

ERM Quality Management

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Producers meeting Amsterdam – September 2016



Many different validation tools

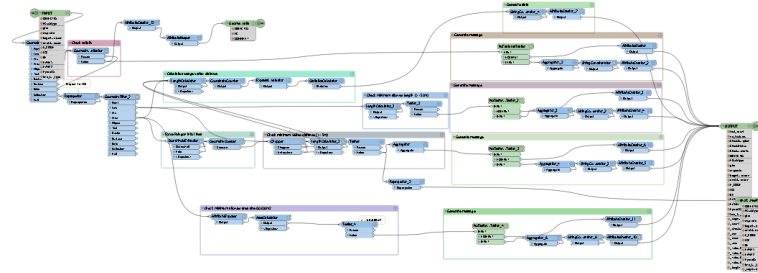
ArcGIS Data Reviewer

C# Tools

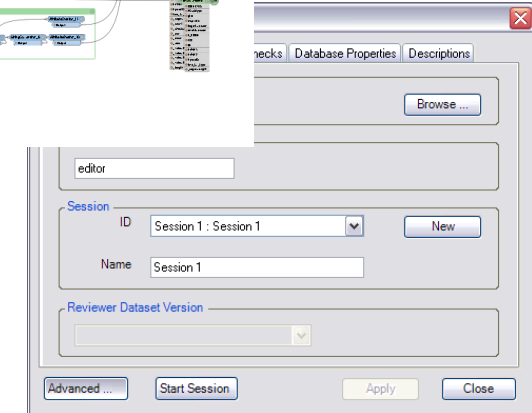
ExM Python tools

FME

National checks



Problems: licenses, maintenance, consistency



Idea

One validation tool:

Used by producers, RCs and PMT

Objectives:

ArcGIS >10.1

Easy to use

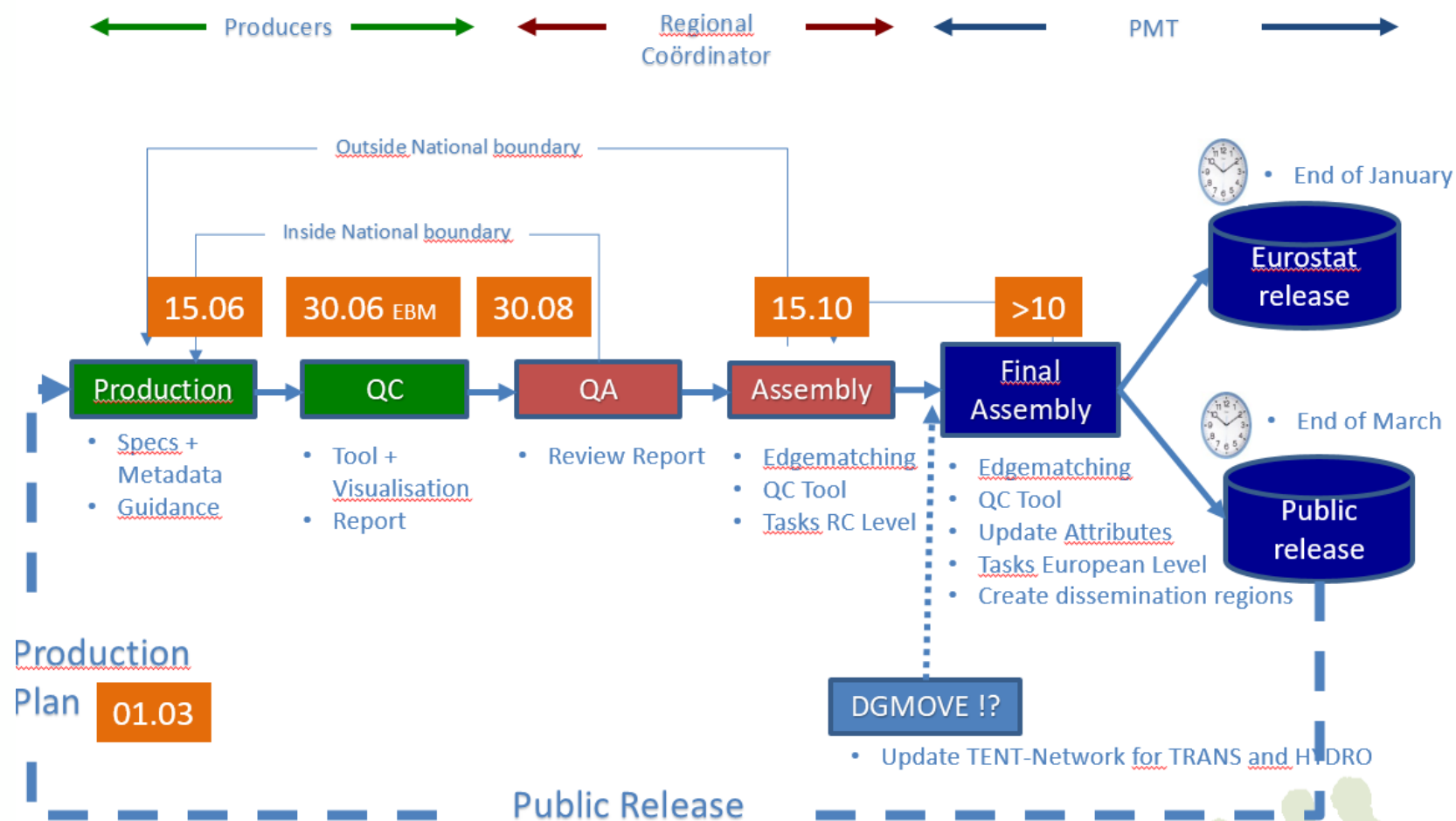
Simple documentation

Flexible & adjustable

Spatial display of results

Raise quality of ERM data

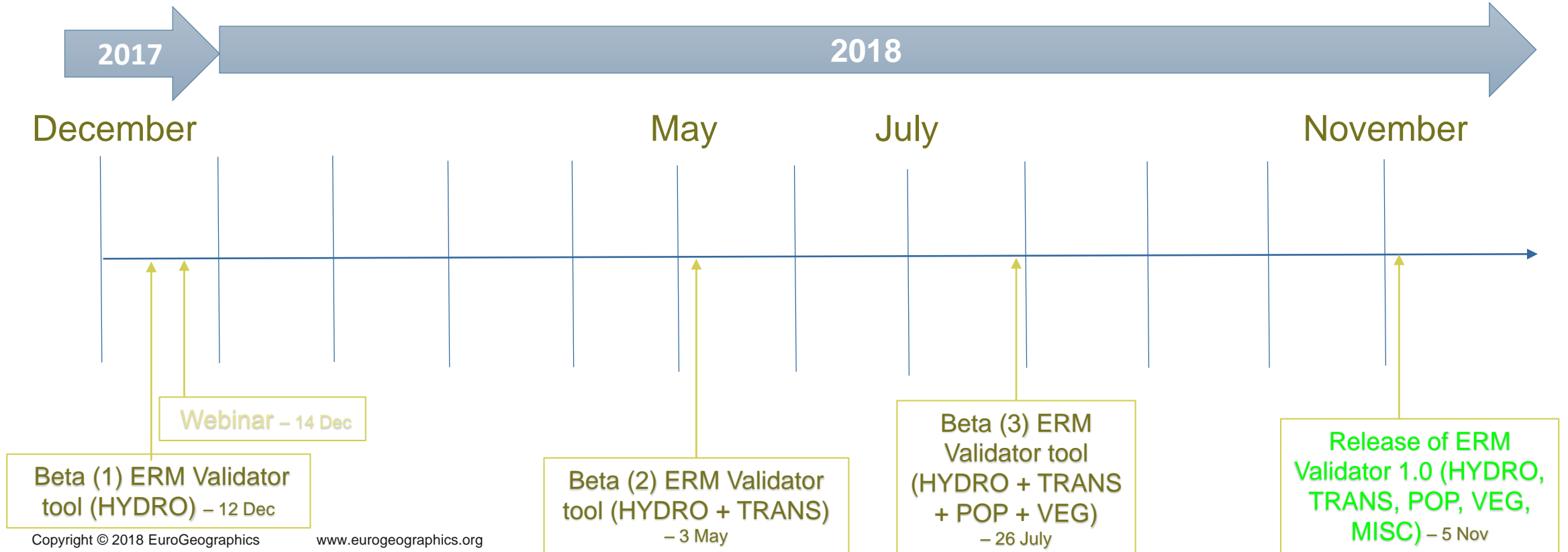
Approach



Producers Meeting Lisbon - November 2017



Releases



Feedback

Most countries

22 responses via GoogleForms survey

+/- 100 emails (producers/RCS)

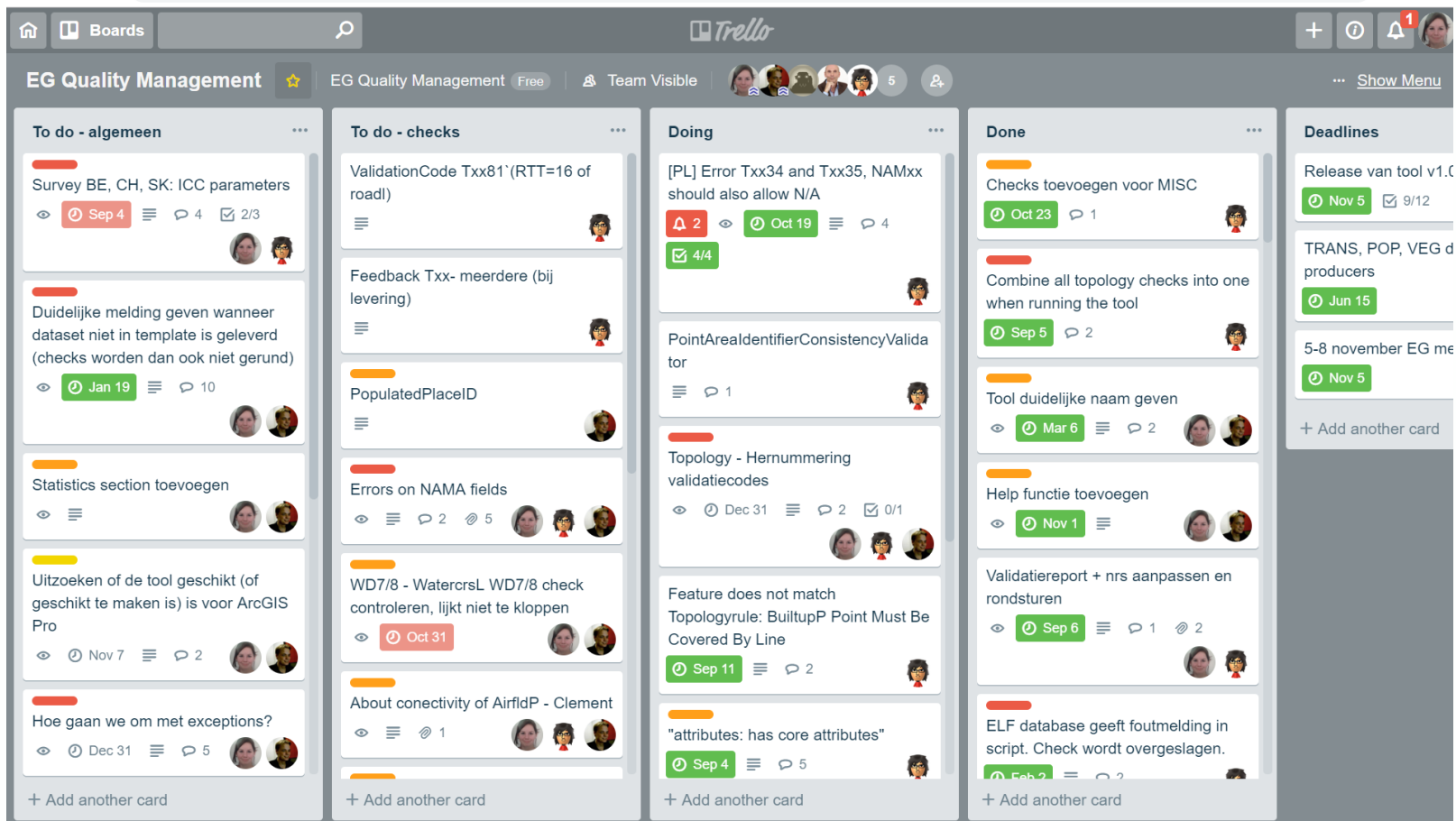
Face-to-face at Producer Meeting

ftp-BKG

Thank you so much!!



Backlog



The screenshot displays a Trello board for 'EG Quality Management'. The board is organized into five columns: 'To do - algemeen', 'To do - checks', 'Doing', 'Done', and 'Deadlines'. Each column contains several task cards with details such as titles, due dates, and assignees.

To do - algemeen

- Survey BE, CH, SK: ICC parameters (Due: Sep 4, 4 comments, 2/3 completed)
- Duidelijke melding geven wanneer dataset niet in template is geleverd (checks worden dan ook niet gerund) (Due: Jan 19, 10 comments)
- Statistics section toevoegen
- Uitzoeken of de tool geschikt (of geschikt te maken is) is voor ArcGIS Pro (Due: Nov 7, 2 comments)
- Hoe gaan we om met exceptions? (Due: Dec 31, 5 comments)

To do - checks

- ValidationCode Txx81' (RTT=16 of roadl)
- Feedback Txx- meerdere (bij levering)
- PopulatedPlaceID
- Errors on NAMA fields (2 comments, 5 attachments)
- WD7/8 - WatercrsL WD7/8 check controleren, lijkt niet te kloppen (Due: Oct 31)
- About conectivity of AirfidP - Clement (1 attachment)

Doing

- [PL] Error Txx34 and Txx35, NAMxx should also allow N/A (2 alerts, Due: Oct 19, 4 comments, 4/4 completed)
- PointAreaIdentifierConsistencyValidator (1 comment)
- Topology - Hernummering validatiecodes (Due: Dec 31, 2 comments, 0/1 completed)
- Feature does not match Topologyrule: BuiltupP Point Must Be Covered By Line (Due: Sep 11, 2 comments)
- "attributes: has core attributes" (Due: Sep 4, 5 comments)

Done

- Checks toevoegen voor MISC (Due: Oct 23, 1 comment)
- Combine all topology checks into one when running the tool (Due: Sep 5, 2 comments)
- Tool duidelijke naam geven (Due: Mar 6, 2 comments)
- Help functie toevoegen (Due: Nov 1)
- Validatiereport + nrs aanpassen en rondsturen (Due: Sep 6, 1 comment, 2 attachments)
- ELF database geeft foutmelding in script. Check wordt overgeslagen. (Due: Feb 2, 2 comments)

Deadlines

- Release van tool v1.0 (Due: Nov 5, 9/12 completed)
- TRANS, POP, VEG d producers (Due: Jun 15)
- 5-8 november EG me (Due: Nov 5)

+ Add another card

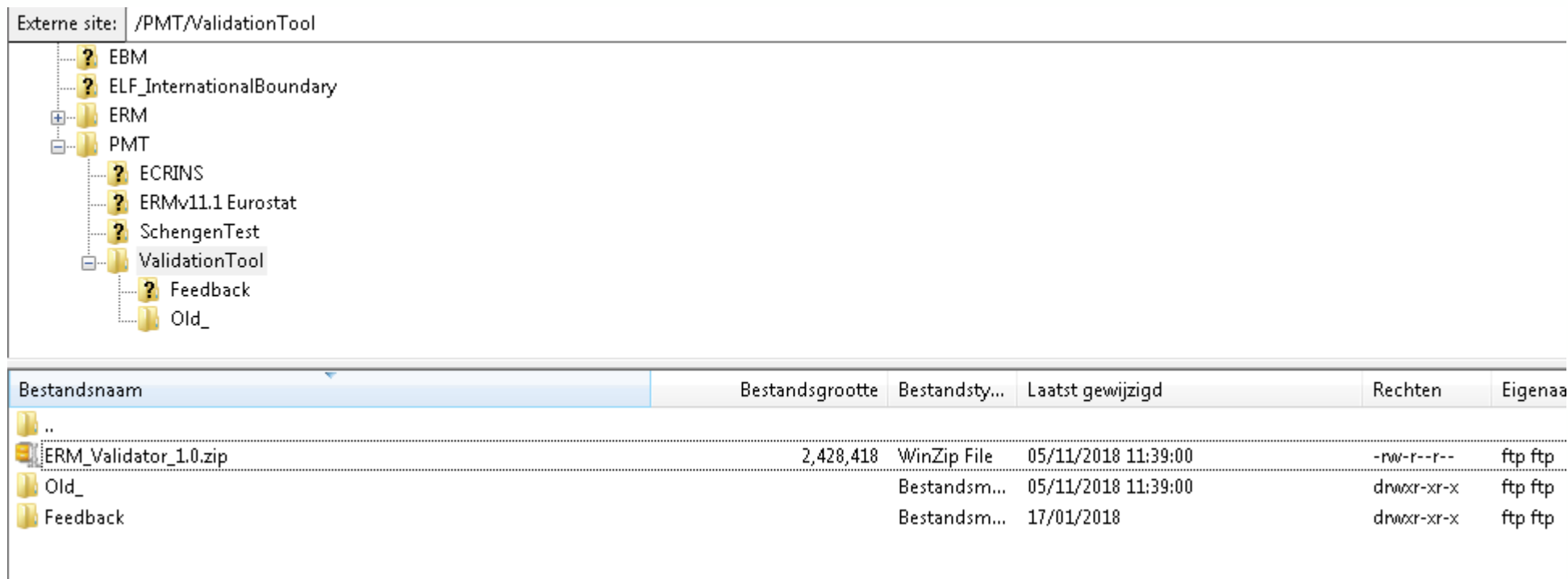
Producers meeting Zagreb – November 2018



Release *ERM Validator 1.0*

BKG-ftp server

Externe site: /PMT/ValidationTool



Bestandsnaam	Bestandsgrootte	Bestandsty...	Laatst gewijzigd	Rechten	Eigenaa
..					
ERM_Validator_1.0.zip	2,428,418	WinZip File	05/11/2018 11:39:00	-rw-r--r--	ftp ftp
Old_		Bestandsm...	05/11/2018 11:39:00	drwxr-xr-x	ftp ftp
Feedback		Bestandsm...	17/01/2018	drwxr-xr-x	ftp ftp

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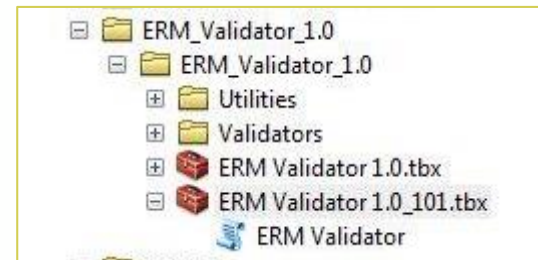
No additional restrictions — You may not apply legal terms or [technological measures](#) that legally restrict others from doing anything the license permits.

Zip-file

Excel report

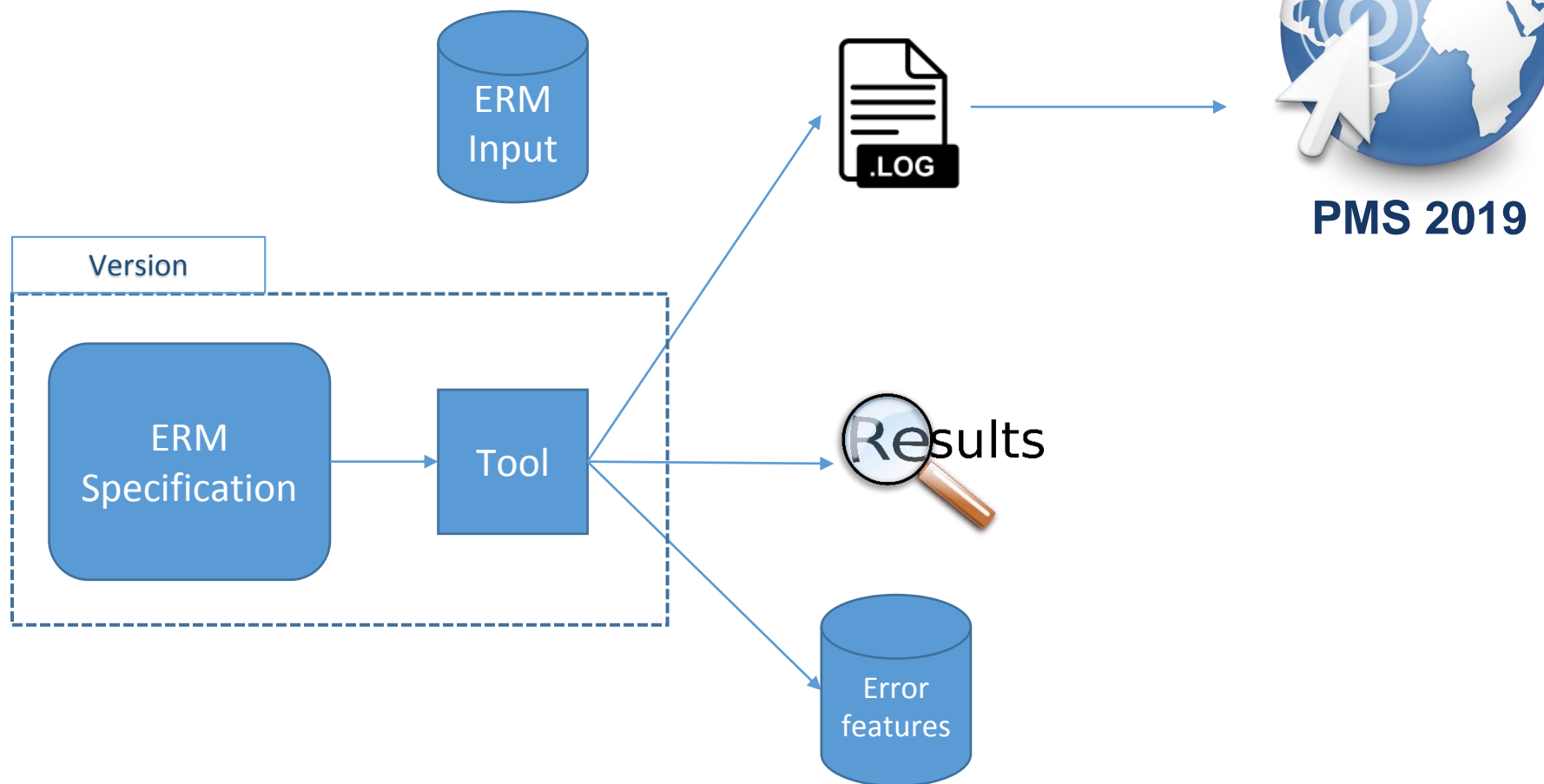
generic	test code	test	implemented in the tool?
General Data Delivery	H001	feature classes AQUEDCTL, COASTA, COASTL, DAML, DAMC, LAKERESA, LANDICEA, ISLANDA, SEAA, SEASTRTL, SPRINGP, SPRINGC, SWAMPA, RAPIDSL, RAPIDSC, WATRCRSA, WATCRSL, WELLP	<input checked="" type="checkbox"/>
	H002	coordinate system (GEOGRAPHIC, decimal degrees)	<input checked="" type="checkbox"/>
	H003	map extent ($-25^{\circ} < \text{Lambda} < 40^{\circ}$ and $30^{\circ} < \text{Phi} < 80^{\circ}$)	<input checked="" type="checkbox"/>
	H004	mandatory feature classes COASTA, COASTL, DAML, DAMC, LAKERESA, LANDICEA(BJ030), ISLANDA, SEAA, SWAMPA, WATRCRSA, WATCRSL must have features	<input checked="" type="checkbox"/>
	H005	Empty or missing tables	<input checked="" type="checkbox"/>
Geometric resolution (Tested in projection Lambert_Conformal_Conic_ WGS84)	H006	Valid Geometry	<input checked="" type="checkbox"/>
	H007	minimum allowed area size: 60 000m ²	<input checked="" type="checkbox"/>
	H008	minimum allowed distance between vertices of line and area features: 5m	<input checked="" type="checkbox"/>
	H009	minimum allowed length of a line segment: 50m	<input checked="" type="checkbox"/>
	H010	statistics of average distance between vertices	<input type="checkbox"/>
Selection criteria (Tested in projection Lambert_Conformal_Conic_ WGS84)	H011	The number of LAKERESA less than 400 000m ²	<input checked="" type="checkbox"/>
	H012	The number of WATRCRSA less than 200 000m ²	<input checked="" type="checkbox"/>
	H013	The number of SWAMPA, LANDICEA less than 400 000m ²	<input checked="" type="checkbox"/>
	H014	The number of ISLANDA less than 400 000m ²	<input checked="" type="checkbox"/>
	H015	The number of dams and locks less than 125m	<input checked="" type="checkbox"/>
	H016	The number of dangling AQUEDCTL, WATCRSL shorter than 1600m	<input checked="" type="checkbox"/>
	H017	The number of shoreline construction (SEASTRTL)	<input checked="" type="checkbox"/>

Tool



Naam	Gewijzigd op	Type	Grootte
Utilities	24-10-2017 14:13	Bestandsmap	
Validators	24-10-2017 14:13	Bestandsmap	
BNDValidations.py	10-10-2017 11:27	Python File	1 kB
BNDValidations.pyc	24-10-2017 14:13	Compiled Python ...	1 kB
ERM Validation_101.tbx	1-11-2017 10:33	ArcGIS Toolbox	12 kB
EuropeanLevelValidations.py	10-10-2017 11:31	Python File	1 kB
EuropeanLevelValidations.pyc	24-10-2017 14:13	Compiled Python ...	1 kB
GenericValidations.py	10-10-2017 12:10	Python File	2 kB
GenericValidations.pyc	24-10-2017 14:13	Compiled Python ...	2 kB
Hydro_Topology.json	9-10-2017 20:08	JSON-bestand	16 kB
HydroValidations.py	10-10-2017 11:03	Python File	19 kB
HydroValidations.pyc	24-10-2017 14:13	Compiled Python ...	11 kB
main.py	10-10-2017 20:29	Python File	8 kB
MiscValidations.py	10-10-2017 11:28	Python File	1 kB
MiscValidations.pyc	24-10-2017 14:13	Compiled Python ...	1 kB
NameValidations.py	10-10-2017 11:29	Python File	1 kB
NameValidations.pyc	24-10-2017 14:13	Compiled Python ...	1 kB
POIValidations.py	10-10-2017 11:31	Python File	1 kB
POIValidations.pyc	24-10-2017 14:13	Compiled Python ...	1 kB
PopValidations.py	10-10-2017 11:36	Python File	1 kB
PopValidations.pyc	24-10-2017 14:13	Compiled Python ...	1 kB
RunValidations.bat	10-10-2017 20:36	Windows-batchbe...	1 kB
TransValidations.py	10-10-2017 11:30	Python File	1 kB
TransValidations.pyc	24-10-2017 14:13	Compiled Python ...	1 kB
VegValidations.py	10-10-2017 11:30	Python File	1 kB
VegValidations.pyc	24-10-2017 14:13	Compiled Python ...	1 kB

Scheme tool process



Framework

25 validators

```

projectedDataset = ValidationUtilities.ProjectDataset(params["SourceDatabase"], "EuroRegionalMap", params["ResultDatabase"])

arcpy.env.workspace = projectedDataset#params["SourceDatabase"]
ValidationUtilities.AddOrigIDField()


























#
resultDatabase = params["ResultDatabase"]
resultFolder = params["ResultFolder"]
runTime = params["RunTime"]

results = []
results.extend(FeatureCountValidator.Run("H001", "Aquadctl", 1))
results.extend(AllowedAttributeValidator.Run("H002", "WatrcrsA", "SN", "5020,5030"))
results.extend(AllowedAttributeValidator.Run("H002", "WatrcrsA", "ICC", "'SK'"))
results.extend(AllowedAttributeValidator.Run("H002", "SpringP", "SWT", "999"))
results.extend(AttributeNotNullValidator.Run("H003", "WatrcrsA", "ICC"))
results.extend(AttributeNotNullValidator.Run("H003", "WatrcrsL", "SN"))

results.extend(ExtentValidator.Run("H004", "WatrcrsA", -25, 30, 40, 80))
results.extend(MinimumAreaValidator.Run("H005", "WatrcrsA", 60000))
results.extend(MinimumLengthValidator.Run("H006", "WatrcrsL", 50))
results.extend(MinimumVertexDistanceValidator.Run("H007", "WatrcrsA", 5))

results.extend(AxisValidator.Run("H008", "WatrcrsL", "LOC=984", ["LakeresA", "WatrcrsA", "SwampA"], mustBeInside=True))
#results.extend(AxisValidator.Run("H008", "WatrcrsL", "LOC <> 984 AND LOC <> 25 AND LOC <> 40", ["LakeresA", "WatrcrsA"], mustBeInside=False))

```

	AllowedAttributeValidator.py	11/09/2018 15:10	Python File	2 kB
	AttributeNotNullValidator.py	11/09/2018 15:10	Python File	2 kB
	AxesValidator.py	11/09/2018 15:10	Python File	4 kB
	ClassTableConsistencyValidator.py	11/09/2018 15:10	Python File	3 kB
	CompletionRateValidator.py	11/09/2018 15:10	Python File	4 kB
	ExtentValidator.py	11/09/2018 15:10	Python File	2 kB
	FeatureCountValidator.py	11/09/2018 15:10	Python File	2 kB
	GeodatabaseTemplateValidator.py	11/09/2018 15:10	Python File	11 kB
	ICCVValidator.py	11/09/2018 15:10	Python File	2 kB
	MinimumAreaValidator.py	11/09/2018 15:10	Python File	2 kB
	MinimumLengthValidator.py	11/09/2018 15:10	Python File	2 kB
	MinimumVertexDistanceValidator.py	11/09/2018 15:10	Python File	4 kB
	MustBeOutsideValidator.py	11/09/2018 15:10	Python File	4 kB
	MustBeSinglePartValidator.py	11/09/2018 15:10	Python File	2 kB
	NameFieldValidator.py	11/09/2018 15:10	Python File	3 kB
	PointAreaIdentifierConsistencyValidator.py	11/09/2018 15:10	Python File	4 kB
	ProximityValidator.py	14/09/2018 10:57	Python File	3 kB
	QueryValidator.py	11/09/2018 15:10	Python File	2 kB
	RegexValidator.py	11/09/2018 15:10	Python File	3 kB
	TableClassConsistencyValidator.py	11/09/2018 15:10	Python File	3 kB
	TopologyValidator.py	11/09/2018 15:10	Python File	16 kB
	TransSpecificChecks.py	11/09/2018 15:10	Python File	20 kB
	ValidationUtilities.py	31/10/2018 11:36	Python File	11 kB
	ValidCharacterValidator.py	11/09/2018 15:10	Python File	3 kB
	ValidGeometryValidator.py	11/09/2018 15:10	Python File	2 kB

HYDRO, MISC, POP, TRANS, VEG,
~~POI, NAME, BND~~

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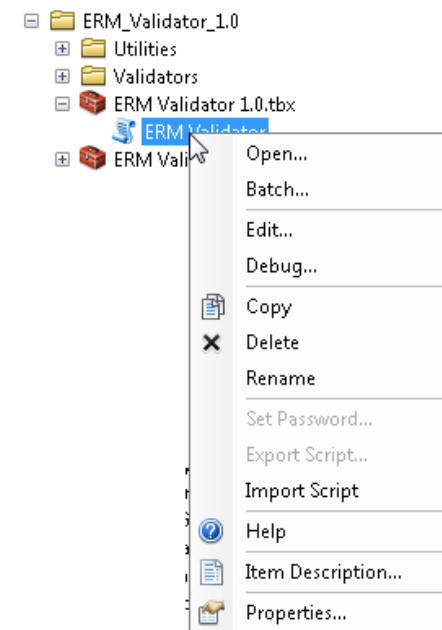
To get started

Download the latest version on BKG ftp server.

Dataset in ERM template format !

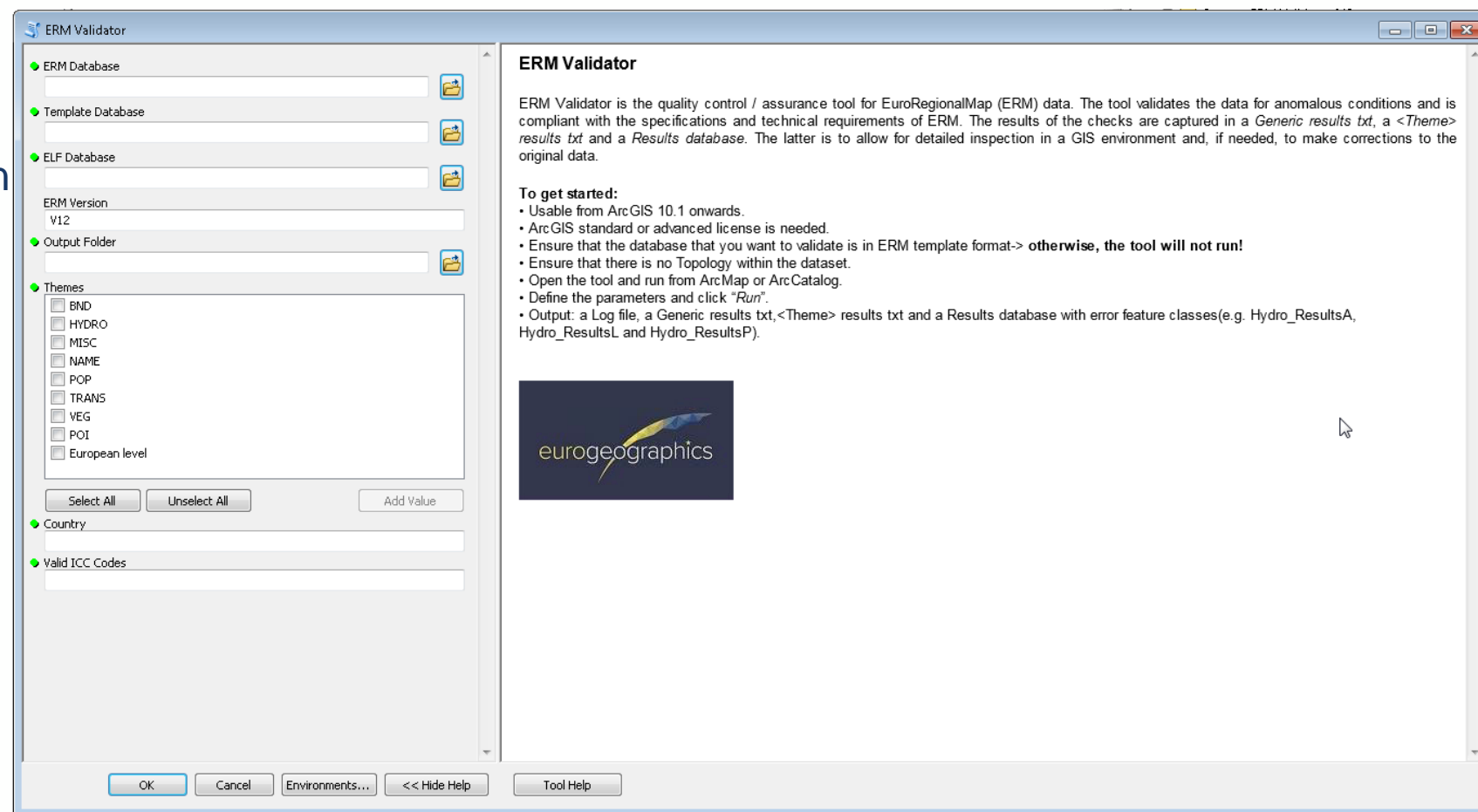
No topology in dataset allowed.

Open the tool from ArcMap or ArcCatalog



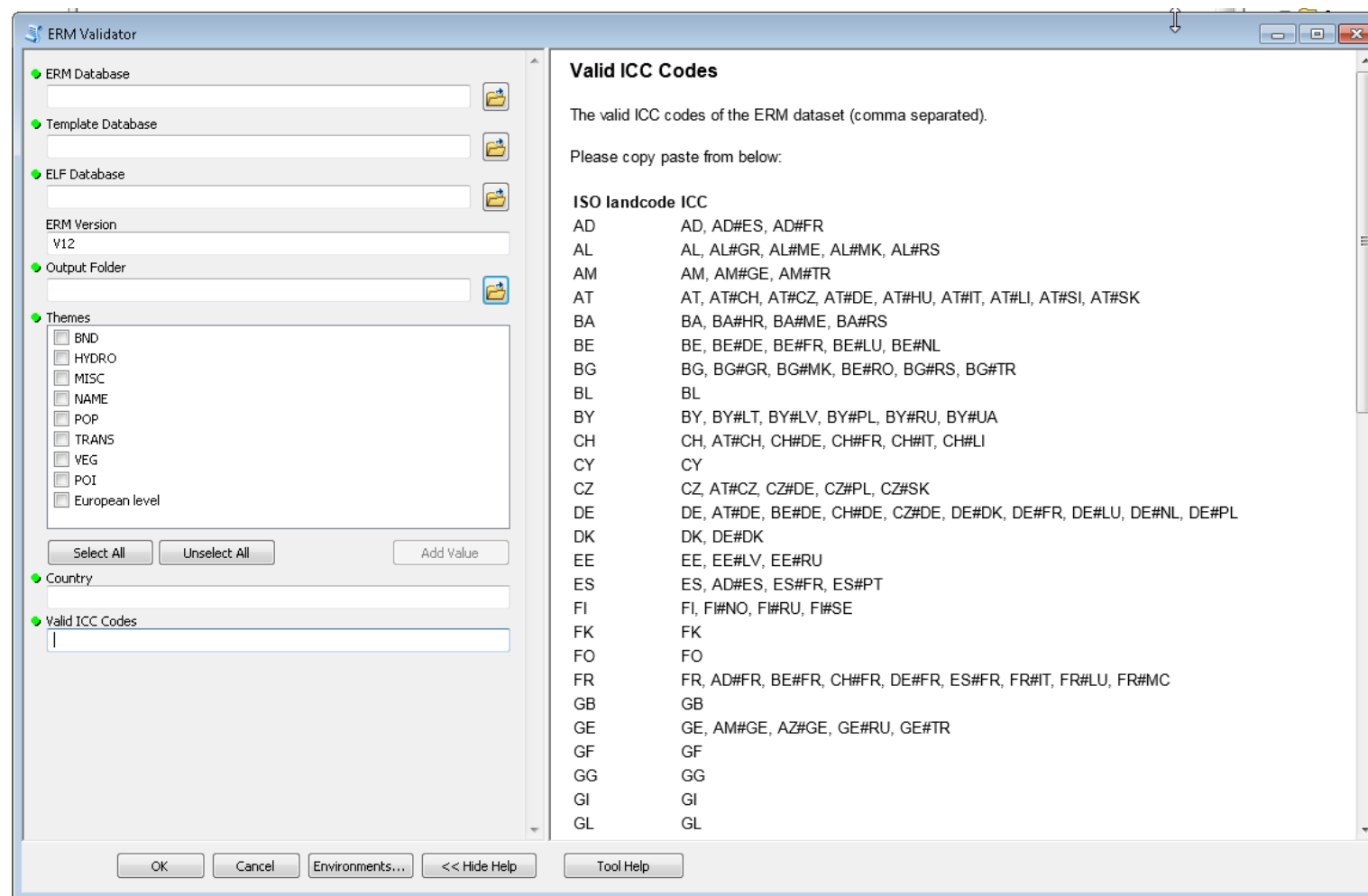
Parameters

Information added to 'Help' section



ICC

For now: please copy – paste the valid ICC codes from the ‘Help’ menu



Results










Runtime

Log file

Generic Results txt file

<theme> Results txt file

Results database

 Results_20181101-085759.gdb	05/11/2018 09:21	Bestandsmap
 ERMValidator_20181101-103251.log	01/11/2018 11:12	Tekstdocument
 GENERIC_Results_20181101-103251.txt	01/11/2018 10:35	Tekstdocument
 Hydro_Results_20181101-103251.txt	01/11/2018 10:58	Tekstdocument
 Misc_Results_20181101-103251.txt	01/11/2018 11:00	Tekstdocument
 POP_Results_20181101-103251.txt	01/11/2018 11:01	Tekstdocument
 Topo_Results_20181101-103251.txt	01/11/2018 10:52	Tekstdocument
 Trans_Results_20181101-103251.txt	01/11/2018 11:12	Tekstdocument
 Veg_Results_20181101-103251.txt	01/11/2018 11:12	Tekstdocument

Log (.txt)



```

ERMValidator_20171110-170048.log - Kladblok
Bestand  Bewerken  Opmaak  Beeld  Help
20171110-17:00:48 MainProcess MainThread INFO Logging created, logfile: H:\output\ERMvalidator_20171110-170048.log
20171110-17:00:48 MainProcess MainThread INFO Start ERM Validator version: 20171010.01
20171110-17:00:48 MainProcess MainThread INFO Start with parameters:
20171110-17:00:48 MainProcess MainThread INFO Input database : H:\ERM_v11_ETRS89_R06_2017_edits_10oct2017.gdb
20171110-17:00:48 MainProcess MainThread INFO Template database: L:\GMA\Projecten\EuroGeographics\ERM\Templates\Database\ERM_v11_template.gdb
20171110-17:00:49 MainProcess MainThread INFO ERM Version : v11
20171110-17:00:49 MainProcess MainThread INFO Result folder : H:\output
20171110-17:00:49 MainProcess MainThread INFO Themes : HYDRO
20171110-17:00:49 MainProcess MainThread INFO Country : The Netherlands
20171110-17:00:49 MainProcess MainThread INFO Valid ICC Codes : NL, BE#NL, DE#NL
20171110-17:00:49 MainProcess MainThread DEBUG ArcGIS Licence : ArcInfo
20171110-17:00:49 MainProcess MainThread DEBUG ArcGIS Version : 10.5
20171110-17:00:49 MainProcess MainThread INFO =====
20171110-17:00:49 MainProcess MainThread INFO Creating results database: H:\output\Results_20171110-170049.gdb
20171110-17:00:49 MainProcess MainThread VERBOSE Utilities::StartTimer::CreateDB
20171110-17:01:00 MainProcess MainThread VERBOSE Utilities::StopTimer::CreateDB
20171110-17:01:00 MainProcess MainThread DEBUG Database created in 00h:00m:11s
20171110-17:01:00 MainProcess MainThread INFO =====
20171110-17:01:00 MainProcess MainThread INFO Starting Generic validations
20171110-17:01:00 MainProcess MainThread VERBOSE Utilities::StartTimer::GenericValidations
20171110-17:01:00 MainProcess MainThread INFO Running GeodatabaseTemplateValidator
20171110-17:01:31 MainProcess MainThread DEBUG Checking H:\ERM_v11_ETRS89_R06_2017_edits_10oct2017.gdb\EuroRegionalMap\wellp
20171110-17:01:52 MainProcess MainThread VERBOSE Executing: GetCount H:\ERM_v11_ETRS89_R06_2017_edits_10oct2017.gdb\EuroRegionalMap\wellp
20171110-17:01:52 MainProcess MainThread VERBOSE Start Time: Fri Nov 10 17:01:49 2017
20171110-17:01:52 MainProcess MainThread VERBOSE Row Count = 0
20171110-17:01:52 MainProcess MainThread VERBOSE Succeeded at Fri Nov 10 17:01:52 2017 (Elapsed Time: 2.28 seconds)
20171110-17:01:52 MainProcess MainThread VERBOSE ValidationUtilities::CreateResult: count COUNT wellp None 0 records
20171110-17:01:52 MainProcess MainThread VERBOSE Checking datatype
20171110-17:01:52 MainProcess MainThread VERBOSE Checking geometrytype
20171110-17:01:52 MainProcess MainThread VERBOSE Checking Fields
20171110-17:01:52 MainProcess MainThread VERBOSE Checking OBJECTID
20171110-17:01:52 MainProcess MainThread VERBOSE Checking Shape
20171110-17:01:52 MainProcess MainThread VERBOSE Checking FCSUBTYPE
20171110-17:01:52 MainProcess MainThread VERBOSE Checking INSPIREID
20171110-17:01:52 MainProcess MainThread VERBOSE Checking BEGINLIFESPANVERSION
20171110-17:01:52 MainProcess MainThread VERBOSE Checking F_CODE
20171110-17:01:52 MainProcess MainThread VERBOSE Checking ICC
20171110-17:01:52 MainProcess MainThread VERBOSE Checking SN
20171110-17:01:52 MainProcess MainThread DEBUG Checking H:\ERM_v11_ETRS89_R06_2017_edits_10oct2017.gdb\EuroRegionalMap\WatrCrSL
20171110-17:02:10 MainProcess MainThread VERBOSE Executing: GetCount H:\ERM_v11_ETRS89_R06_2017_edits_10oct2017.gdb\EuroRegionalMap\WatrCrSL
20171110-17:02:10 MainProcess MainThread VERBOSE Start Time: Fri Nov 10 17:02:07 2017
20171110-17:02:10 MainProcess MainThread VERBOSE Row Count = 22354
20171110-17:02:10 MainProcess MainThread VERBOSE Succeeded at Fri Nov 10 17:02:10 2017 (Elapsed Time: 2.92 seconds)
20171110-17:02:10 MainProcess MainThread VERBOSE ValidationUtilities::CreateResult: count COUNT WatCrSL None 22354 records
20171110-17:02:10 MainProcess MainThread VERBOSE Checking datatype
20171110-17:02:10 MainProcess MainThread VERBOSE Checking geometrytype
20171110-17:02:10 MainProcess MainThread VERBOSE Checking Fields

```

Generic results (.txt)



```

GENERIC_Results_20171110-170049.txt - Kladblok
Bestand  Bewerken  Opmaak  Beeld  Help
=====
ERM QA Condition report
Validationdate + time : 20171110-170049
Tool version         : 20171010.01
Country Name         : The Netherlands
User (windows login) : kuijem
ERM version          : V11
Theme                : GENERIC
Database name         : H:\ERM_v11_ETRS89_R06_2017_edits_10oct2017.gdb
Template database name: L:\GMA\Projecten\EuroGeographics\ERM\Templates\Database\ERM_v11_template.gdb
=====
==COUNT
=====
== count == 71 records found
=====
| validationCode | FeatureClass | objectID | Message
=====
count           | wellP        | None     | 0 records
count           | WatcrsL      | None     | 22354 records
count           | WatcrsA      | None     | 187 records
count           | Vega         | None     | 1419 records
count           | UrbanP       | None     | 0 records
count           | TowerP       | None     | 575 records
count           | SwampA       | None     | 33 records
count           | SpringP      | None     | 0 records
count           | SpringC      | None     | 0 records
count           | SoilA        | None     | 52 records
count           | ShoreL       | None     | 0 records
count           | SeastrL      | None     | 1079 records
count           | SeaA         | None     | 2 records
count           | RunwayL      | None     | 32 records
count           | RoadL        | None     | 63713 records
count           | RestC        | None     | 801 records
count           | RapidsL      | None     | 0 records
count           | RapidsC      | None     | 0 records
count           | RailrdL      | None     | 3363 records
count           | RailrdC      | None     | 436 records
count           | PowerP       | None     | 22 records
count           | PowerL       | None     | 353 records
count           | PolbndL      | None     | 1388 records
count           | PolbndA      | None     | 488 records
count           | PhysP        | None     | 0 records

```

Theme specific results (.txt)

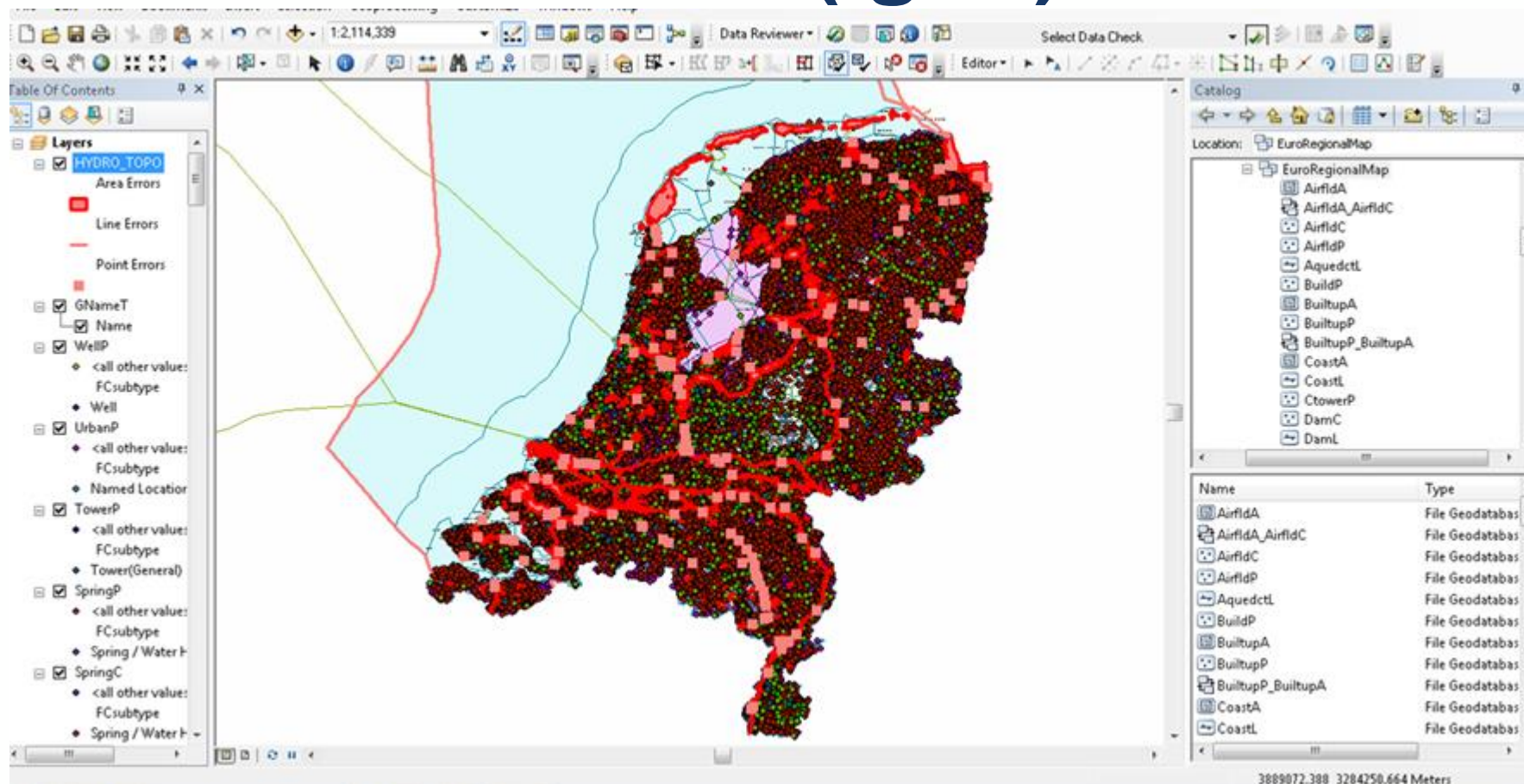


```
Hydro_Results_20171110-170049.txt - Kladblok
Bestand  Bewerken  Opmaak  Beeld  Help
=====
ERM QA Condition report
Validationdate + time : 20171110-170049
Tool version          : 20171010.01

Country Name          : The Netherlands
User (windows login)  : kuijem

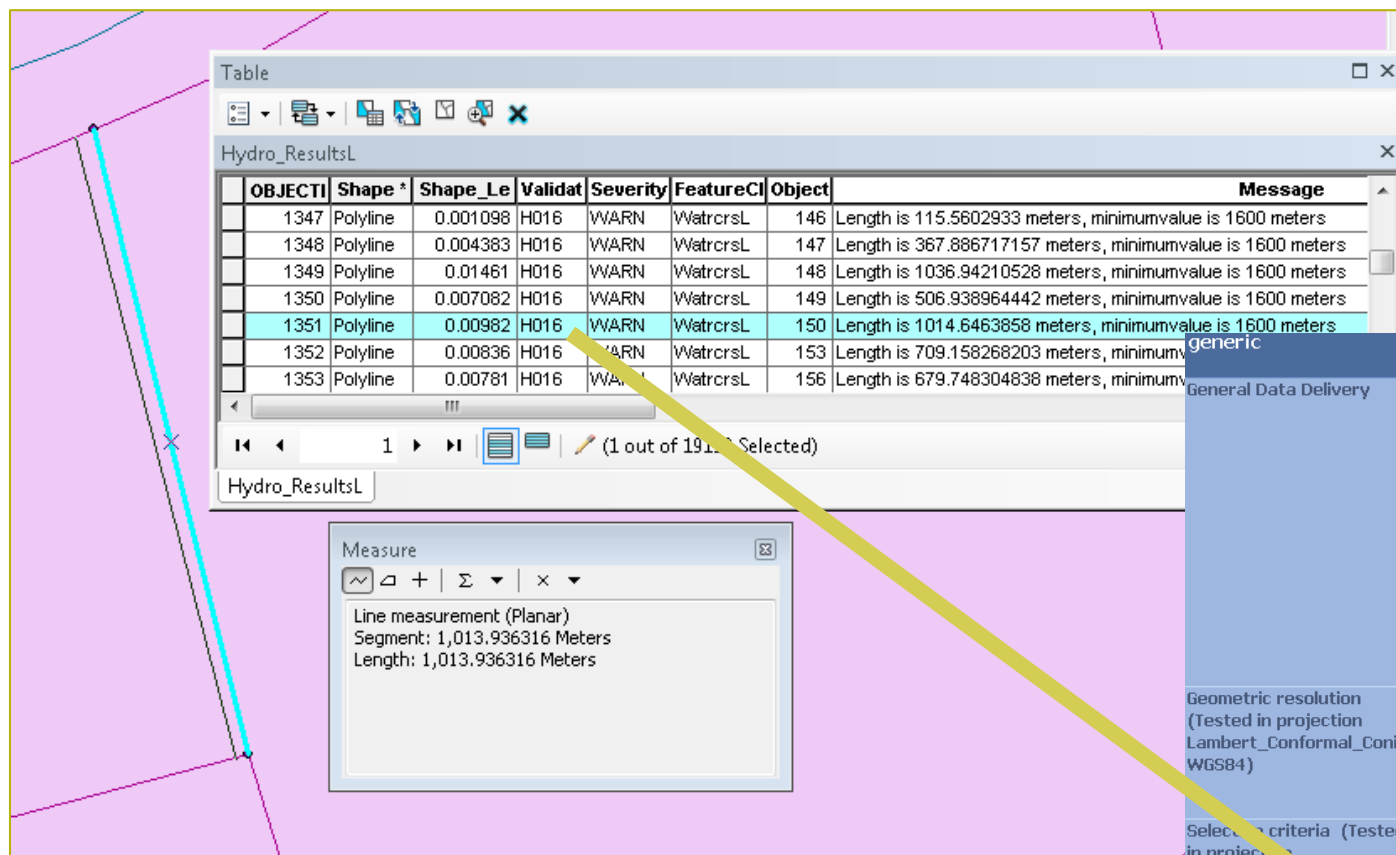
ERM version           : v11
Theme                 : Hydro
Database name          : H:\ERM_v11_ETRS89_R06_2017_edits_10oct2017.gdb
Template database name: L:\GMA\Projecten\EuroGeographics\ERM\Templates\Database\ERM_v11_template.gdb
=====
==ERROR
=====
== H004 == 1 records found
=====
| ValidationCode | FeatureClass | ObjectID | Message
=====
H004             | LandIceA     | None     | FeatureClass LandIceA has 0 records, minimum: 1
=====
== H008 == 1225 records found
=====
| ValidationCode | FeatureClass | ObjectID | Message
=====
H008             | CoastL       | 401      | Distance between vertices is 0.527207975284 meters, minimumvalue is 5 meters
H008             | SeastrtL     | 6         | Distance between vertices is 0.348552692997 meters, minimumvalue is 5 meters
H008             | SeastrtL     | 170      | Distance between vertices is 2.78797970001 meters, minimumvalue is 5 meters
H008             | SeastrtL     | 182      | Distance between vertices is 0.33576292202 meters, minimumvalue is 5 meters
H008             | SeastrtL     | 194      | Distance between vertices is 4.98816311807 meters, minimumvalue is 5 meters
H008             | SeastrtL     | 284      | Distance between vertices is 1.72785461148 meters, minimumvalue is 5 meters
```

Results database (.gdb)



- Results_20181101-085759.gdb
 - EuroRegionalMap
 - HYDRO_MISC_POP_TRANS_VEG_TOPO_line
 - HYDRO_MISC_POP_TRANS_VEG_TOPO_point
 - HYDRO_MISC_POP_TRANS_VEG_TOPO_poly
 - Hydro_ResultsA
 - Hydro_ResultsL
 - Hydro_ResultsP
 - IntercC_joinMotorways
 - Misc_ResultsL
 - Misc_ResultsP
 - POP_ResultsA
 - RailrdL_Network
 - RoadL_Network
 - Topo_ResultsA
 - Trans_ResultsL
 - Trans_ResultsP
 - Veg_ResultsA

Table							
Hydro_ResultsL							
OBJECTID *	Shape *	Shape_Length	ValidationCode	Severity	FeatureClassName	Object_ObjectId	Message
1212	Polyline	0.342998	H008	ERROR	WatcrsL	22453	Distance between vertices is 0.342997740443 meters, minimumvalue is 5 meters
1213	Polyline	0.931634	H008	ERROR	WatcrsL	22457	Distance between vertices is 0.93163351146 meters, minimumvalue is 5 meters
1214	Polyline	1.280222	H008	ERROR	WatcrsL	22457	Distance between vertices is 1.28022201212 meters, minimumvalue is 5 meters
1215	Polyline	3.370807	H008	ERROR	WatcrsL	22463	Distance between vertices is 3.37080711978 meters, minimumvalue is 5 meters
1216	Polyline	1.099411	H008	ERROR	WatcrsL	22474	Distance between vertices is 1.09941076938 meters, minimumvalue is 5 meters
1217	Polyline	4.347994	H008	ERROR	WatcrsL	22475	Distance between vertices is 4.34799369066 meters, minimumvalue is 5 meters
1218	Polyline	3.84941	H008	ERROR	WatcrsL	22475	Distance between vertices is 3.84940964807 meters, minimumvalue is 5 meters
1219	Polyline	0.756976	H008	ERROR	WatcrsL	22475	Distance between vertices is 0.756975672256 meters, minimumvalue is 5 meters
1220	Polyline	2.167425	H008	ERROR	WatcrsL	22475	Distance between vertices is 2.16742485452 meters, minimumvalue is 5 meters
1221	Polyline	4.789757	H008	ERROR	WatcrsL	22475	Distance between vertices is 4.78975682154 meters, minimumvalue is 5 meters
1222	Polyline	1.232783	H008	ERROR	WatcrsL	22475	Distance between vertices is 1.23278297059 meters, minimumvalue is 5 meters
1223	Polyline	2.63628	H008	ERROR	WatcrsL	22475	Distance between vertices is 2.6362795167 meters, minimumvalue is 5 meters
1224	Polyline	0.604365	H008	ERROR	WatcrsL	22478	Distance between vertices is 0.604364864321 meters, minimumvalue is 5 meters
1225	Polyline	4.678775	H008	ERROR	WatcrsL	22480	Distance between vertices is 4.67877528976 meters, minimumvalue is 5 meters
1226	Polyline	0.00032	H009	WARN	SeastrL	53	Length is 23.5232607198 meters, minimumvalue is 50 meters
1227	Polyline	0.000287	H009	WARN	WatcrsL	11325	Length is 31.8671387887 meters, minimumvalue is 50 meters
1228	Polyline	0.000973	H015	WARN	DamL	4	Length is 107.482305827 meters, minimumvalue is 125 meters
1229	Polyline	0.004717	H016	WARN	AquedctL	1	Length is 341.378883927 meters, minimumvalue is 1600 meters
1230	Polyline	0.003542	H016	WARN	AquedctL	2	Length is 294.724644768 meters, minimumvalue is 1600 meters
1231	Polyline	0.012312	H016	WARN	AquedctL	3	Length is 851.211175742 meters, minimumvalue is 1600 meters
1232	Polyline	0.0046	H016	WARN	AquedctL	4	Length is 321.482013634 meters, minimumvalue is 1600 meters
1233	Polyline	0.004072	H016	WARN	AquedctL	5	Length is 364.465483081 meters, minimumvalue is 1600 meters
1234	Polyline	0.013864	H016	WARN	WatcrsL	4	Length is 1480.56256671 meters, minimumvalue is 1600 meters
1235	Polyline	0.010273	H016	WARN	WatcrsL	6	Length is 730.53615716 meters, minimumvalue is 1600 meters
1236	Polyline	0.01463	H016	WARN	WatcrsL	7	Length is 1033.21925549 meters, minimumvalue is 1600 meters
1237	Polyline	0.002811	H016	WARN	WatcrsL	9	Length is 215.457326836 meters, minimumvalue is 1600 meters
1238	Polyline	0.005497	H016	WARN	WatcrsL	14	Length is 499.946973946 meters, minimumvalue is 1600 meters



generic	test code	test	implemented in the tool?
General Data Delivery	H001	feature classes AQUEDCTL, COASTA, COASTL, DAML, DAMC, LAKERESA, LANDICEA, ISLANDA, SEAA, SEASTRTL, SPRINGP, SPRINGC, SWAMPA, RAPIDSL, RAPIDSC, WATRCRSA, WATCRSL, WELLP	<input checked="" type="checkbox"/>
	H002	coordinate system (GEOGRAPHIC, decimal degrees)	<input checked="" type="checkbox"/>
	H003	map extent (-25° < Lambda < 40° and 30° < Phi < 80°)	<input checked="" type="checkbox"/>
	H004	mandatory feature classes COASTA, COASTL, DAML, DAMC, LAKERESA, LANDICEA(BJ030), ISLANDA, SEAA, SWAMPA, WATRCRSA, WATCRSL must have features	<input checked="" type="checkbox"/>
Geometric resolution (Tested in projection Lambert_Conformal_Conic_WGS84)	H005	Empty or missing tables	<input checked="" type="checkbox"/>
	H006	Valid Geometry	<input checked="" type="checkbox"/>
	H007	minimum allowed area size: 60 000m²	<input checked="" type="checkbox"/>
	H008	minimum allowed distance between vertices of line and area features: 5m	<input checked="" type="checkbox"/>
Selection criteria (Tested in projection Lambert_Conformal_Conic_WGS84)	H009	minimum allowed length of a line segment: 50m	<input checked="" type="checkbox"/>
	H010	statistics of average distance between vertices	<input type="checkbox"/>
	H011	The number of LAKERESA less than 400 000m²	<input checked="" type="checkbox"/>
	H012	The number of WATRCRSA less than 200 000m²	<input checked="" type="checkbox"/>
	H013	The number of SWAMPA, LANDICEA less than 400 000m²	<input checked="" type="checkbox"/>
	H014	The number of ISLANDA less than 400 000m²	<input checked="" type="checkbox"/>
	H015	The number of dams and locks less than 125m	<input checked="" type="checkbox"/>
	H016	The number of dangling AQUEDCTL, WATCRSL shorter than 1600m	<input checked="" type="checkbox"/>
	H017	The number of shoreline construction (SEASTRTL)	<input checked="" type="checkbox"/>

Next steps

- Add checks that are not yet implemented (validation report)
- Integrate consistency checks from BKG – EBM/ERM
- Send overview of feedback received
- Modify user interface based on feedback received
- Add statistics session
- False positives?
- PMS results?
- How to handle with exceptions?
- ArcGIS Pro?

Next steps

- New version of ERM Validation tool in beginning of next production year
- More feedback is very welcome!

Question to the producers....

Who uses or is going to use ArcGIS Pro for ERM production?

Thank you for your attention!

Contact:

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