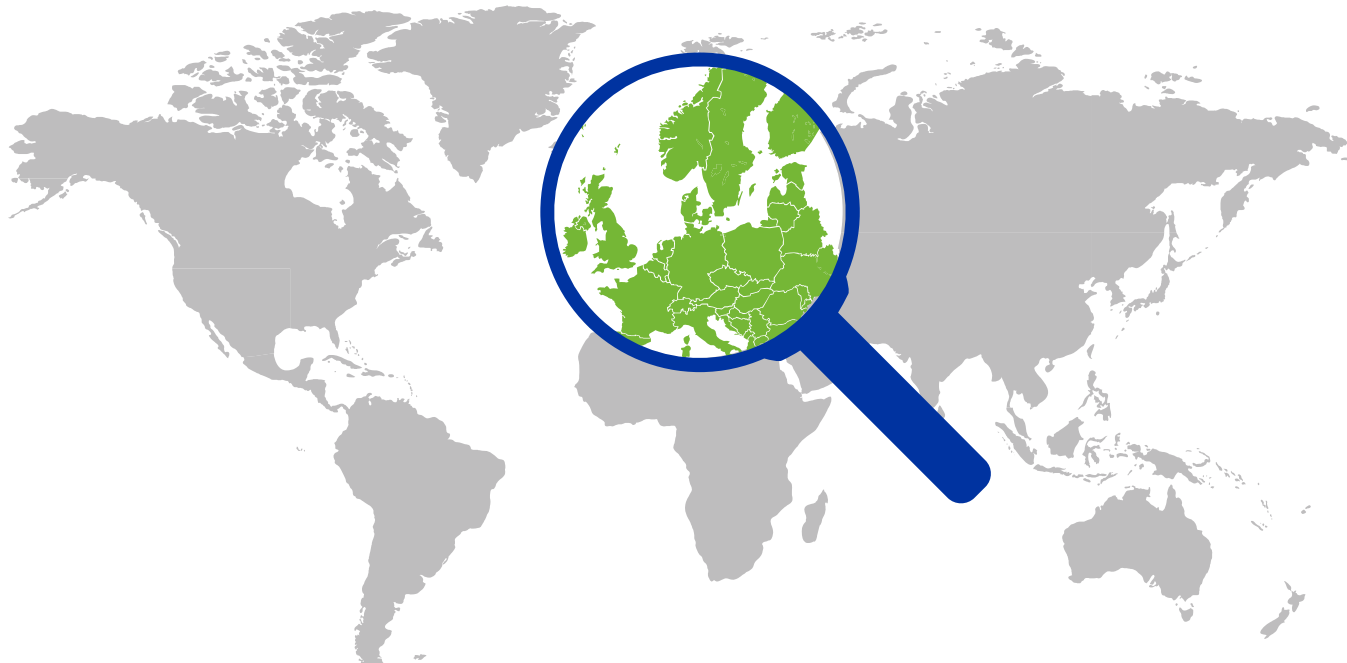


ASSET LEVEL DATA INPUT TOOL

New technologies to simplify data delivery



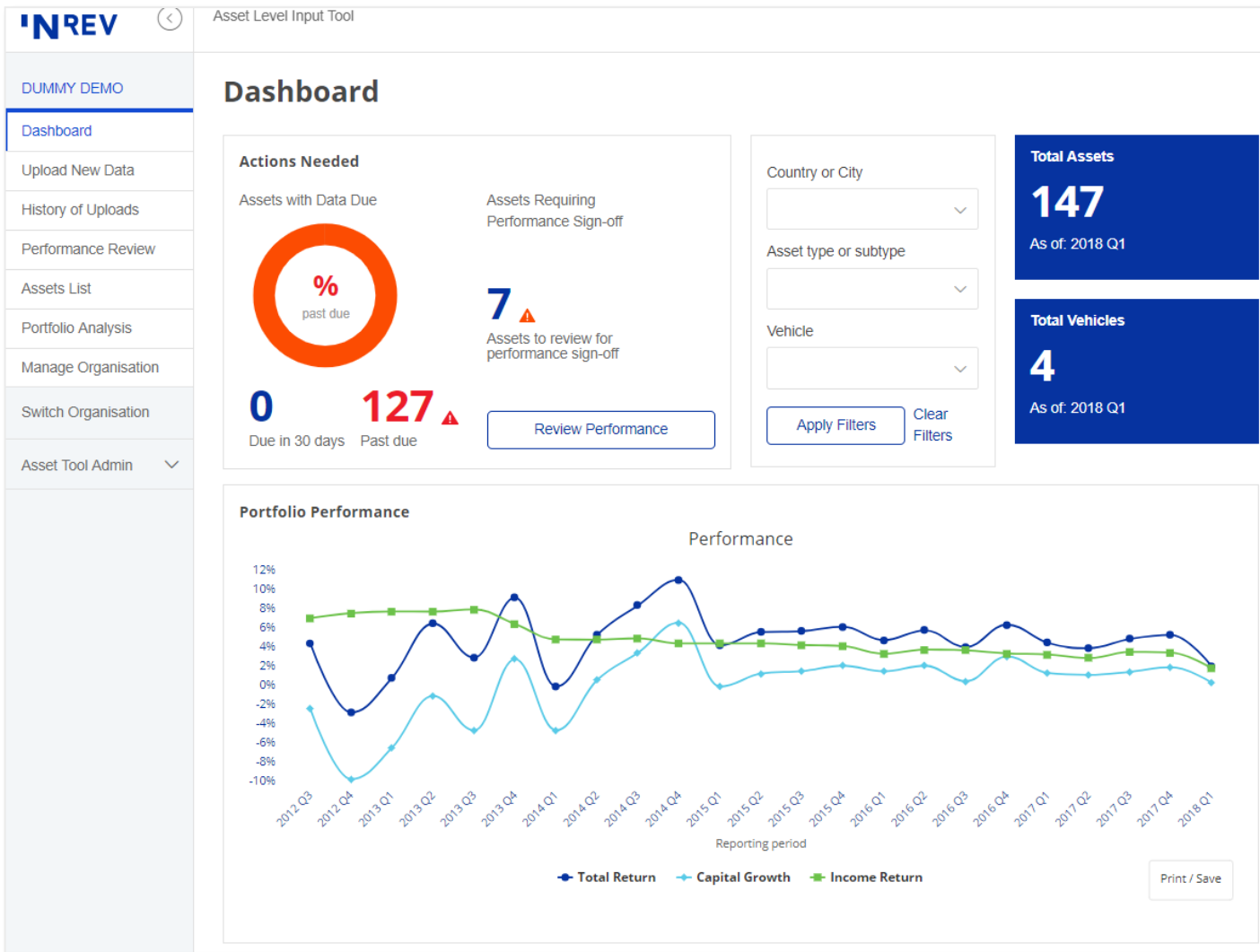
INREV

November 2018

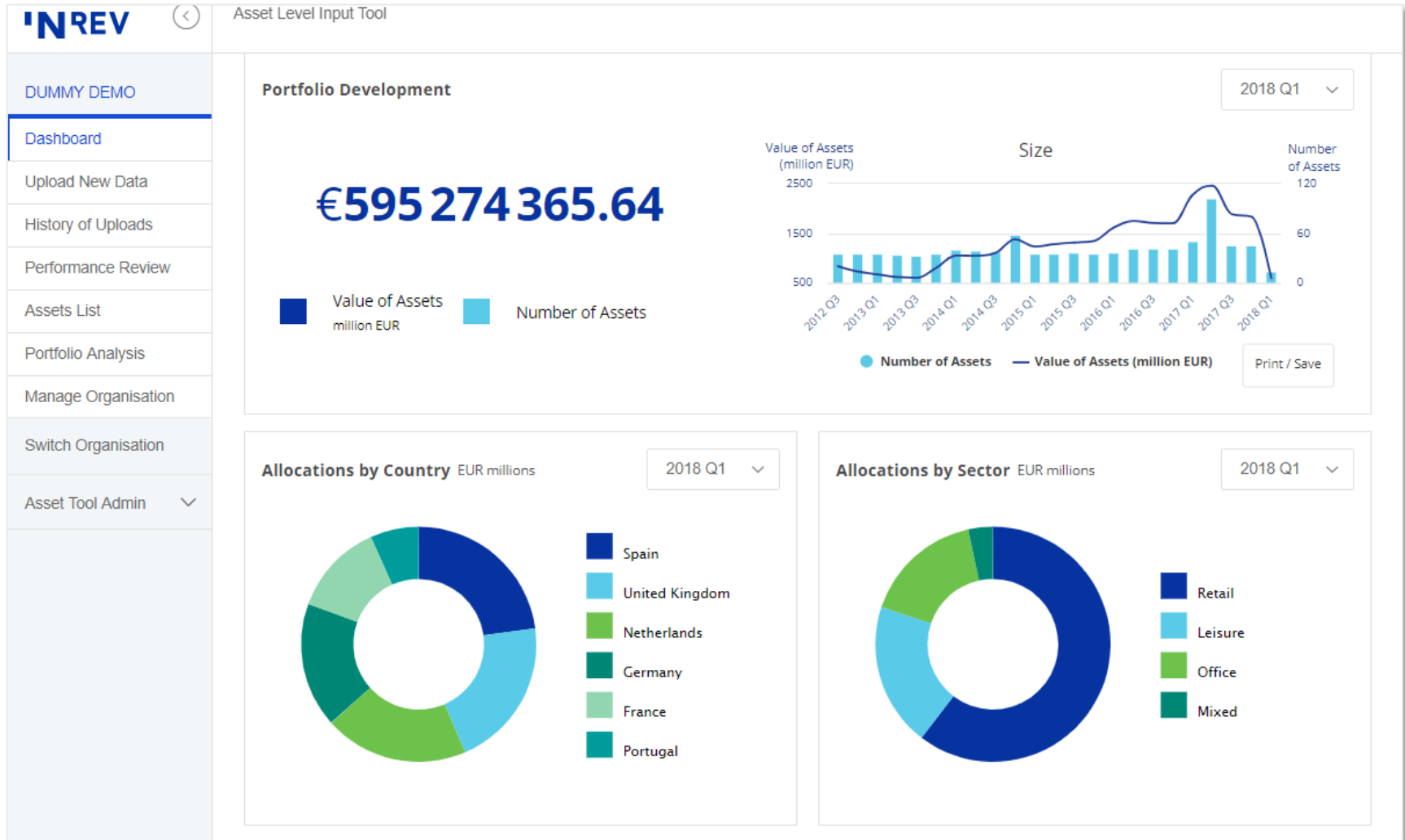
Vitaliy Tonenchuk

Research and Analytics Manager

Company dashboard (1)



Company dashboard (2)



Data upload: 6 easy steps to follow

The screenshot displays the 'Asset Level Input Tool' interface. At the top left is the 'INREV' logo. The page title is 'Asset Level Input Tool'. In the top right corner, the user 'Vitaliy Tonenchuk' is logged in. A navigation bar contains six steps: '1. UPLOAD DATA', '2. ERRORS', '3. NEW ASSETS', '4. SOLD ASSETS', '5. WARNINGS', and '6. PERFORMANCE SIGN-OFF'. The first step, '1. UPLOAD DATA', is selected and highlighted with a red dashed box. Below the navigation bar, the main content area is titled '1. Upload Data'. It features two buttons: 'Spreadsheet template' with a download icon and 'Browse for file' with an upward arrow icon. A large light blue area below these buttons contains the text 'Drop files here to upload'.

Step 1: Excel file upload and validation

The screenshot displays the 'Asset Level Input Tool' interface. At the top left is the 'INREV' logo and a back arrow. The top right shows the user 'Vitaliy Tonenchuk' with a dropdown arrow. Below the header is a navigation bar with six radio buttons: '1. UPLOAD DATA' (selected), '2. ERRORS', '3. NEW ASSETS', '4. SOLD ASSETS', '5. WARNINGS', and '6. PERFORMANCE SIGN-OFF'. A left sidebar contains a menu with items: 'DUMMY DEMO', 'Dashboard', 'Upload New Data', 'History of Uploads', 'Performance Review', 'Assets List', 'Portfolio Analysis', 'Manage Organisation', 'Switch Organisation', and 'Asset Tool Admin' (with a dropdown arrow). The main content area is titled '1. Upload Data' and features a green checkmark icon next to the text 'File Upload Success'. Below this, it states 'Your file has been validated:' followed by a list of three items: 'Valid Excel formatted file', 'File has a DataCollectionSheet with expected headings', and 'File has 7 rows of data.'. A blue button labeled 'Proceed to data syntax validation' is positioned at the bottom of the validation message box.

Step 2: Syntax error validation

INREV Asset Level Input Tool Vitaliy Tonenchuk

1. UPLOAD DATA **2. ERRORS** 3. NEWASSETS 4. SOLD ASSETS 5. WARNINGS 6. PERFORMANCE SIGN-OFF

DUMMY DEMO

Dashboard
Upload New Data
History of Uploads
Performance Review
Assets List
Portfolio Analysis
Manage Organisation
Switch Organisation
Asset Tool Admin

2. Errors

Instructions >

Includes errors & changes made online
[Updated file](#)

1 Errors **7** Total periods **7** Total assets uploaded **147** Known company assets

[Proceed](#)

Error List

ASSET ID	ASSET NAME	ERROR MESSAGE	COLLAPSE ALL
23794-212	Asset 2		
PERIOD	DATA FIELD	PROVIDED VALUE	
2017 Q1	Fund style	Core-Plus (invalid)	must be one of Core, Value added, Opportunity.

[Proceed](#)

Step 3: New assets approval

INREV Asset Level Input Tool Vitaliy Tonenchuk

1. UPLOAD DATA 2. ERRORS **3. NEW ASSETS** 4. SOLD ASSETS 5. WARNINGS 6. PERFORMANCE SIGN-OFF

3. New Assets Approval

New Assets

New Assets require review and must be approved or excluded on this screen.

Includes errors & changes made online

Updated file

7
New Assets to review

Proceed to sold assets

<u>New Assets (7)</u>	Approved (0)	Excluded (0)		
		<p>Exclude (7) Approve (7)</p>		
ASSET ID 23794-2121	ASSET NAME Asset 2	CITY Amsterdam	SECTOR Office	Exclude Approve
ASSET ID 23734-2121	ASSET NAME Asset 3	CITY s-Gravenhage	SECTOR Office	Exclude Approve
ASSET ID 51534-1021	ASSET NAME Asset 4	CITY S.Joao Da Madeira	SECTOR Retail	Exclude Approve
ASSET ID 51567-1021	ASSET NAME Asset 5	CITY Vila Nova De Gaia	SECTOR Retail	Exclude Approve
ASSET ID 51255-1021	ASSET NAME Asset 6	CITY Berlin	SECTOR Retail	Exclude Approve
ASSET ID 31220-1021	ASSET NAME Asset 7	CITY Ellesmere Port	SECTOR Leisure	Exclude Approve
ASSET ID 31240-1021	ASSET NAME Asset 8	CITY Leicester	SECTOR Leisure	Exclude Approve

Step 4: Sold assets approval

INREV Asset Level Input Tool Vitaliy Tonenchuk

1. UPLOAD DATA 2. ERRORS 3. NEW ASSETS 4. SOLD ASSETS 5. WARNINGS 6. PERFORMANCE SIGN-OFF

4. Sold Assets Approval

Review

Sold Assets require review and must be approved or excluded on this screen.

Includes errors & changes made online

Updated file

2 Sold assets to review

Proceed to warnings

Sold Assets (2)				Approved (0)	Excluded (0)
				Exclude (2) Approve (2)	
ASSET ID 23794-2121	ASSET NAME Asset 2	CITY Amsterdam	SECTOR Office	Exclude	Approve
ASSET ID 23734-2121	ASSET NAME Asset 3	CITY s-Gravenhage	SECTOR Office	Exclude	Approve

Proceed to warnings

Step 5: Business logic warnings review

NREV < Asset Level Input Tool Vitaly Tonenchuk ▾

1. UPLOAD DATA 2. ERRORS 3. NEW ASSETS 4. SOLD ASSETS 5. WARNINGS 6. PERFORMANCE SIGN-OFF

5. Review Warnings

5 New Assets 7 Total Periods Reported 3 Warnings to Review

Instructions >

Includes errors & changes made online

Updated file 📎 Warnings file 📎 Proceed

Requires Review (3) Approved (0) Excluded (0)

Approve (3)

ASSET ID	ASSET NAME	COUNTRY	SECTOR
23794-2121	Asset 2	Netherlands	Office

REPORTING PERIOD
Quarter: Jan-Mar 2017 Exclude Approve

DATA FIELD	PROVIDED VALUE	WARNING MESSAGE	COMMENT
Final disposition costs	<input checked="" type="checkbox"/>	is a mandatory field and cannot be left blank, since the asset was disposed this period. Ignore this warning if this data is not available.	<input type="text"/>
Net operating income for the period	4947820.00 <input checked="" type="checkbox"/>	is greater than 10% of market value beginning (30984000.0)	<input type="text"/>

Proceed

Step 6: Performance sign-off

INREV
Asset Level Input Tool
Vitaliy Tonenchuk

1. UPLOAD DATA
2. ERRORS
3. NEW ASSETS
4. SOLD ASSETS
5. WARNINGS
6. PERFORMANCE SIGN-OFF

6. Performance Sign-off

7
Pending

0
Excluded

0
Signed-off

Instructions >

Includes errors & changes made online

Updated file
Warnings file
Performance

Pending (7)
Excluded (0)
Pending Manager Sign-Off (0)
Signed-off (0)

Exclude (7)
Sign off (7)

VEHICLE
Diversified Fund (DF1)

REPORTING PERIOD	ASSETS IN THIS UPLOAD	MARKET VALUE	CAPEX	NOI	TOTAL RETURN	INCOME RETURN	CAPITAL RETURN	
2017 Q1	7	361 978 782.00 EUR	0.00	11 962 348.32	3.12%	2.74%	0.37%	
Exclude (7) Sign off (7)								
ASSET		MARKET VALUE	CAPEX	NOI	TOTAL RETURN	INCOME RETURN	CAPITAL RETURN	
23734-2121 Asset 3 Netherlands		0.00 EUR	0.00	1616 258.25	2.74%	2.44%	0.30%	Exclude Sign off
23794-2121 Asset 2 Netherlands		0.00 EUR	0.00	4947 820.00	16.62%	16.57%	0.05%	Exclude Sign off

Asset by asset performance analysis

INREV
Asset Level Input Tool
Vitaliy Tonenchuk

DUMMY DEMO

Dashboard

Upload New Data

History of Uploads

Performance Review

Assets List

Portfolio Analysis

Manage Organisation

Switch Organisation

Asset Tool Admin

13258-13

Asset 1

Street 1 100, Apeldoorn, 7335 LH, Netherlands

[Return to Asset List](#)

ASSET TYPE	ASSET SUB-TYPE	MANAGER / DIRECT INVESTOR	VEHICLE / FUND	OWNERSHIP SHARE	OWNERSHIP TYPE	OWNER OCCUPIED	UNIT OF AREA MEASUREMENT	NET LEASEABLE AREA	NUMBER OF UNITS IN RESIDENTIAL ASSET
Residential	Private Rental Sector/Multi-family	Lion Capital	Diversified Fund	100.0%	Freehold	No	SqM	713.06	10

Acquisition date	n/a
Acquisition price	n/a
Latest market value	1 432 564.48 EUR
Date of latest market value	15 December 2017
One year return	40.53%
Three year return	22.60%
Five year return	n/a

Return of Asset

● Value of Asset (million EUR) — Return of Asset

Periods

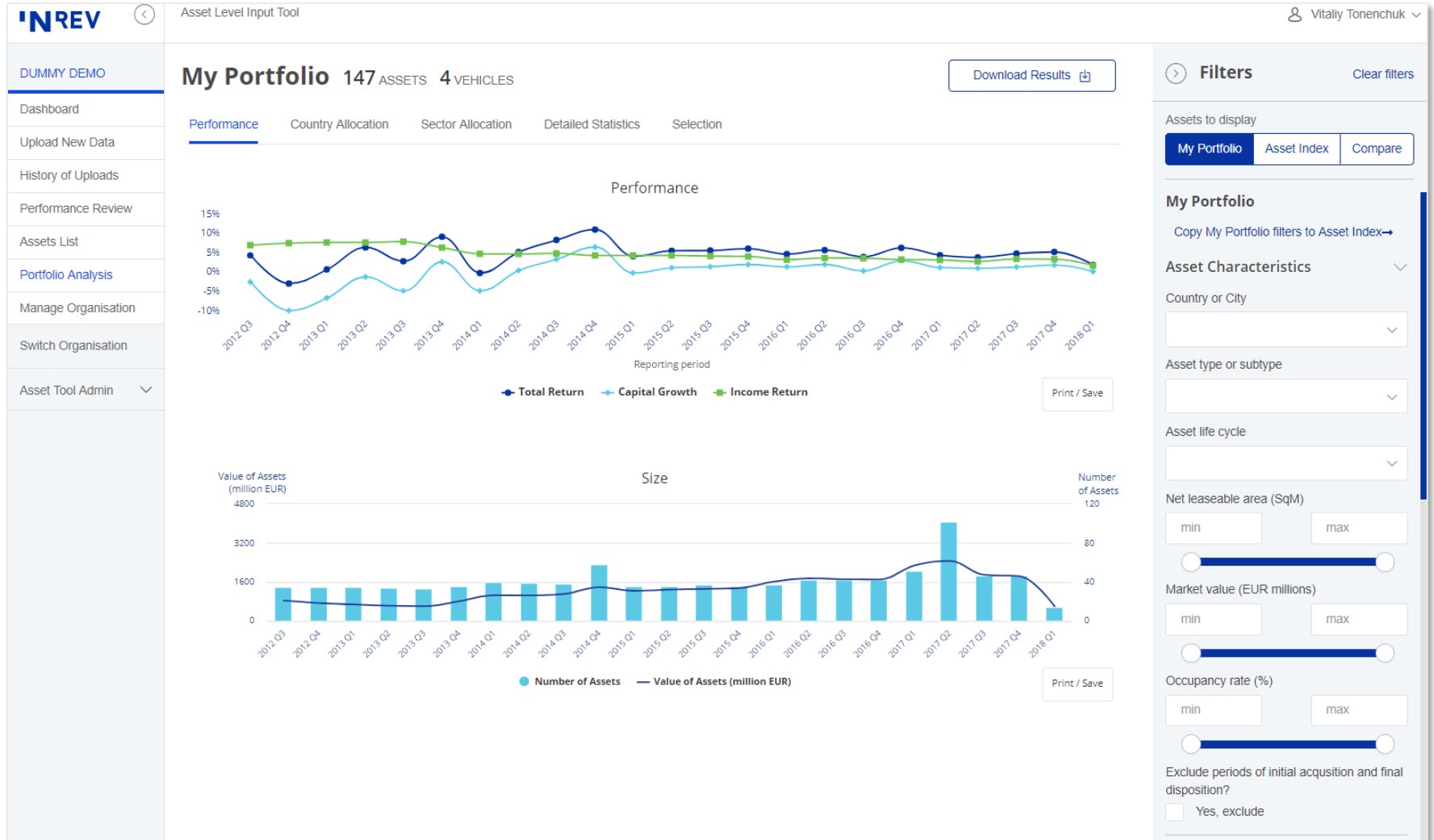
Download all data
For this asset

Download most recent data
For this asset

Download performance over time
For this asset

PERIOD	REPORTING FREQUENCY	ASSET LIFE CYCLE	OCCUPANCY RATE	ENDING MARKET VALUE	NOI	INCOME RETURN	CAPITAL RETURN	TOTAL RETURN	
2017 Q4	Quarterly	Standing investment/operating	100%	1 432 564 EUR Asset sold	8 934.06 EUR	0.73%	26.78%	27.63%	Details...
2017 Q3	Quarterly	Standing investment/operating	100%	1 130 000 EUR	11 192.16 EUR	1.01%	2.63%	3.66%	Details...
2017 Q2	Quarterly	Standing investment/operating	100%	1 101 000 EUR	12 260.63 EUR	1.13%	2.13%	3.28%	Details...
2017 Q1	Quarterly	Standing investment/operating	91%	1 078 000 EUR	10 996.45 EUR	1.04%	1.79%	2.84%	Details...

Portfolio analysis



Portfolio statistics

INREV
Asset Level Input Tool
Vitaliy Tonenchuk

DUMMY DEMO

- Dashboard
- Upload New Data
- History of Uploads
- Performance Review
- Data Gap Report
- Assets List
- Portfolio Analysis
- Manage Organisation
- Switch Organisation
- Asset Tool Admin

My Portfolio 147 ASSETS 4 VEHICLES

Performance Country Allocation Sector Allocation Detailed Statistics Selection

	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4
MY PORTFOLIO														
Total return %	4.33	-2.9	0.72	6.36	2.81	9.08	-0.21	5.17	8.26	10.92	4.09	5.48	5.57	6.04
Capital return %	-2.5	-9.86	-6.58	-1.19	-4.78	2.66	-4.77	0.47	3.33	6.45	-0.2	1.15	1.4	1.97
Income return %	6.94	7.45	7.63	7.61	7.84	6.31	4.71	4.69	4.82	4.29	4.3	4.3	4.13	4.02
Number of assets	35	35	35	34	33	36	40	39	38	58	36	36	37	36
Total market value (million EUR)	835.41	732.48	672.3	619.03	601.63	805.02	1 051.84	1 046.45	1 103.15	1 380.71	1 232.33	1 281.92	1 313.23	1 346.44
Total NOI (million EUR)	58.11	57.61	51.46	48.33	46.7	49.01	49.38	49.27	50.83	50.33	52.01	53.5	53.2	53.68
Total CAPEX (million EUR)	0.54	1.22	9	0.36	0	0.14	0.08	0.45	2.97	1.09	1.28	2.94	4.27	7.8
Total rental income (million EUR)	49	49.53	46.49	43.66	42.22	43.78	44.83	43.94	44.28	45	44.05	44.21	44.24	45.51
Total net leasable area (Sqm)						85 069	170 303	170 303	170 303	219 555	170 303	170 303	170 303	170 303
Avg. Occupancy Rate %	0	0	0	0	0	12.98	19.28	19.77	20.41	24.59	20.85	21.12	20.91	21.26
INDEX VALUE														
Total returns	104.33	101.44	102.16	108.52	111.33	120.41	120.2	125.38	133.63	144.56	148.64	154.12	159.69	165.73
Capital returns	97.5	87.65	81.06	79.87	75.09	77.76	72.99	73.45	76.79	83.24	83.03	84.18	85.58	87.54
Income returns	106.94	114.4	122.03	129.64	137.49	143.79	148.51	153.2	158.02	162.3	166.6	170.9	175.03	179.05

Note: Index values are calculated starting at 100 in 2012 Q2

Filters Clear filters

Assets to display

My Portfolio
Asset Index
Compare

My Portfolio

[Copy My Portfolio filters to Asset Index](#)

Asset Characteristics

Country or City

Asset type or subtype

Asset life cycle

Net leaseable area (Sqm)

Market value (EUR millions)

Occupancy rate (%)

[Download Results](#)

Market analysis

Asset Level Input Tool
Vitaliy Tonenchuk

Allianz Real Estate GmbH

- Dashboard
- History of Uploads
- Performance Review
- Data Gap Report
- Assets List
- Portfolio Analysis
- View Organisation
- Asset Tool Admin

Asset Index 4054 ASSETS 93 VEHICLES

Download Results

Performance
Country Allocation
Sector Allocation
Detailed Statistics
Selection

Performance

Reporting period

● Total Return ● Capital Growth ● Income Return

Print / Save

Size

● Number of Assets ● Value of Assets (million EUR)

Print / Save

Filters

Clear filters

Assets to display

My Portfolio
Asset Index
Compare

Asset Index

← Copy Asset Index filters to My Portfolio

Exclude my assets

Yes, exclude

Asset Characteristics

Country or City

Asset type or subtype

Asset life cycle

Net leaseable area (SqM)

min

max

Market value (EUR millions)

min

max

Occupancy rate (%)

min

max

Portfolio market performance

INREV
Asset Level Input Tool
Vitaliy Tonenchuk

DUMMY DEMO

- Dashboard
- Upload New Data
- History of Uploads
- Performance Review
- Data Gap Report
- Assets List
- Portfolio Analysis
- Manage Organisation
- Switch Organisation
- Asset Tool Admin

My Portfolio 144 ASSETS 5 VEHICLES

Performance
Country Allocation
Sector Allocation
Detailed Statistics
Select

Performance

Reporting period

- My Portfolio: Total Return
- ◆ Asset Index: Total Return
- My Portfolio: Capital Growth
- ▲ Asset Index: Capital Growth
- ▾ My Portfolio: Income Return
- ◀ Asset Index: Income Return

Print / Save

Size

- Number of Assets
- Value of Assets (million EUR)

Print / Save

Filters

Clear filters

Assets to display

My Portfolio
Asset Index
Compare

My Portfolio

Copy My Portfolio filters to Asset Index →

Asset Characteristics ▾

Country or City

Asset type or subtype

Asset life cycle

Net leaseable area (SqM) min max

Market value (EUR millions) min max

Occupancy rate (%) min max

Asset Index

← Copy Asset Index filters to My Portfolio

Exclude my assets Yes, exclude

Asset Characteristics ▾

Country or City

Asset type or subtype

Asset life cycle

Net leaseable area (SqM) min max

Market value (EUR millions) min max

WHAT WE ASK FOR

Join this industry initiative



What we ask for

EUR 7,500
annual fee

Historical data
starting from
Q4 2013

3 years of
data going
forwards

Data delivery 8 weeks after quarter end

Call for data

2 weeks after
quarter end

Member data delivery and validation

Up to 8 weeks after quarter end

INREV validation

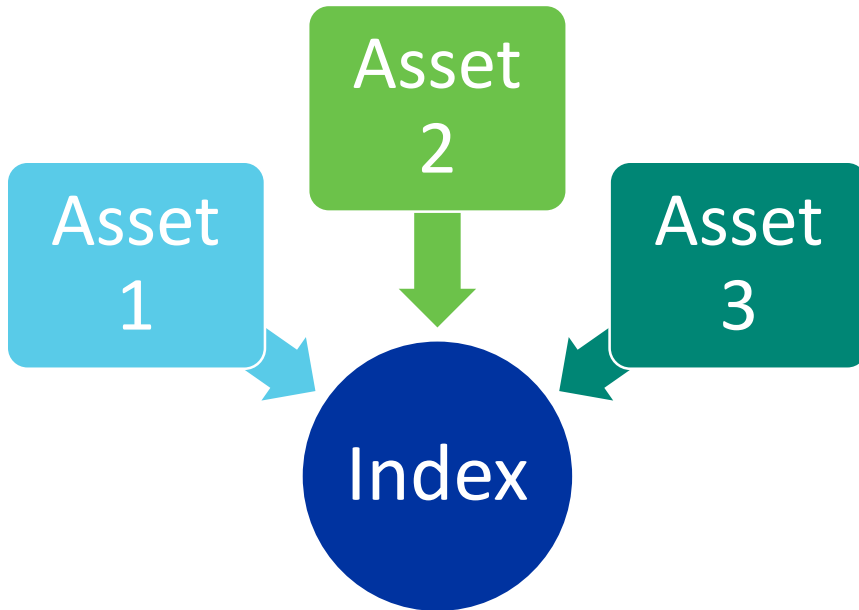
Up to 9 weeks after quarter end

Publication of all
reports and
update of Online
Analysis tool

10 weeks after
quarter end

10 week process to publish the Asset Level Index

Confidentiality rules



An Index can only be created when the sample size meets the following requirements:

- At least 3 assets from at least 3 different data contributors
- A single asset not account for more than 60% of the value of the sample

Join the club

Standard Life Aberdeen

AEW

ALTERA
VASTGOED NV

AMVEST

ASR
vastgoed

AXA Real Estate
An AXA Investment Managers Company

Bouwinvest

CATELLA

CBRE
GLOBAL INVESTORS

ROCKSPRING

Hines

Invesco

syntrus | achmea
real estate & finance

CBRE
GLOBAL INVESTORS

DWS

NREP

Schroders

I PUT

LaSalle
INVESTMENT MANAGEMENT

RIO

Legal & General
INVESTMENT MANAGEMENT

M&G
INVESTMENTS

PATRIZIA

PROLOGIS



PGIM

UBS

NN

SONAE
SIERRA

Allianz

PGGM

TH Real Estate

INREV

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