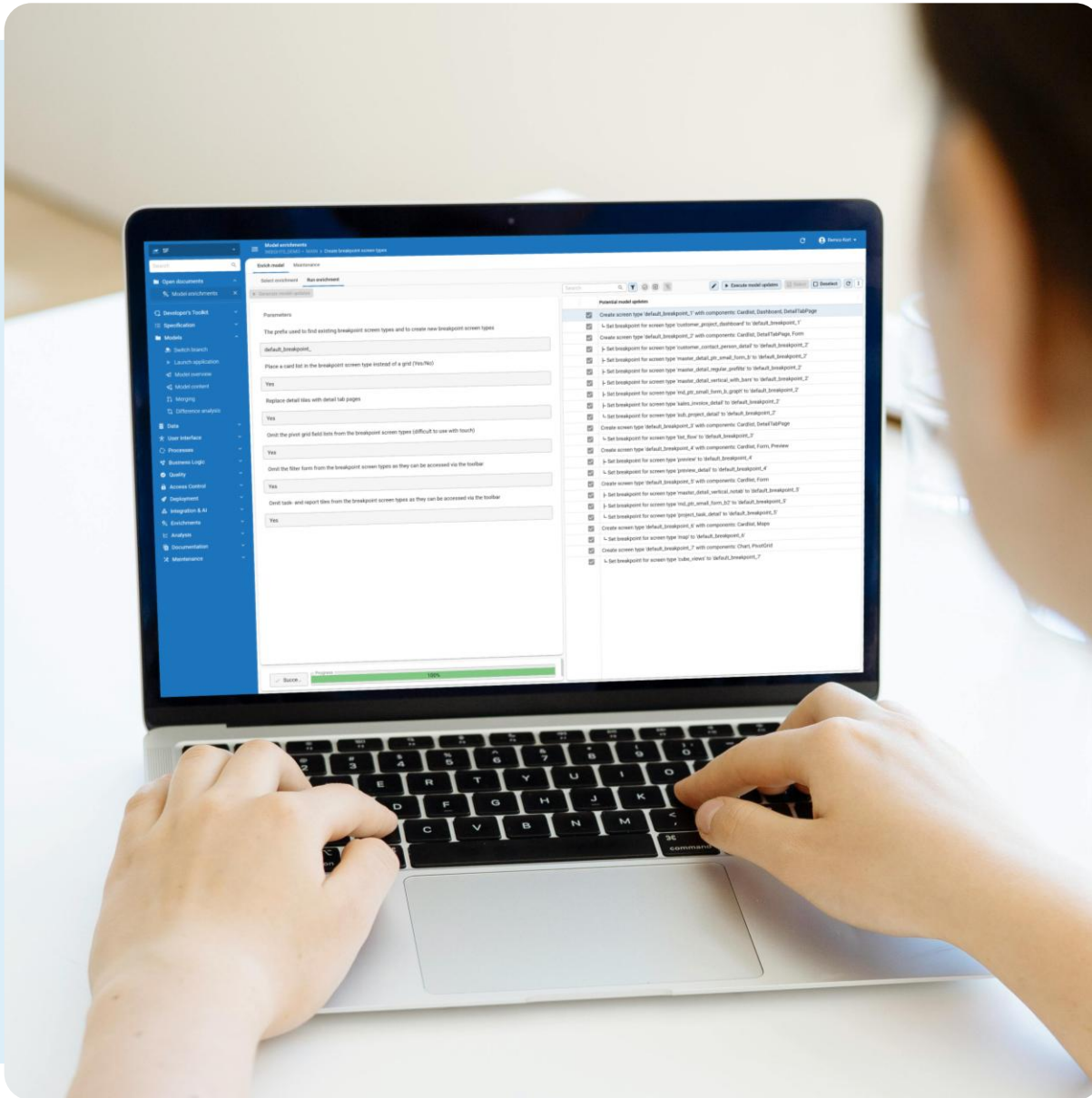
Company	Product	Length	28 Inventory amount	29 Inventory amount	30 Inventory amount	31 Inventory amount	32 Inventory amount	33 Inventory amount	34 Inventory amount	35 Inventory amount	36 Inventory amount	38 Inventory amount	40 Inventory amount
▼ Cast Iron			47	56	62	88	91	100	104	92	76	80	14
	▼ Falture relaxed fit jeans		12	14	14	22	24	25	26	23	19	20	3
		30	7	7	5	7	6	5	4	3	2	2	
		32	3	3	4	5	7	7	6	4	2	2	2
		34	2	4	5	6	6	6	7	5	3	2	1
		36				2	3	4	5	6	7	7	
		38				2	2	3	4	5	5	7	
	▼ Riser slim fit jeans		11	14	16	22	24	25	26	23	19	20	4
		30	7	7	7	7	6	5	4	3	2	2	
		32	3	3	4	5	7	7	6	4	2	2	2
		34	1	4	5	6	6	6	7	5	3	2	2
		36				2	3	4	5	6	7	7	
		38				2	2	3	4	5	5	7	
	▼ Shiftback tapered fit jeans		12	14	16	22	19	25	26	23	19	20	3
		30	7	7	7	7	6	5	4	3	2	2	
		32	3	3	4	5	7	7	6	4	2	2	2
		34	2	4	5	6	1	6	7	5	3	2	1
		36				2	3	4	5	6	7	7	
		38				2	2	3	4	5	5	7	
	▼ Valver regular fit jeans		12	14	16	22	24	25	26	23	19	20	4
		30	7	7	7	7	6	5	4	3	2	2	
		32	3	3	4	5	7	7	6	4	2	2	2
		34	2	4	5	6	6	6	7	5	3	2	2
		36				2	3	4	5	6	7	7	
		38				2	2	3	4	5	5	7	
▼ PME Legend			60	70	80	110	120	125	130	115	95	100	20
	▼ Commander 3.0 relaxed fit jeans		12	14	16	22	24	25	26	23	19	20	4
		30	7	7	7	7	6	5	4	3	2	2	
		32	3	3	4	5	7	7	6	4	2	2	2
		34	2	4	5	6	6	6	7	5	3	2	2



2. Replace extenders and deprecated features

Deprecated features

- Reporting
- TSFReportMailer
- Local file access
- External tasks
- Folder pickers
- Cube value aggregation type: formula



3. Apply model enrichments

Eenmalige acties om model brede wijzigingen te maken

Voorbeelden:

- Add the universal platform
- Create breakpoint screen types
- Decolorize SVG icons
- Show default cube view
- Keep ungrouped form fields vertically aligned
- Set up a card list configuration
- Set the default page size for pagination
- Show tab icons



4. Deploy the Universal UI

Omgevingsinrichting

- Reference Architecture (zie [docs](#))
- Security headers (zie [docs](#))

Performance verschillen

- Pagineren
- Lazy loading

- Overhead internet
- Web server sizing
- HTTP 2
- GZIP / Brotli compressie
- Firewall

Performance: http/1.1 traffic jams

Browser staat max 6 parallele requests toe

Status	Protocol	Type	Initiator	Size	Time	Waterfall
200	http/1.1	document	Other	827 B	567 ms	
200	http/1.1	png	(index):17	2.8 KB	642 ms	
200	http/1.1	png	(index):17	3.5 KB	681 ms	
200	http/1.1	png	(index):17	3.4 KB	697 ms	
200	http/1.1	png	(index):17	5.9 KB	705 ms	
200	http/1.1	png	(index):17	4.7 KB	705 ms	
200	http/1.1	png	(index):17	5.3 KB	720 ms	
200	http/1.1	png	(index):17	1.7 KB	1.18 s	
200	http/1.1	png	(index):17	4.1 KB	1.22 s	
200	http/1.1	png	(index):17	1.5 KB	1.26 s	
200	http/1.1	png	(index):17	773 B	1.27 s	
200	http/1.1	png	(index):17	3.6 KB	1.27 s	
200	http/1.1	png	(index):17	6.4 KB	1.31 s	
200	http/1.1	png	(index):17	3.7 KB	1.76 s	
200	http/1.1	png	(index):17	726 B	1.78 s	
200	http/1.1	png	(index):17	1.6 KB	1.83 s	
200	http/1.1	png	(index):17	910 B	1.84 s	
200	http/1.1	png	(index):17	781 B	1.84 s	
200	http/1.1	png	(index):17	4.1 KB	1.88 s	
200	http/1.1	png	(index):17	4.6 KB	2.34 s	
200	http/1.1	png	(index):17	3.0 KB	2.37 s	
200	http/1.1	png	(index):17	754 B	2.39 s	

Name	Status	Protocol	Type	Initiator	Size	Time	Waterfall
i_ui_extended_property?\$filter=(gui_...	200	h2	xhr	_app-8084eb3700	572 B	270 ms	
i_ui_process_flow?\$filter=(gui_appl_i...	200	h2	xhr	_app-8084eb3700	13.1 kB	79 ms	
i_ui_list_bar_item?\$filter=((gui_appl_i...	200	h2	xhr	_app-8084eb3700	12.1 kB	130 ms	
SQLSERVER_IAM.download_icon(file...	200	h2	xhr	_app-8084eb3700	6.4 kB	158 ms	
tinymce.min.js	200	h2	script	main-a92ed7481f	152 kB	39 ms	
660.0d0896f91aa6b877.js	200	h2	script	webpack-7ff786d	10.0 kB	32 ms	
data:image/gif;base...	200	data	gif	framework-b25e2	0 B	0 ms	
SQLSERVER_IAM.download_universa...	200	h2	jpeg	Other	342 kB	99 ms	
roboto-latin-700-normal.f3dda9d.w...	404	h2	font	154c859057180c2	58 B	23 ms	
roboto-latin-700-normal.f3dda9d.w...	404	h2	font	154c859057180c2	46 B	87 ms	
i_ui_start_object?\$filter=(gui_appl_id...	200	h2	xhr	_app-8084eb3700	944 B	32 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	3.3 kB	131 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	1.6 kB	192 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	739 B	174 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	1.3 kB	152 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	3.0 kB	126 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	641 B	174 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	855 B	147 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	813 B	142 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	1.8 kB	169 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	1.2 kB	192 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	1.5 kB	187 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	1.5 kB	184 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	1.5 kB	177 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	810 B	171 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	612 B	158 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	2.5 kB	79 ms	
SQLSERVER_IAM.download_list_bar_...	200	h2	xhr	_app-8084eb3700	1.9 kB	142 ms	
656.4090c388a04cb70e.js	200	h2	script	webpack-7ff786d	10.7 kB	12 ms	
badge()	200	h2	xhr	_app-8084eb3700	898 B	21 ms	
badge()	200	h2	xhr	_app-8084eb3700	334 B	77 ms	

Performance: geen compressie

Package size compressie scheelt tijd en data

geen compressie

⊙ cdfd8999.f86dc7a599df087f.js	200	h2	fetch	service-worker.js:1	126 kB	26 ms
⊙ framework-b25e23bb9c5762...js	200	h2	fetch	service-worker.js:1	212 kB	25 ms
⊙ main-a92ed7481f70483...js	200	h2	fetch	service-worker.js:1	110 kB	28 ms
114 requests 28.0 MB transferred 27.9 MB resources Finish: 8.15 s DOMContentLoaded: 1.82 s Load: 1.96 s						

Headers		Preview	Response
▶ General			
▼ Response Headers			
Accept-Ranges			bytes
Content-Encoding			gzip

gzip

⊙ 920.7a5a7f439a7172eb.js	200	h2	fetch	service-worker.js:1		
⊙ 957.71b191df4b96f637...js	200	h2	fetch	service-worker.js:1		
⊙ 960de000.38bf5...ocee7706.js	200	h2	fetch	service-worker.js:1		
117 requests 9.7 MB transferred 27.7 MB resources Finish: 11.24 s DOMContentLoaded: 3.14 s Load: 3.30 s						

Headers		Preview	Response
▶ General			
▼ Response Headers			
Accept-Ranges			bytes
Content-Encoding			br

brotli

⊙ theme.min.js	200	h2				
⊙ model.min.js	200	h2				
⊙ icons.min.js	200	h2				
115 requests 5.1 MB transferred 28.8 MB resources Finish: 6.12 s DOMContentLoaded: 1.22 s Load: 1.22 s						



Sign in

Email, phone, or Skype

No account? [Create one!](#)

Next



Sign-in options

5. Run in Parallel



Key users aanhaken

- Applicatie gebruiken op Universal
- Optimaliseren op basis van feedback



Accepteren

- Extenders testen als nieuwe functionaliteit



Strategie

- Kies een livegang strategie
- Suggestie: per logische module



Planning

- Timebox
- Eerst over, daarna accelereren



6. Sunset the Windows GUI

- Stapsgewijs uitrollen
- Voorkom dat werk van 1 persoon in verschillende UI's gedaan moet worden

Models

Branches

Model tags

Diagram

List

Form

Model settings

General settings

Platforms

Runtime configurations

Model versions

Base models

Search



	Platform	Def. menu	Def. theme	Modified by	Modified on
	Universal			TSF\rkort	01/12/2026 10:50:05
	Windows			TSF\rkort	03/30/2026 12:51:34

Delete

Are you sure you want to delete this object?

NO

YES



7. Accelerate

Search

Open documents

- Sales order
- Product Management
- Inbound
- Outbound
- CRM
- Master data

Sales order Sales order lines

Search Filter Sort Print Refresh Home Close Check Lock Approve order Calculate margings Plan transport Add Print Edit Delete More

Sales order	Status	Receiving company	Total price before tax	Description	Expected delivery date	Actual delivery date
4	🏠	New Balance	158.30	Shoe Order 3	06/11/2024	01/26/2025
29	🔄	Schoenen Outlet Online	182.83	Shoe Order 28	07/16/2025	04/21/2025
31	🏠	Schoenen Outlet Online	495.16	Shoe Order 30	04/16/2025	12/09/2024
37	🔄	Ziengs	173.26	Shoe Order 36	07/14/2025	04/11/2025
38	🏠	Comfortschoenen Amsterd...	263.42	Shoe Order 37	09/20/2025	12/29/2024
42	🏠	Comfortschoenen Amsterd...	123.76	Shoe Order 41	04/07/2025	12/10/2024
45	🏠	Ziengs	456.80	Shoe Order 44	01/30/2024	01/21/2025
47	🏠	Foot Locker	146.77	Shoe Order 46	05/04/2024	12/15/2024
48	🏠	Reebok Shoes	53.31	Shoe Order 47	09/05/2024	12/18/2024
49	🔄	Foot Locker	203.21	Shoe Order 48	09/18/2025	05/07/2025
57	🔄	Foot Locker	428.66	Shoe Order 56	03/06/2025	05/07/2025
60	🏠	Foot Locker	248.54	Shoe Order 59	04/02/2025	12/25/2024
62	🏠	Foot Locker	111.78	Shoe Order 61	08/07/2024	02/23/2025
65	🔄	Foot Locker	310.00	Shoe Order 64	07/11/2025	04/25/2025
67	🏠	Comfortschoenen Amsterd...	128.07	Shoe Order 66	02/10/2024	01/16/2025
68	🏠	Comfortschoenen Amsterd...	393.35	Shoe Order 67	11/16/2025	02/08/2025
70	🏠	Comfortschoenen Amsterd...	165.53	Shoe Order 69	01/19/2024	12/24/2024
71	🏠	Comfortschoenen Amsterd...	361.83	Shoe Order 70	05/26/2024	01/01/2025
75	🏠	Comfortschoenen Amsterd...	234.79	Shoe Order 74	04/27/2024	01/18/2025
76	🏠	Comfortschoenen Amsterd...	361.95	Shoe Order 75	08/14/2025	01/04/2025
79	🏠	Comfortschoenen Amsterd...	240.27	Shoe Order 78	02/19/2024	02/09/2025
82	🏠	Comfortschoenen Amsterd...	137.68	Shoe Order 81	09/01/2025	12/27/2024
85	🏠	Comfortschoenen Amsterd...	314.75	Shoe Order 84	07/17/2024	02/13/2025
86	🏠	Comfortschoenen Amsterd...	328.03	Shoe Order 85	12/22/2025	12/24/2024
87	🏠	Comfortschoenen Amsterd...	346.90	Shoe Order 86	09/23/2025	02/03/2025
89	🏠	Comfortschoenen Amsterd...	235.05	Shoe Order 88	05/26/2025	11/29/2024
92	🔄	Comfortschoenen Amsterd...	334.51	Shoe Order 91	06/03/2024	04/13/2025
93	🔄	Comfortschoenen Amsterd...	396.13	Shoe Order 92	12/06/2024	04/30/2025
97	🔄	Comfortschoenen Amsterd...	420.89	Shoe Order 96	07/22/2024	04/28/2025

General

Sales order 4

Status 🏠 Received

Description Shoe Order 3

Order contact person id

Receiving company New Balance

Address id Pine Road 73 C

Delivery

Expected delivery date 06/11/2024

Actual delivery date 01/26/2025

Invoice address id

Delivery address id

Transport company id

Total price before tax 158.30

Tax

Customs

Trace

Migratie naar (Thinkwise) Cloud

Het migratieproces voor bestaande klanten.





- 0 Upgrade to platform version 2025.3 (developers)**
- 1 Verify model quality (developers)**
- 2 Replace extenders and deprecated features (developers)**
- 3 Apply model enrichments (developers)**
- 4 Deploy the Universal UI (infrastructure)**
- 5 Run in parallel (key users)**
- 6 Sunset the Windows GUI (infrastructure)**
- 7 Accelerate (developers)**