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# eTOKAI – Tool Kit for ATM Occurrence Investigation on web platform

Larnaca 21-22 May 2015 – InterFAB Workshop on Safety Tools

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Head of Safety Unit /DNM/NOM

And  
JLG Consulting

# eTOKAI flight plan of today

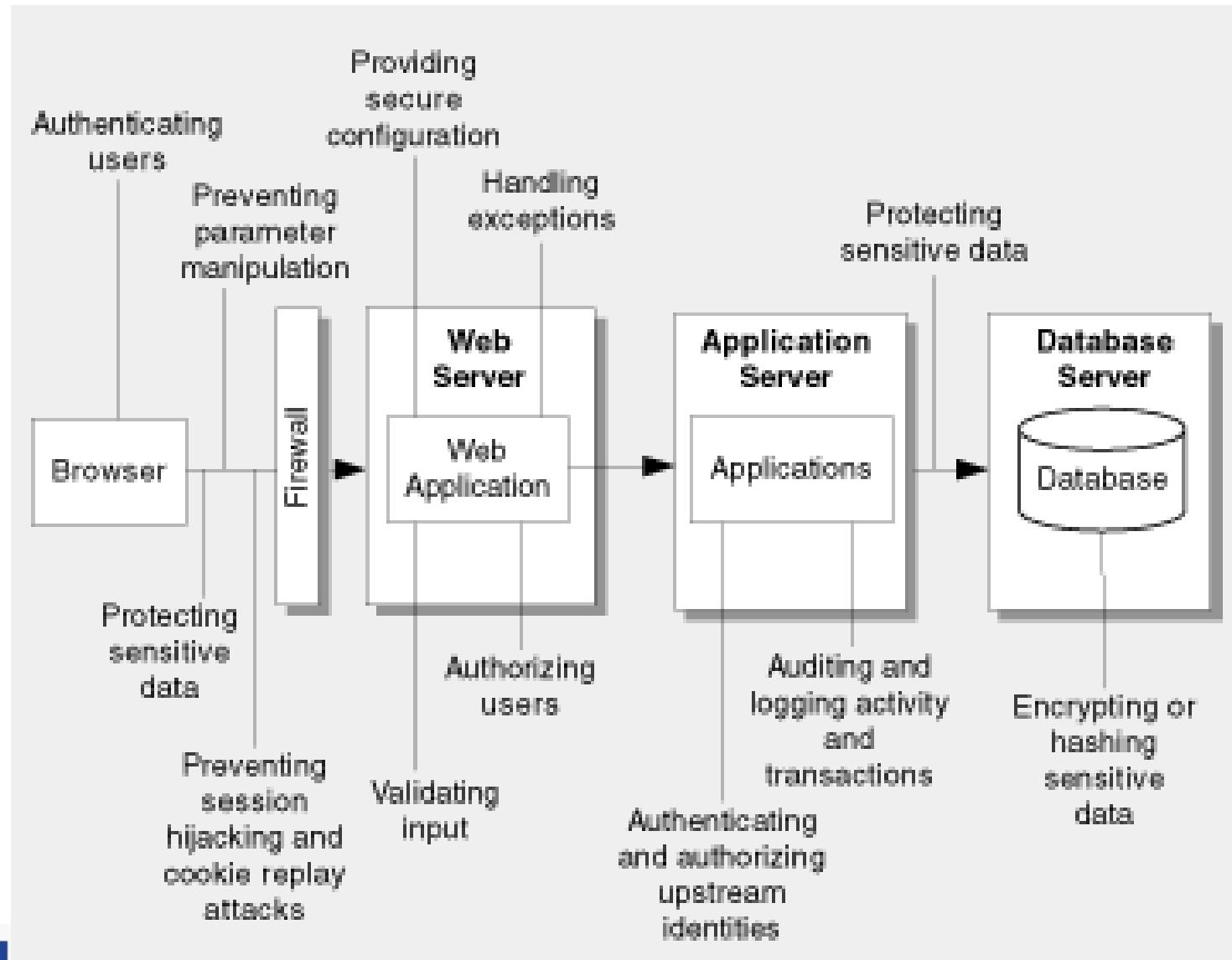


- Architecture and Security aspects
- Tools available in eTOKAI and in production
- Taxonomy
- Corporate application
- Feed-back from users
- Demonstrations



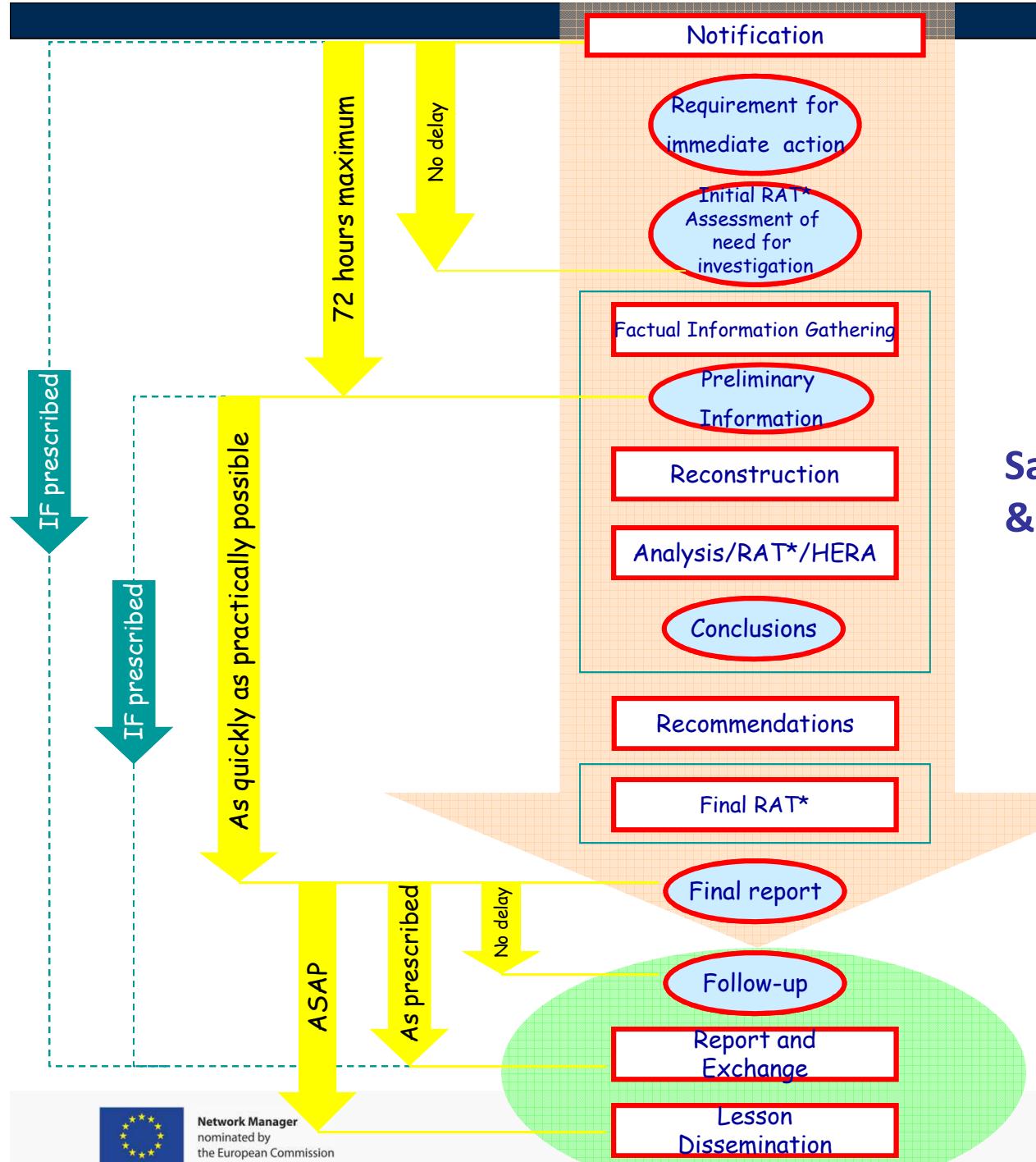
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# TOKAI Architecture and secure web design



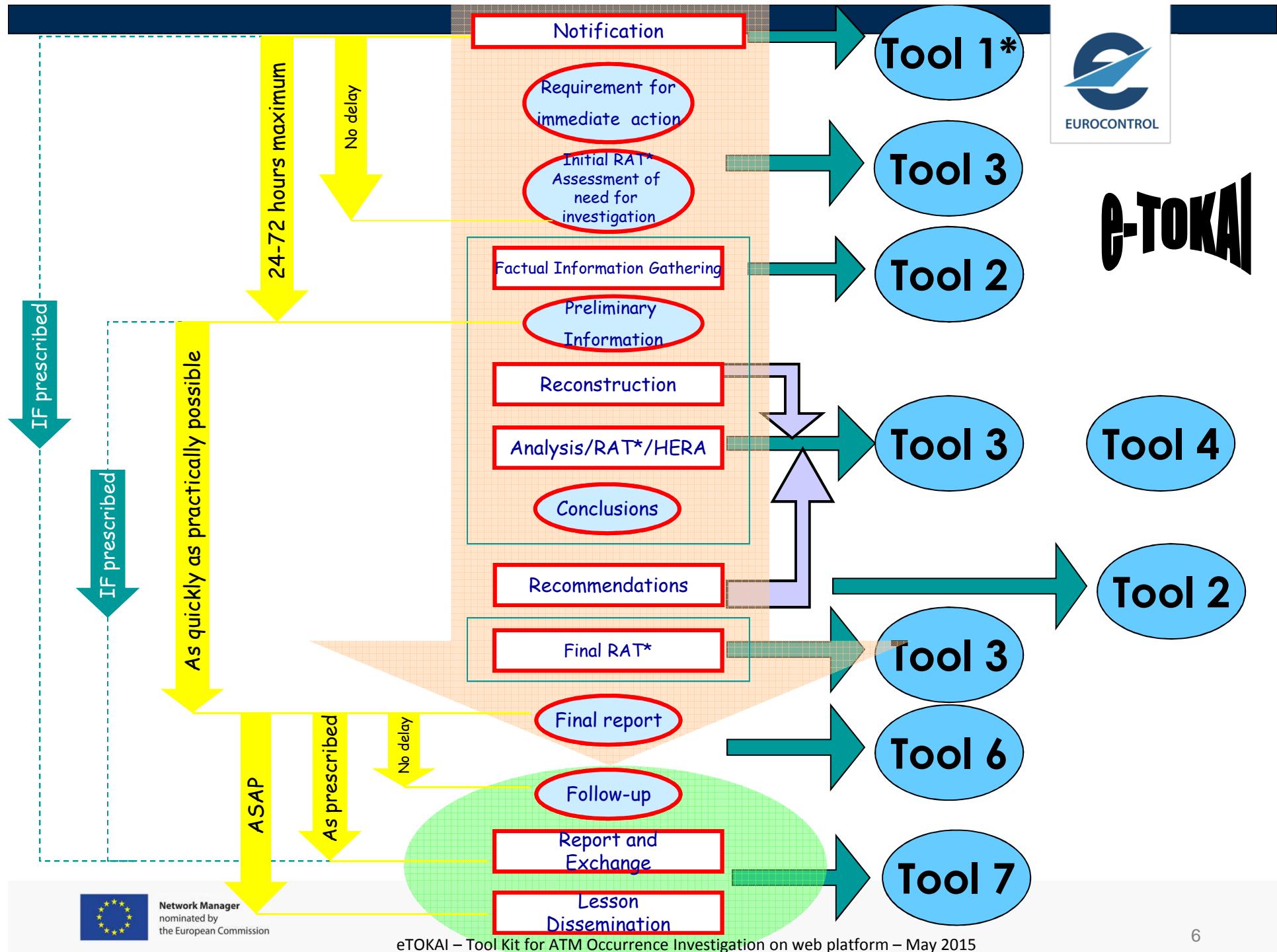
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## Safety Occurrence Notification & Investigation Process



# e-TOKAI tools and capabilities





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# eTOKAI capabilities



- Organisation Management - Units configurations, users, investigators, email distribution lists
  - Users, Units, Regions, Organisation
  - Distribution lists
- Occurrences Notification Forms, flows etc
  - Building Form
  - Import/Export of Forms
  - Flows
- Data Gathering
  - Forms, flows etc
  - Import from Notification and linkage
  - Building Forms
  - Walk through Taxonomy
  - Data Gathering Forms Import/Export
  - Attachments (of any kind)



# What do we have today cont'd



- Risk Analysis Tool (RAT) integration
- Integration with other tools (e.g. bi-directional with Data Gathering)
- HERA (Human Error in ATM) tool
  - At the level of Working Position
  - Integrated with other tools (bi-directional with Data Gathering and RAT)
- Safety Recommendations
- Statistical Analysis
  - Combination of stats with RAT statistical analysis
  - Transferring data to Excel
  - Transfer file templates
- Annual Summary Template (AST)
- ECCAIRS converter (in production)
- Report Builder
  - building Corporate personalised reports (any kind of reports)



# e-TOKAI feed-back from users



**TOKAI**     

ATS Notification Data Gathering RAT Statistics Admin

 0  EVAIR  
Organization Administrator  TLT ▾



Hello, Tony! Welcome to your dashboard!

2

ATS Reports

13

Occurrences

0

Risk Analyses

2

Queries

4

ATS Notification Templates

4

Data Gathering Templates

EVAIR

Working Unit

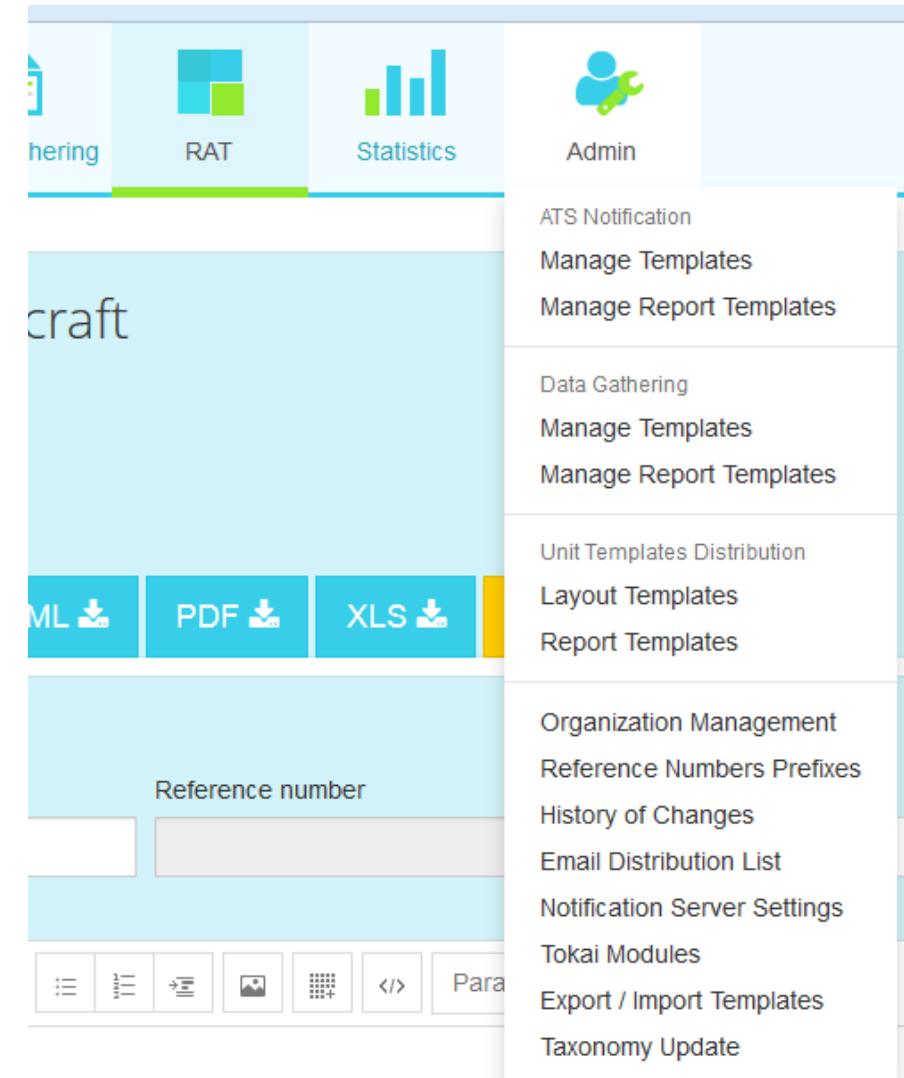
0

Drafts



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# eTOKAI Administration



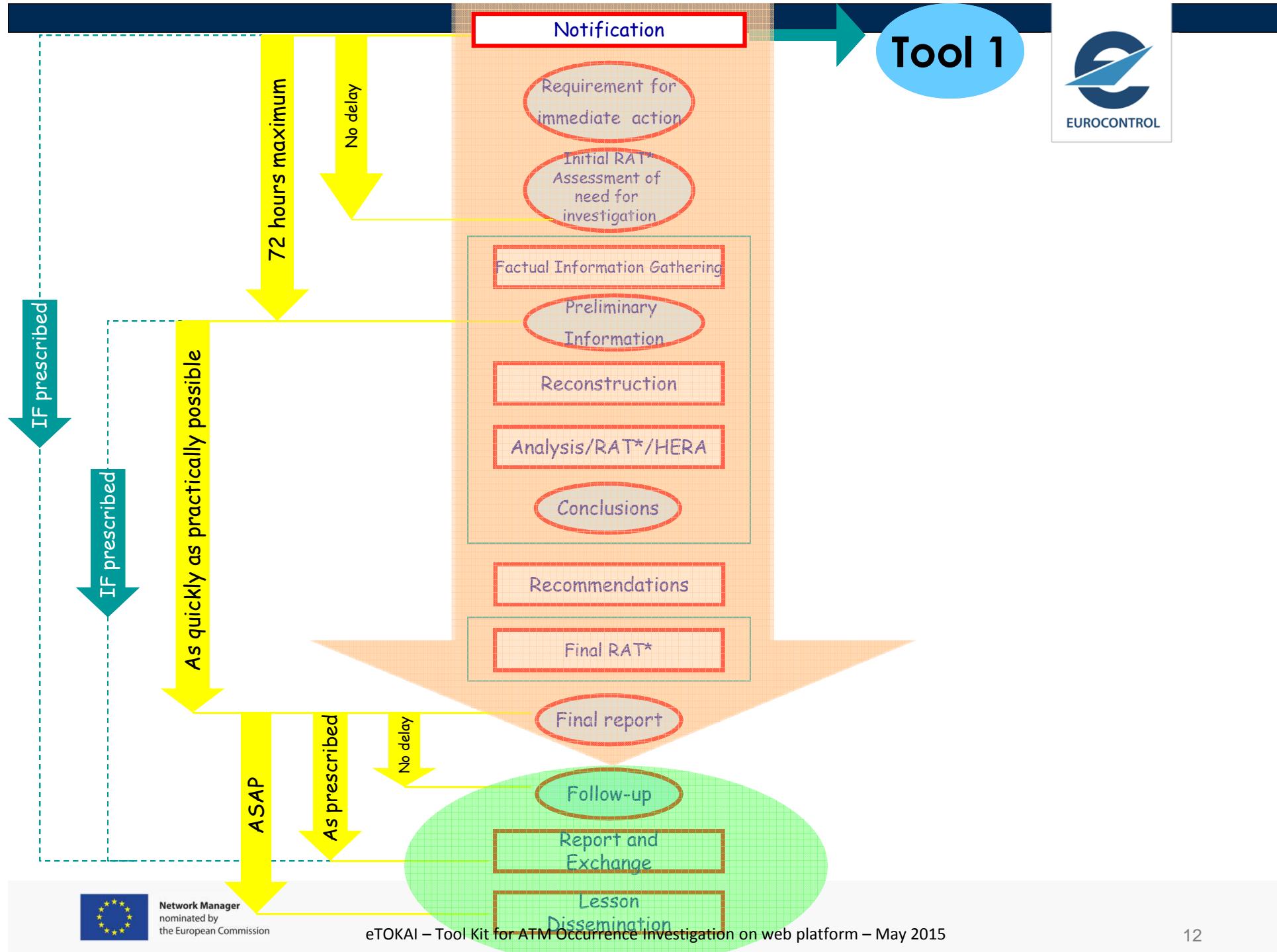
The screenshot shows the eTOKAI Administration interface. At the top, there is a navigation bar with icons for 'hering' (document), 'RAT' (blue and green square grid), and 'Statistics' (bar chart). Below this is a large, semi-transparent overlay with the word 'craft' in a large, light font. On the right side, a vertical sidebar is open, showing a list of administrative functions under the 'Admin' section. The sidebar includes:

- ATS Notification
- Manage Templates
- Manage Report Templates
- Data Gathering
- Manage Templates
- Manage Report Templates
- Unit Templates Distribution
- Layout Templates
- Report Templates
- Organization Management
- Reference Numbers Prefixes
- History of Changes
- Email Distribution List
- Notification Server Settings
- Tokai Modules
- Export / Import Templates
- Taxonomy Update

At the bottom of the sidebar, there are download buttons for 'ML' (ML icon), 'PDF' (PDF icon), and 'XLS' (XLS icon). Below these buttons is a 'Reference number' input field with two text boxes. At the very bottom, there is a toolbar with several icons: a list icon, a list icon with a minus sign, a list icon with a plus sign, a camera icon, a grid icon, a double arrow icon, and a 'Para' button.



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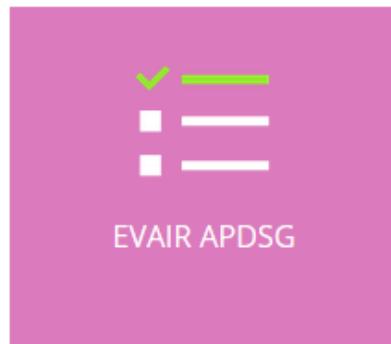


## Tool 1

# Notification Module (Forms) Forms Builder + Usage of the Forms



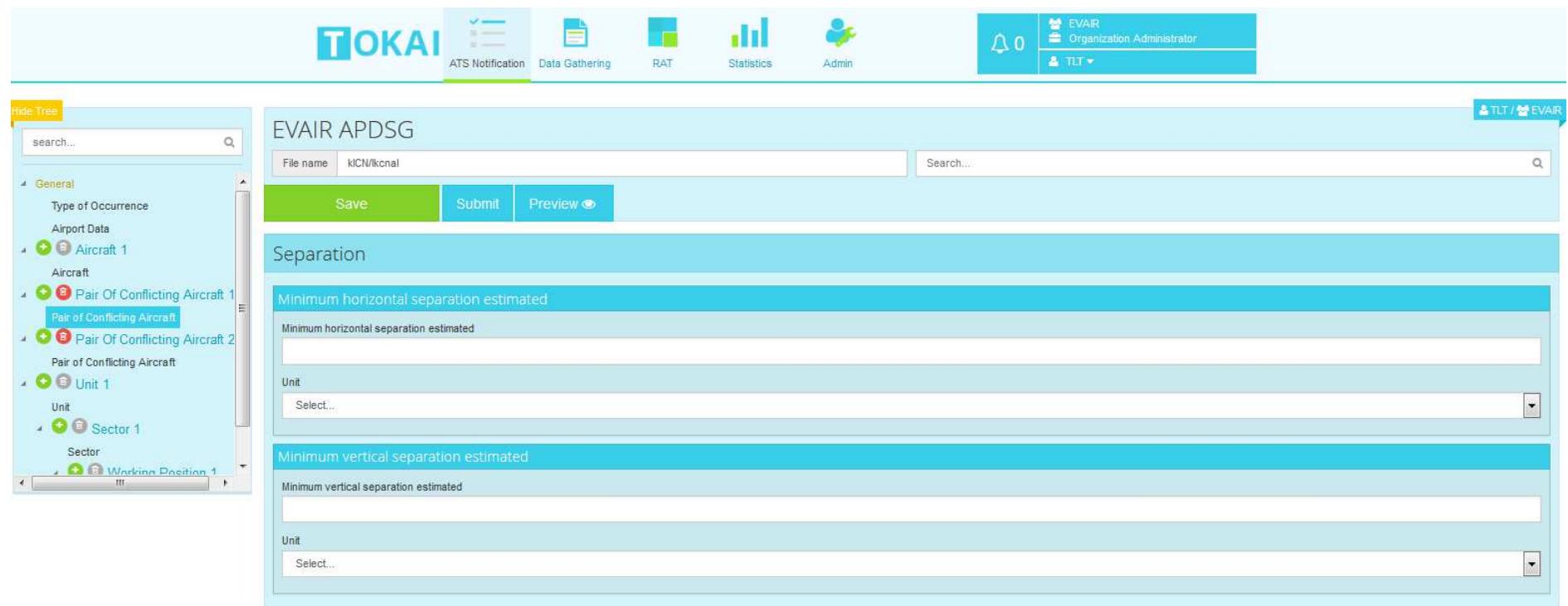
Select a Report Template



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# Tool 1

## Notification Module (Forms) Forms Builder + Usage of the Forms

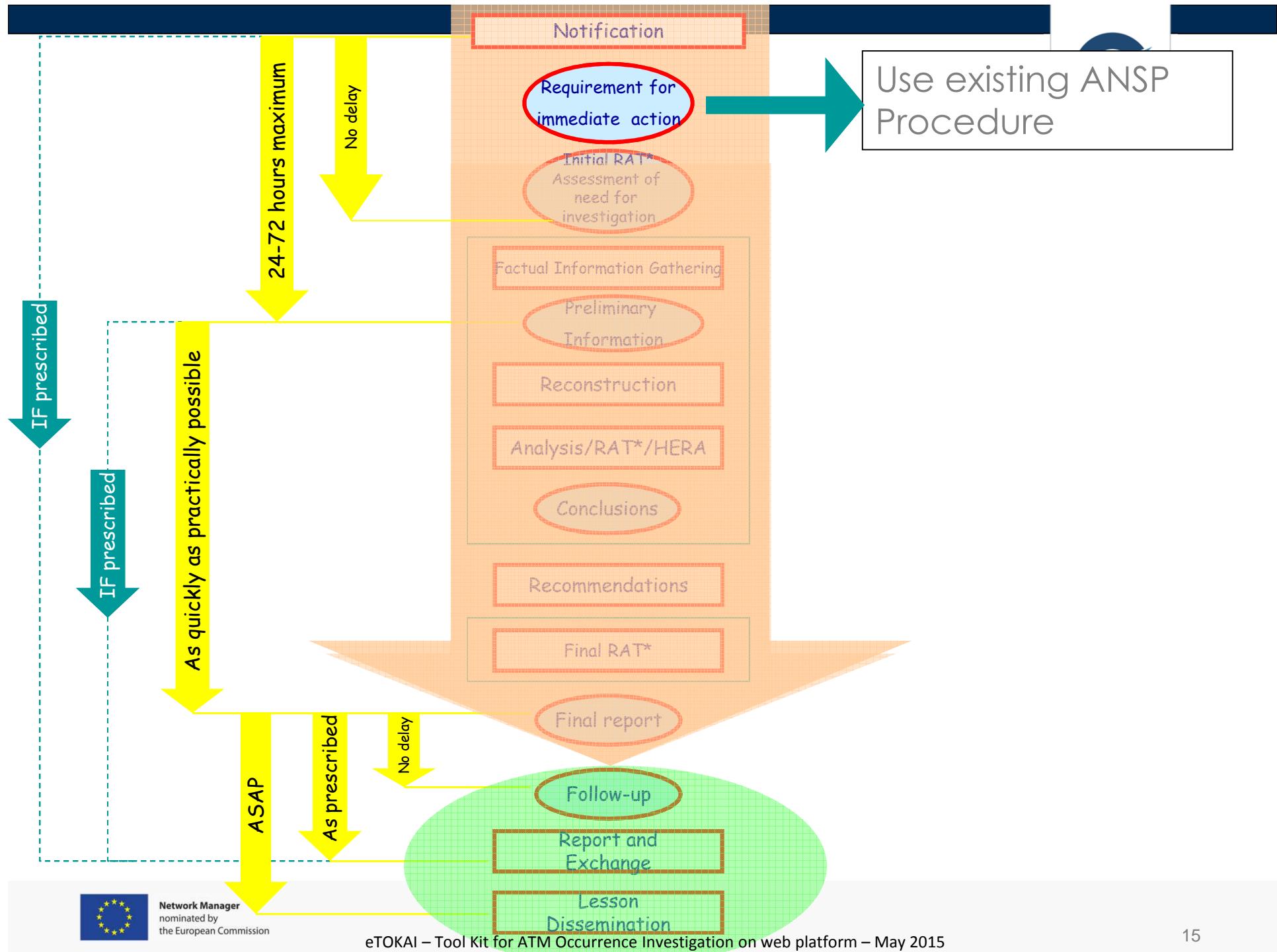


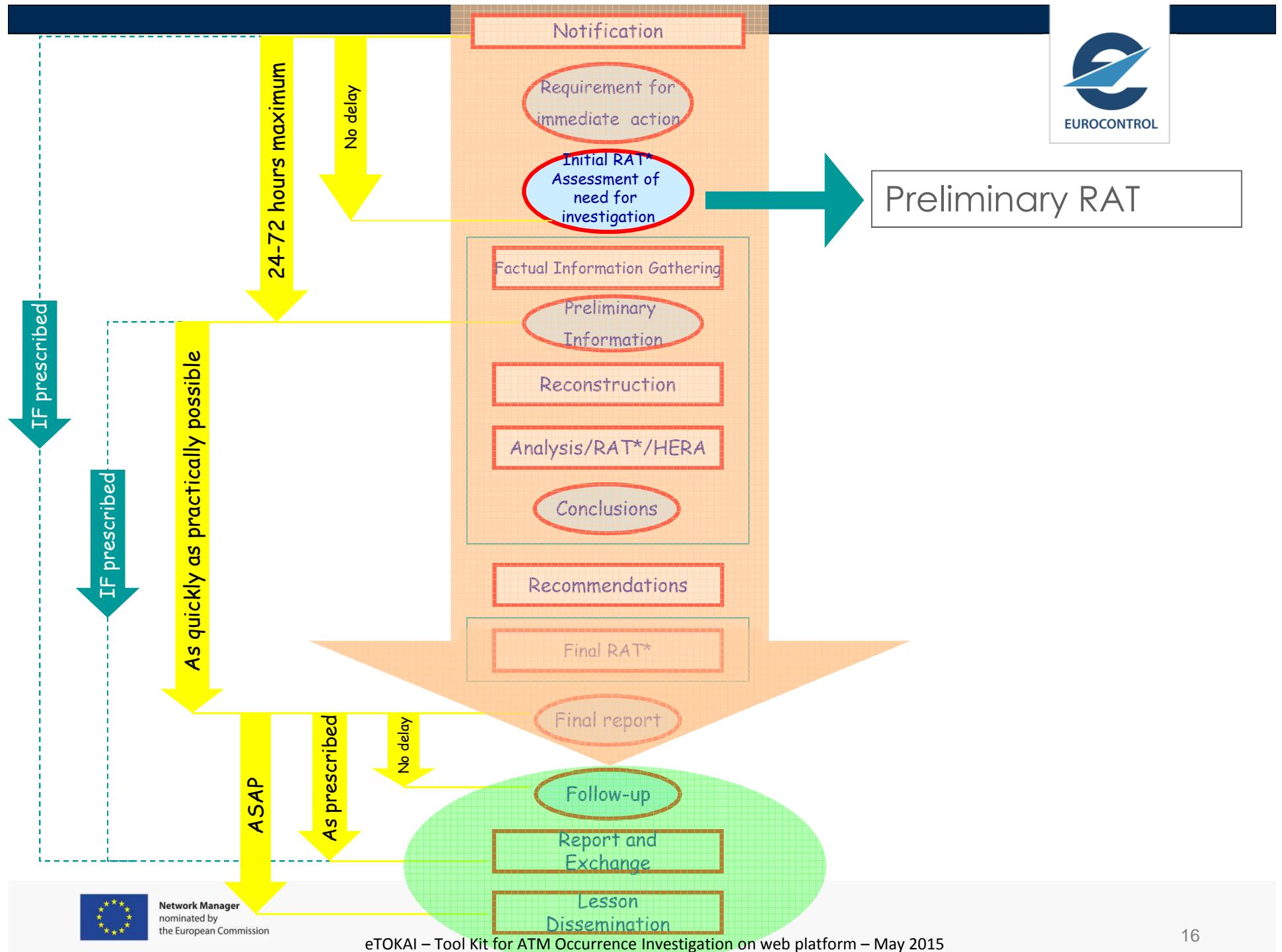
The screenshot shows the eTOKAI web application interface. The top navigation bar includes the 'TOKAI' logo, 'ATS Notification' (selected), 'Data Gathering', 'RAT', 'Statistics', 'Admin', a notification bell with 0 messages, and user accounts for 'EVPAIR Organization Administrator' and 'TLT'. The left sidebar features a 'Hide Tree' button and a search bar, with a tree view of occurrence types: General, Aircraft, and Sector. The main content area is titled 'EVPAIR APDSG' and shows a form with sections for 'Separation' (containing 'Minimum horizontal separation estimated' and 'Unit' dropdown) and 'Minimum vertical separation estimated' (containing 'Unit' dropdown). At the bottom of the form are 'Save', 'Submit', and 'Preview' buttons.

*demonstration*



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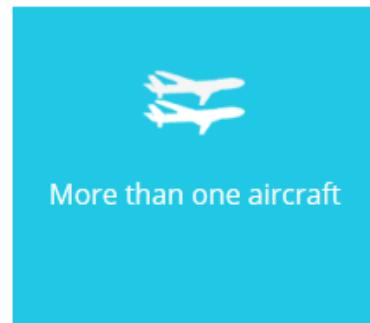


## Tool 3

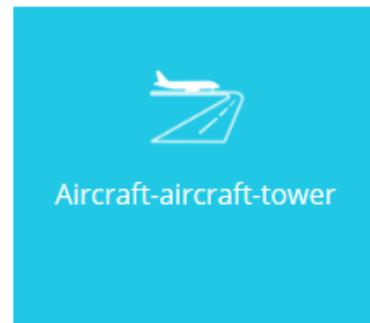
### RAT – Risk Analysis Tool



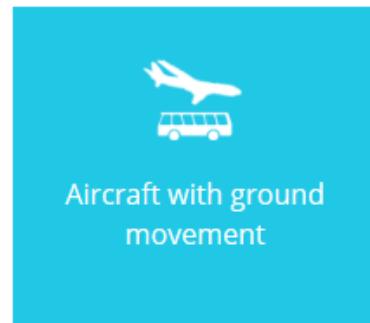
New risk analysis choose an occurrence type



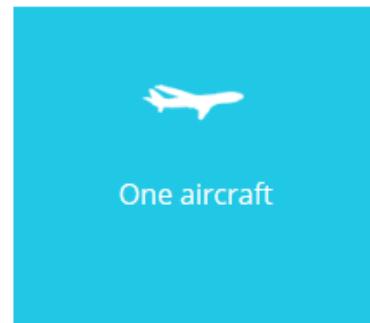
More than one aircraft



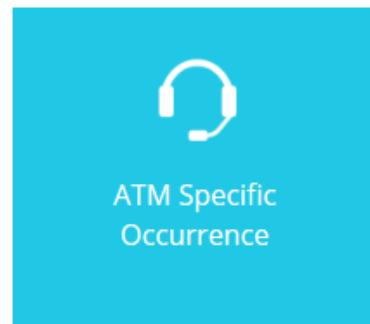
Aircraft-aircraft-tower



Aircraft with ground movement



One aircraft



ATM Specific Occurrence

*demonstration*



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eTOKAI – Tool Kit for ATM Occurrence Investigation on web platform – May 2015

# RAT – Risk Analysis Tool



Hide Matrix

Reliable severity scoring

A1	B1	C1	E1	D1	N1
A2	B2	C2	E2	D2	N2
A3	B3	C3	E3	D3	N3
A4	B4	C4	E4	D4	N4
A5	B5	C5	E5	D5	N5

Risk ATM:

Risk ATM Ground:

Reliability Factors

**Overall**

Overall	0%
Severity	0%
Repeatability	0%

**Ground**

Overall	0%
Severity	0%
Repeatability	0%

More than one aircraft

Mode: Quantitative

Save XML PDF XLS 

**Description**

Name:  Reference number:  Date:  Time:

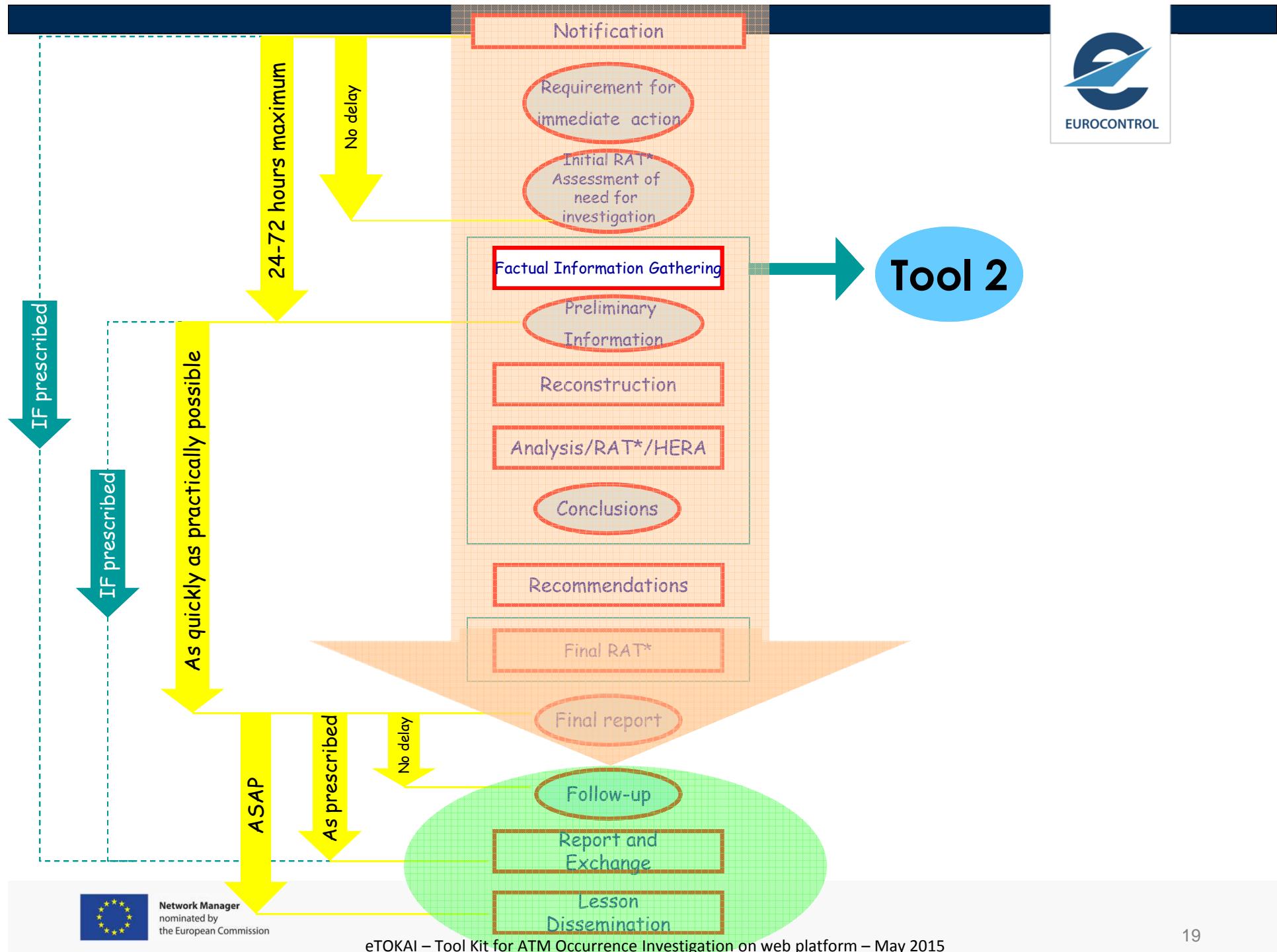
Description: 

**Severity**

**Repeatability**



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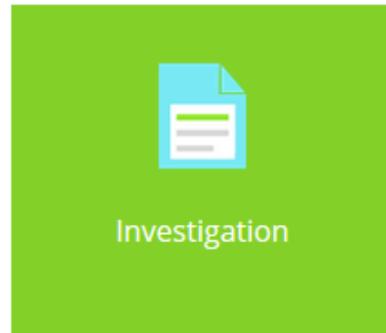


## Tool 2

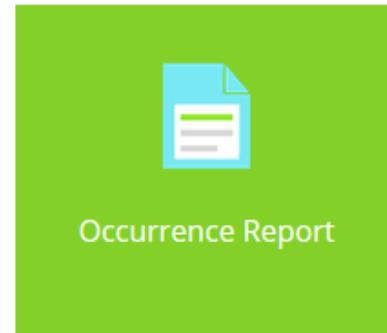
# Data Gathering



Select a Data Gathering Template



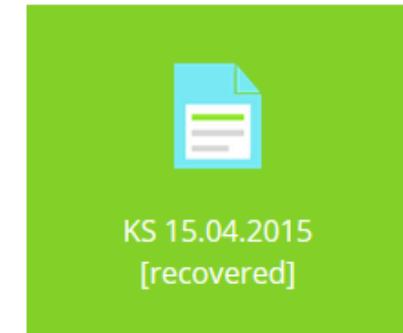
Investigation



Occurrence Report



EVAIR Data Gathering

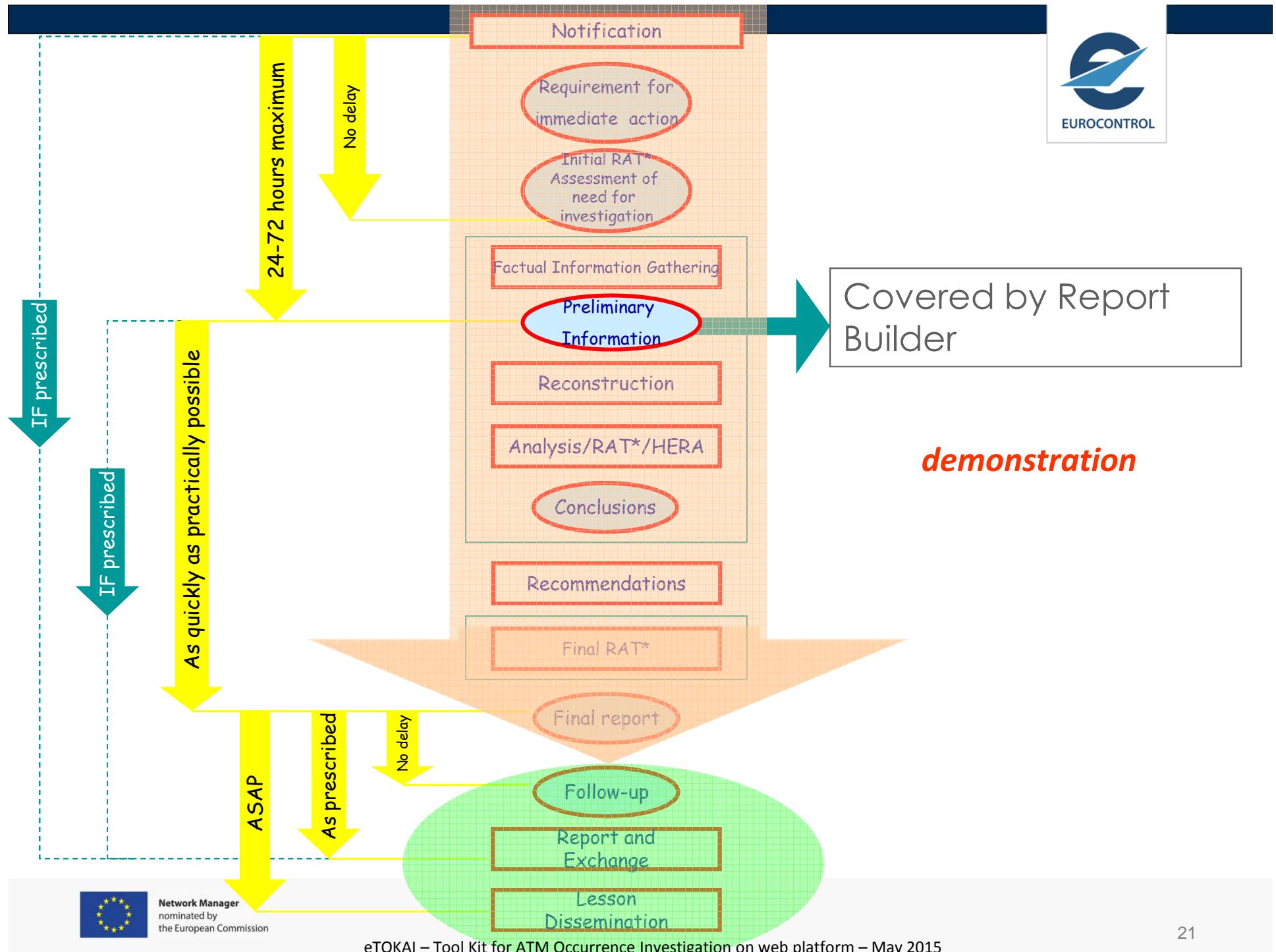


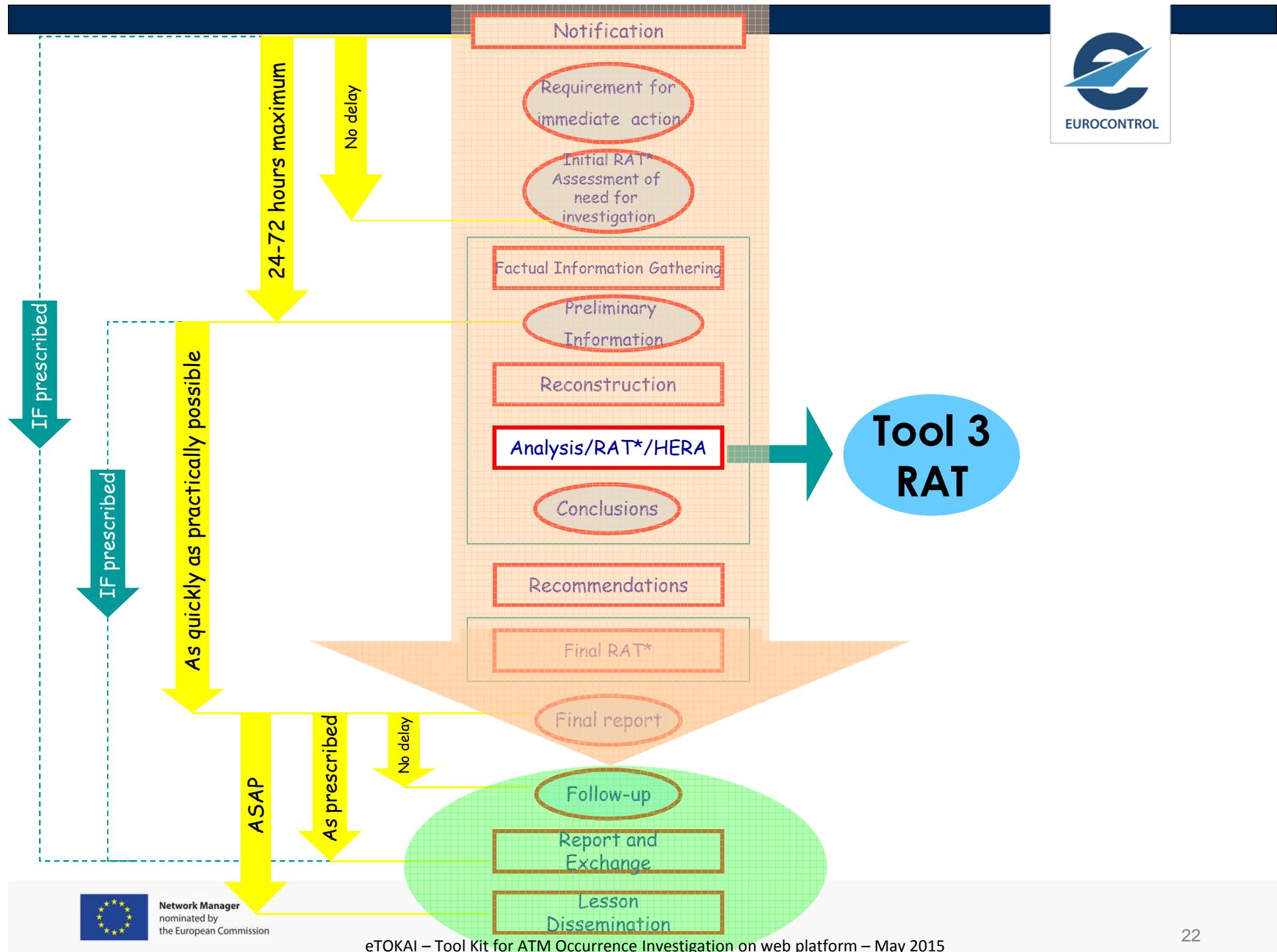
KS 15.04.2015  
[recovered]

*demonstration*

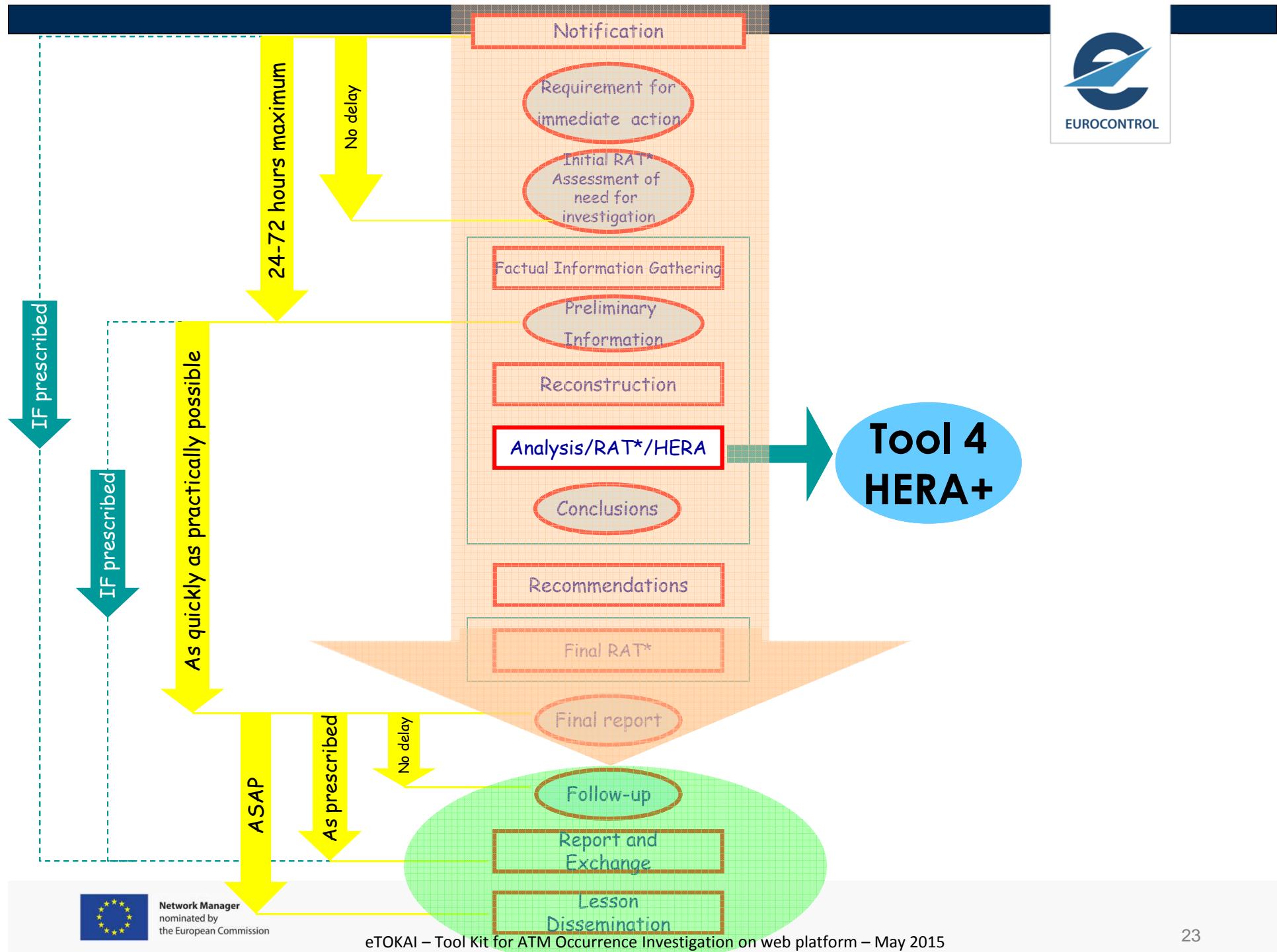


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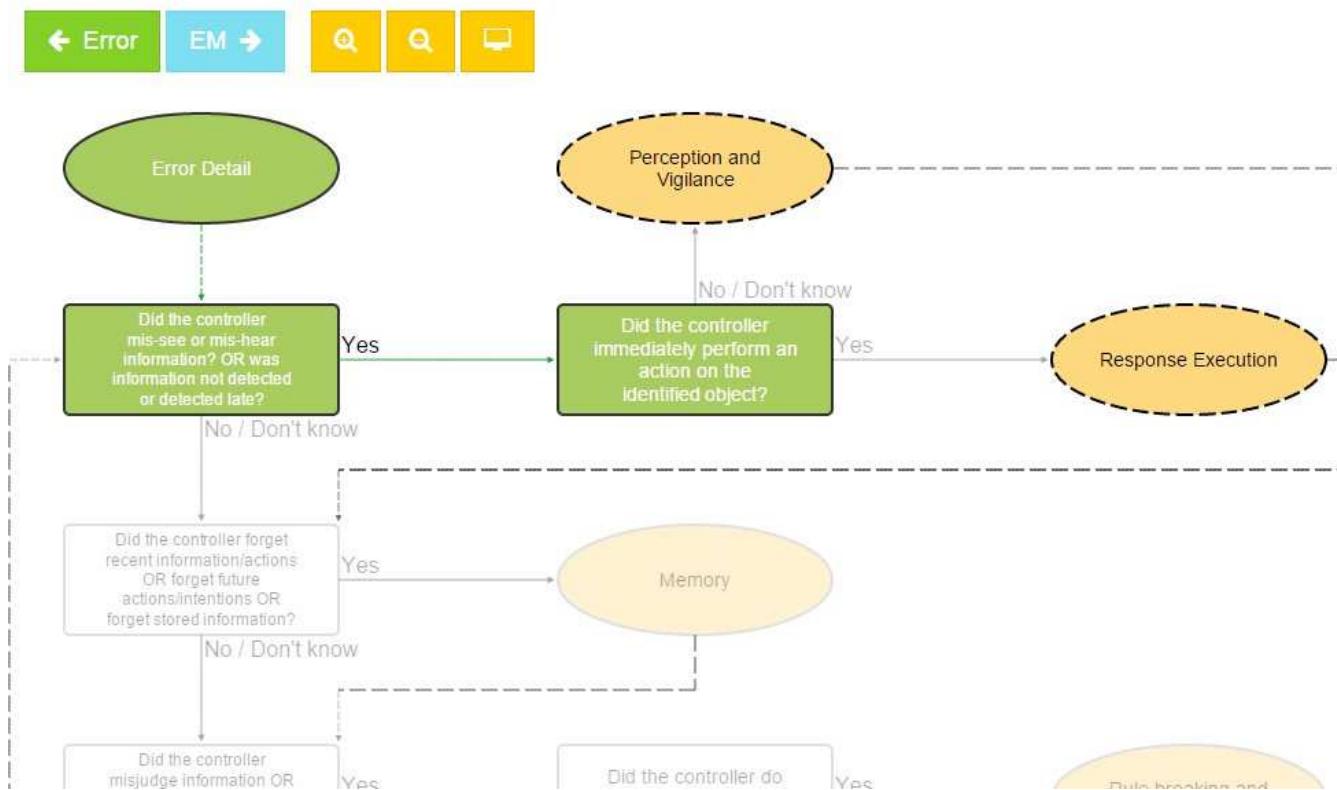


# Tool 4

## HERA and HERA+



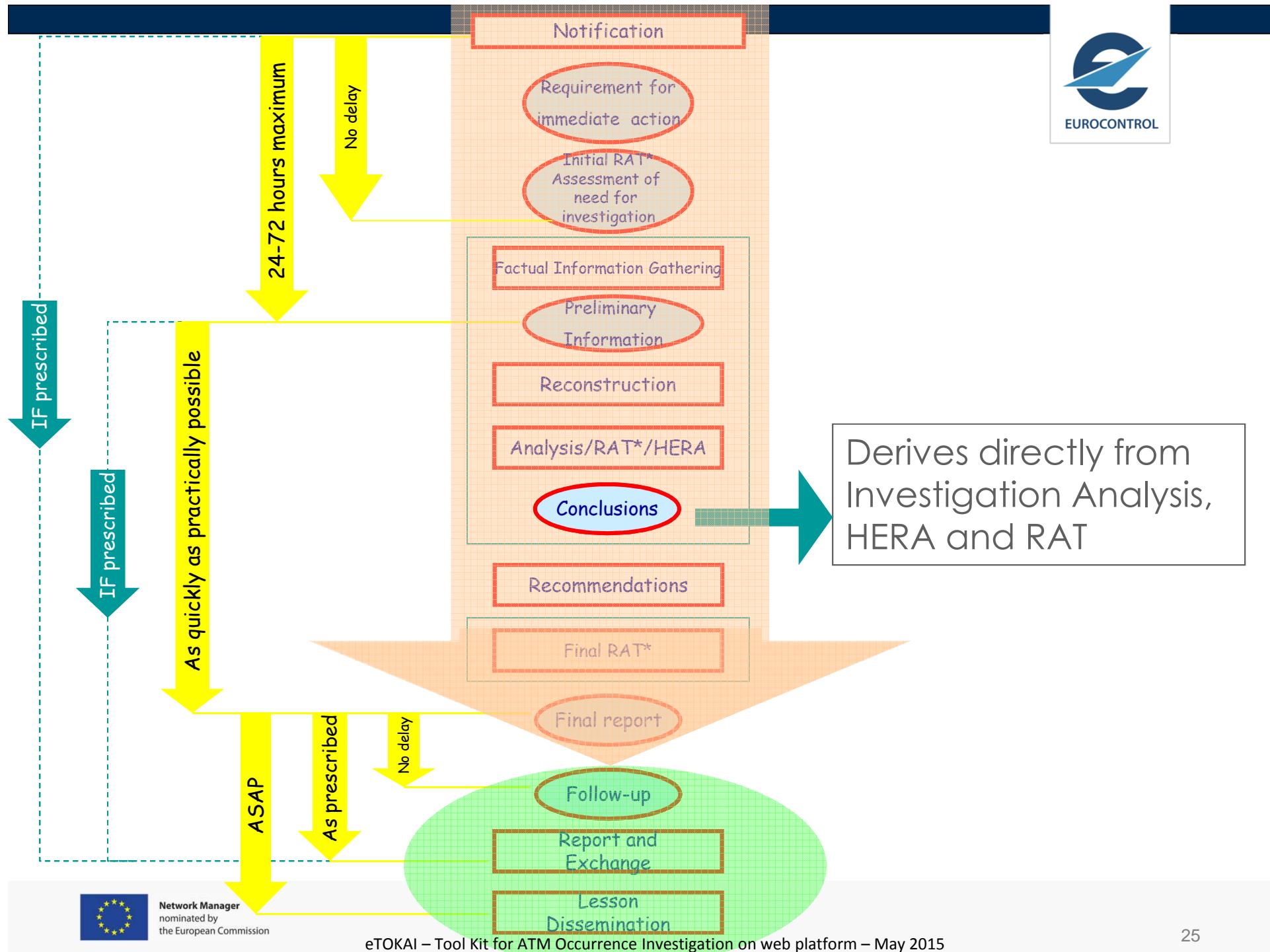
## Error Detail

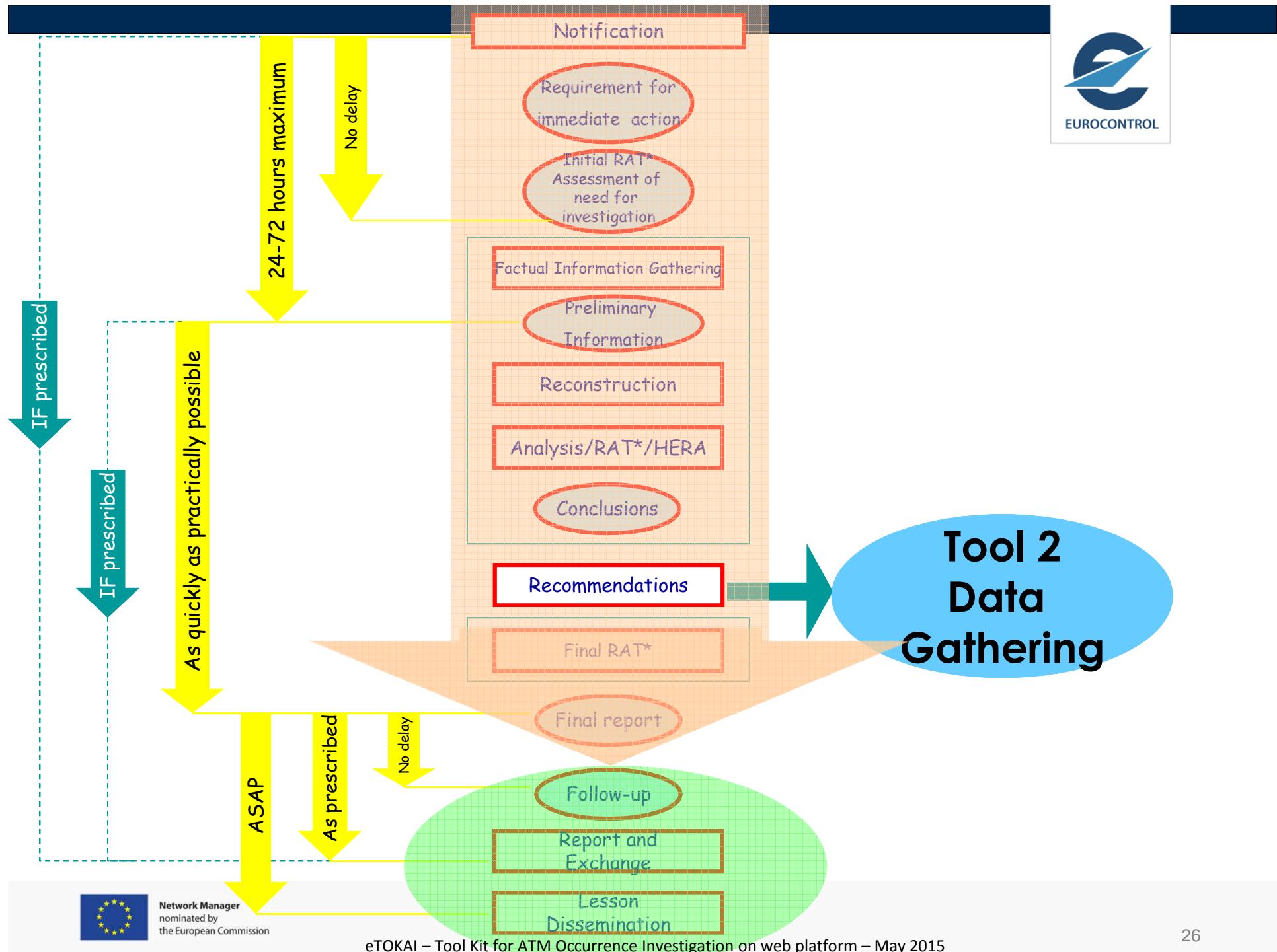


## ***demonstration***



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## Tool 2

# Data Gathering (and Recommendation)



EUROCONTROL



ATS Notification Data Gathering



HERA



RAT



Query System



Admin



BUH  
Organization Administrator  
jgadmin

Hide Tree

search



- Aircraft Information
- Altitude / FL
- Airspace
- + U Unit 1
  - Unit Information
  - + S Sector 1
    - Sector Information
  - + W Working Position 1
    - Working Position Inform
    - Workload and Avoiding
    - Duty times / Relief / CIS
  - + E Error 1
    - HERA Information
- + P Pair Of Conflicting Aircraft
  - Conflicting Aircraft
- + S Safety Recommendations
  - Safety Recommendations and

## Data Gathering CC

File name Test

Search...

Save



0

Preview

### Safety Recommendations

#### Problem description



### Recommendation Description

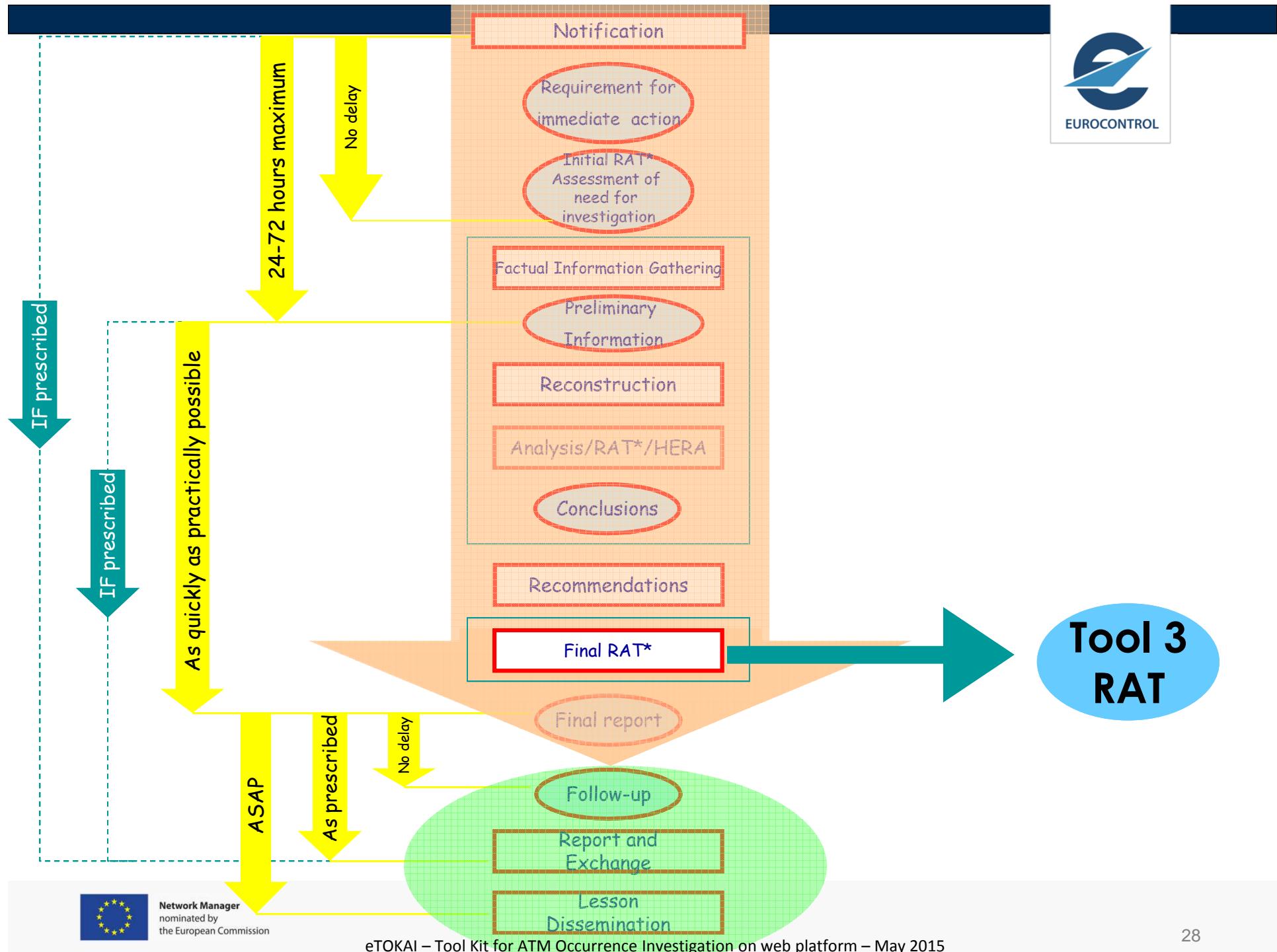
#### Recommendation Description

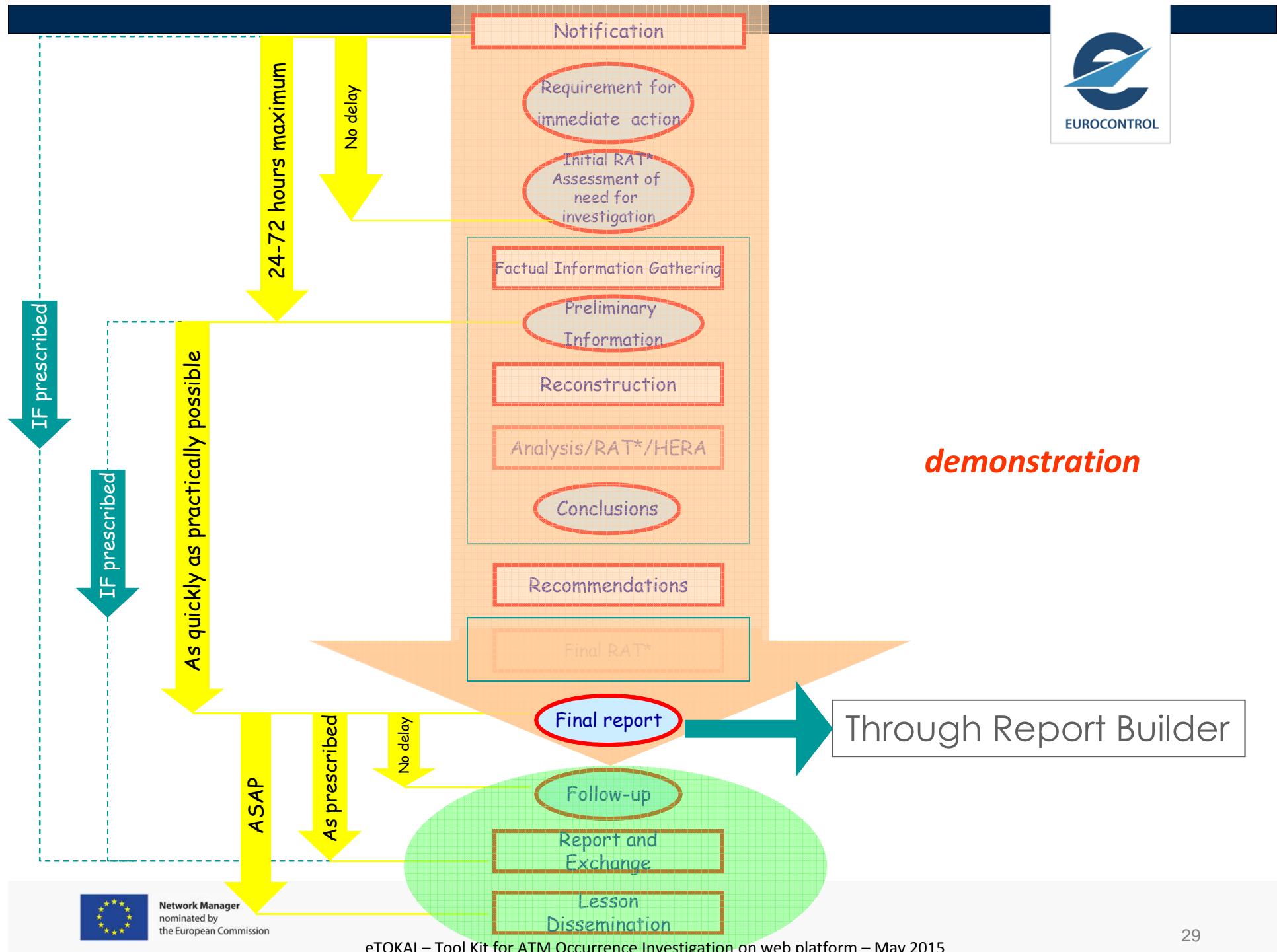


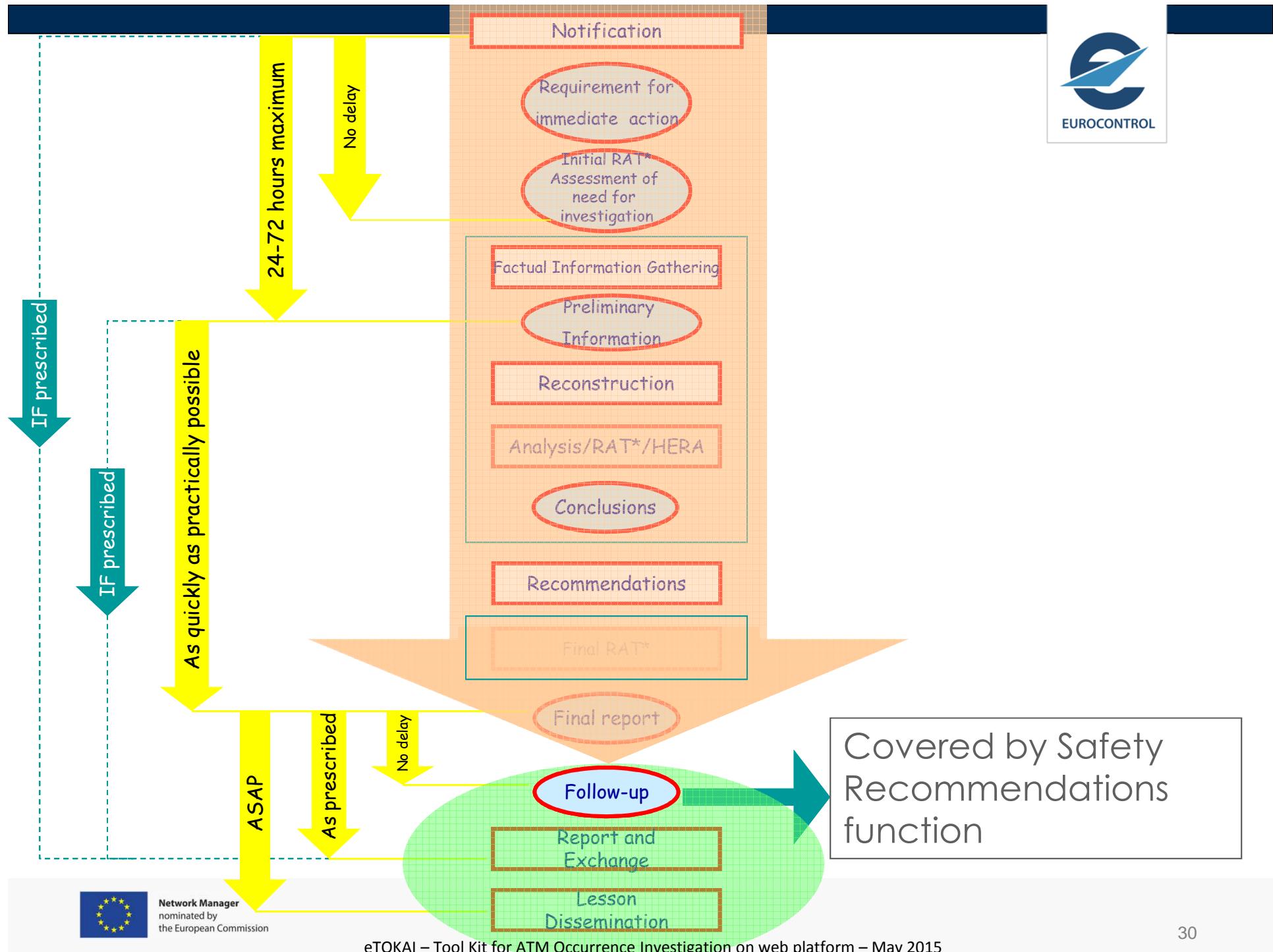
**demstration**

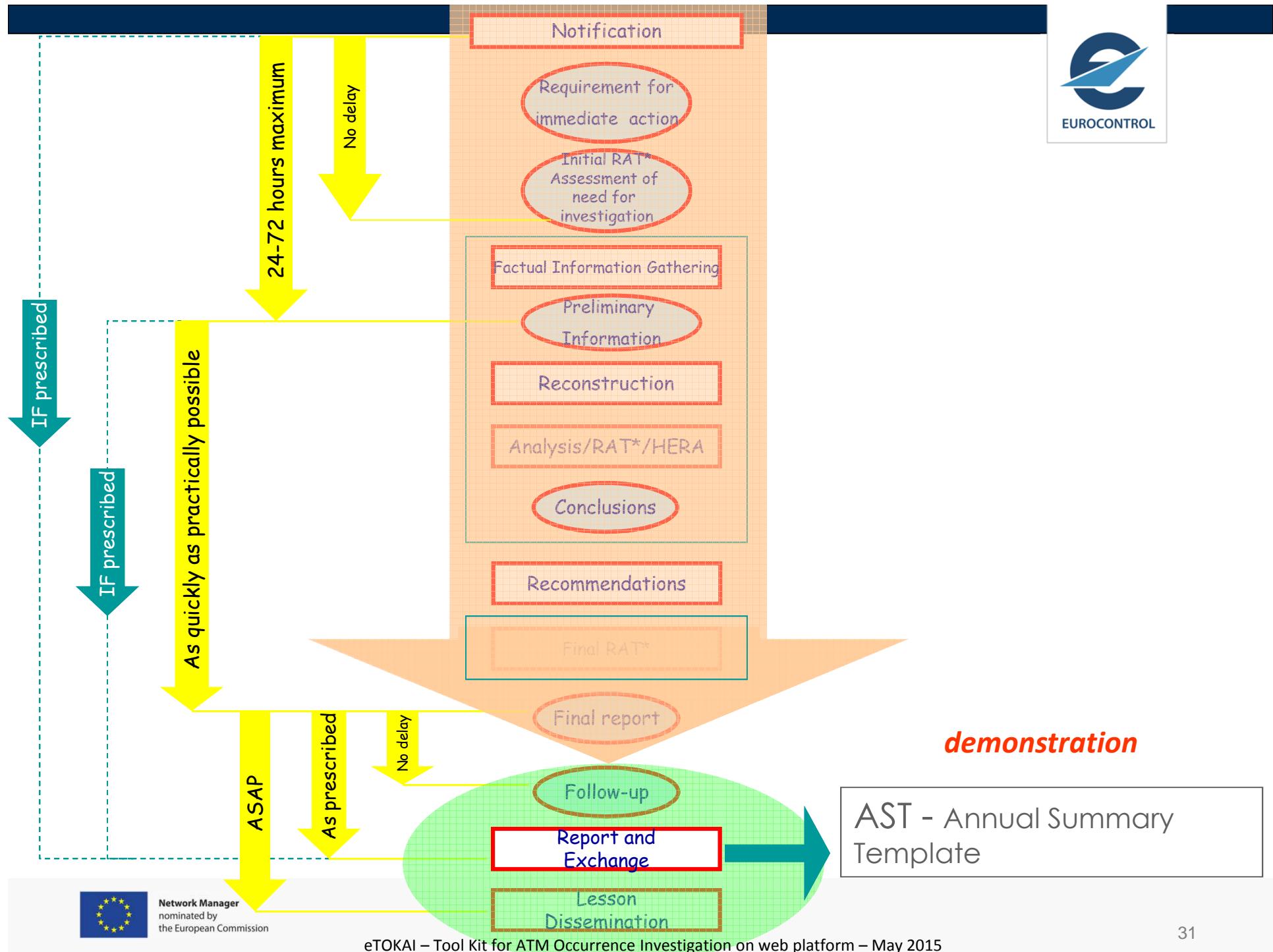


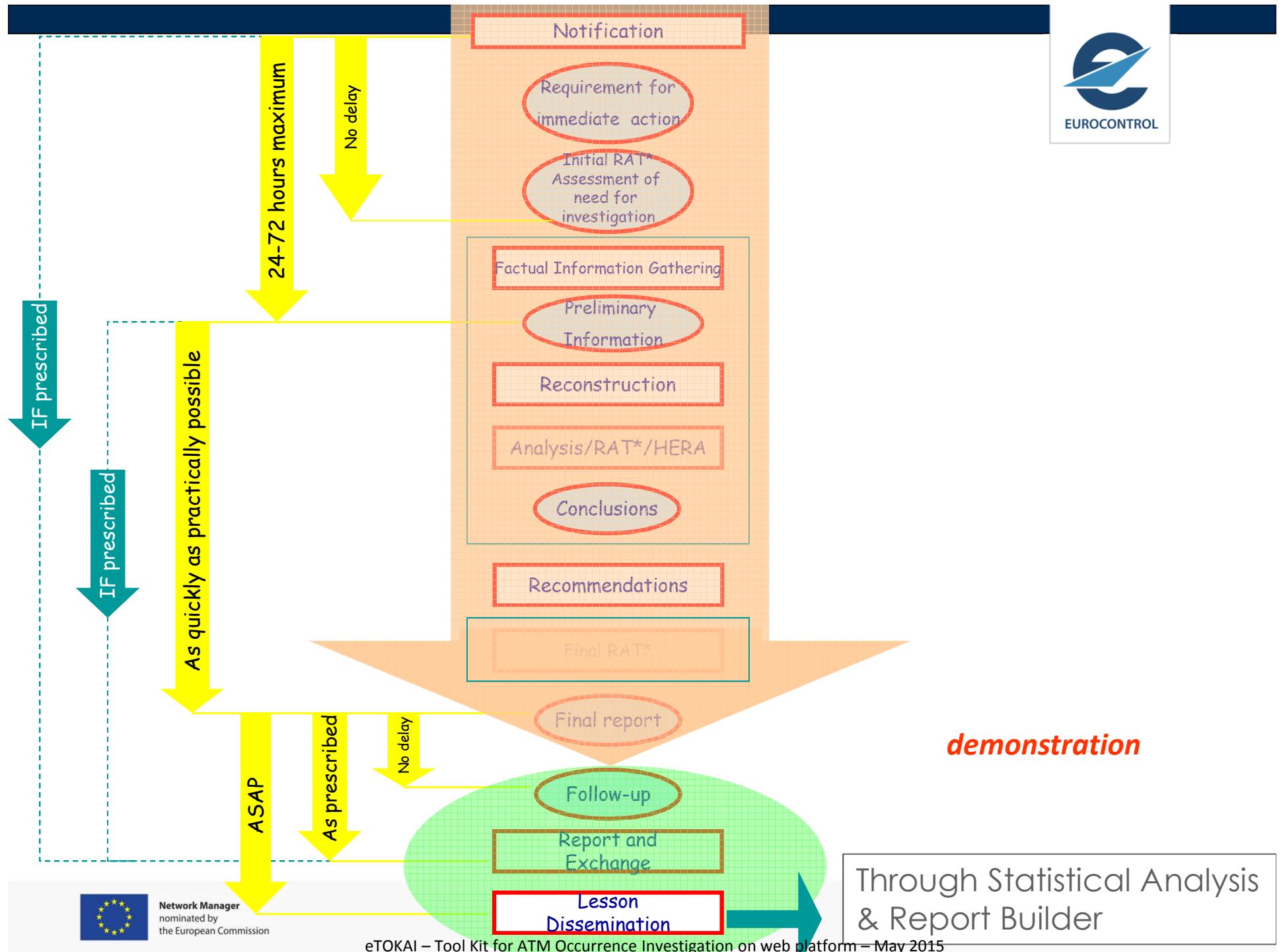
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# What's coming in the next version of e-TOKAI



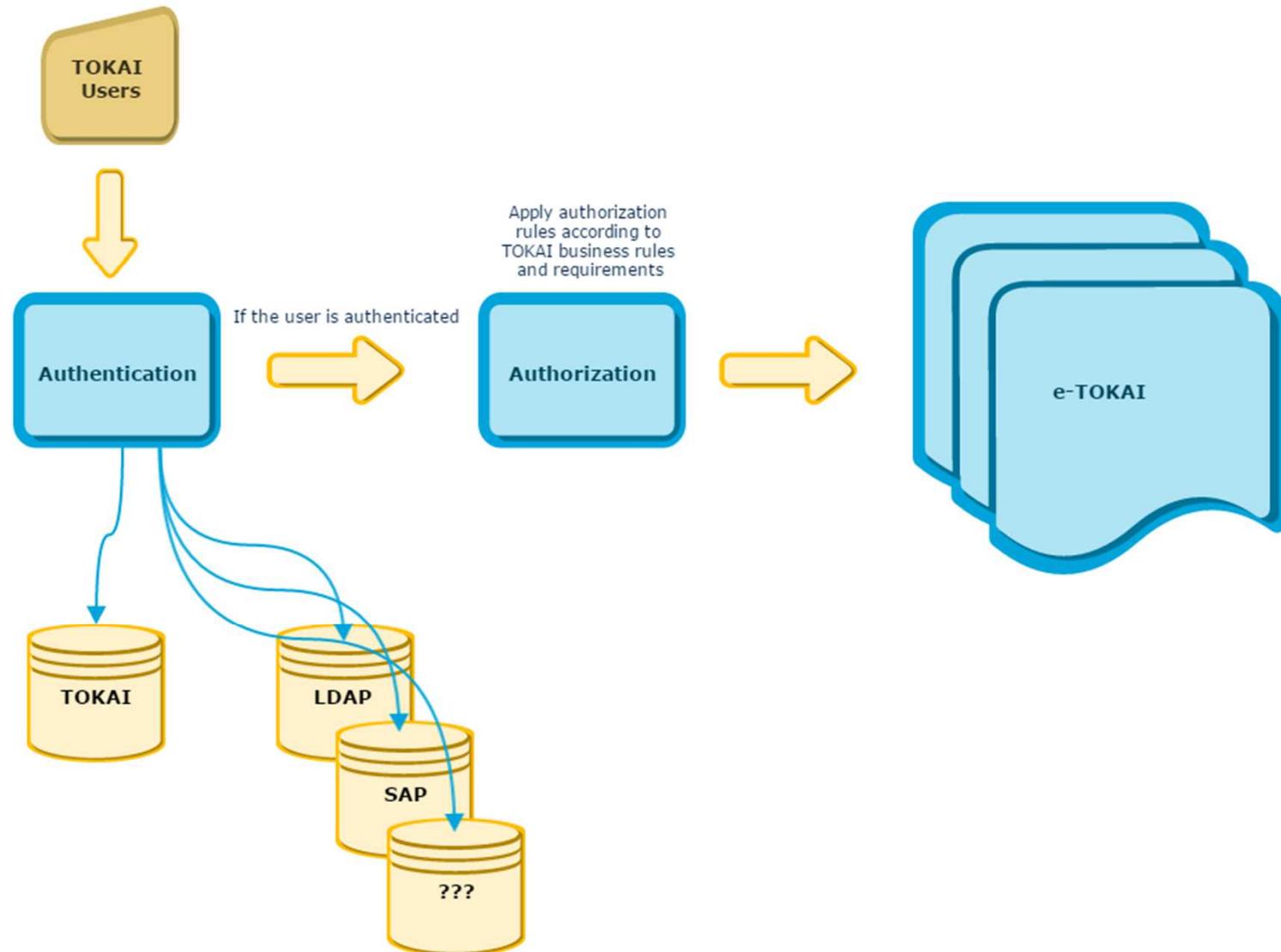
- Custom organization workflows (*in beta*)
- Configurable time based alert system (*in beta*)
- Real-time notification system (*in beta*)
- Re-engineered user management system (*in beta*)
- RAT matrix statistics drilldown capability (*in beta*)
- Export / Import from ECCAIRS (mapping of taxonomy completed)
- A new and enhanced Audit & Trace module



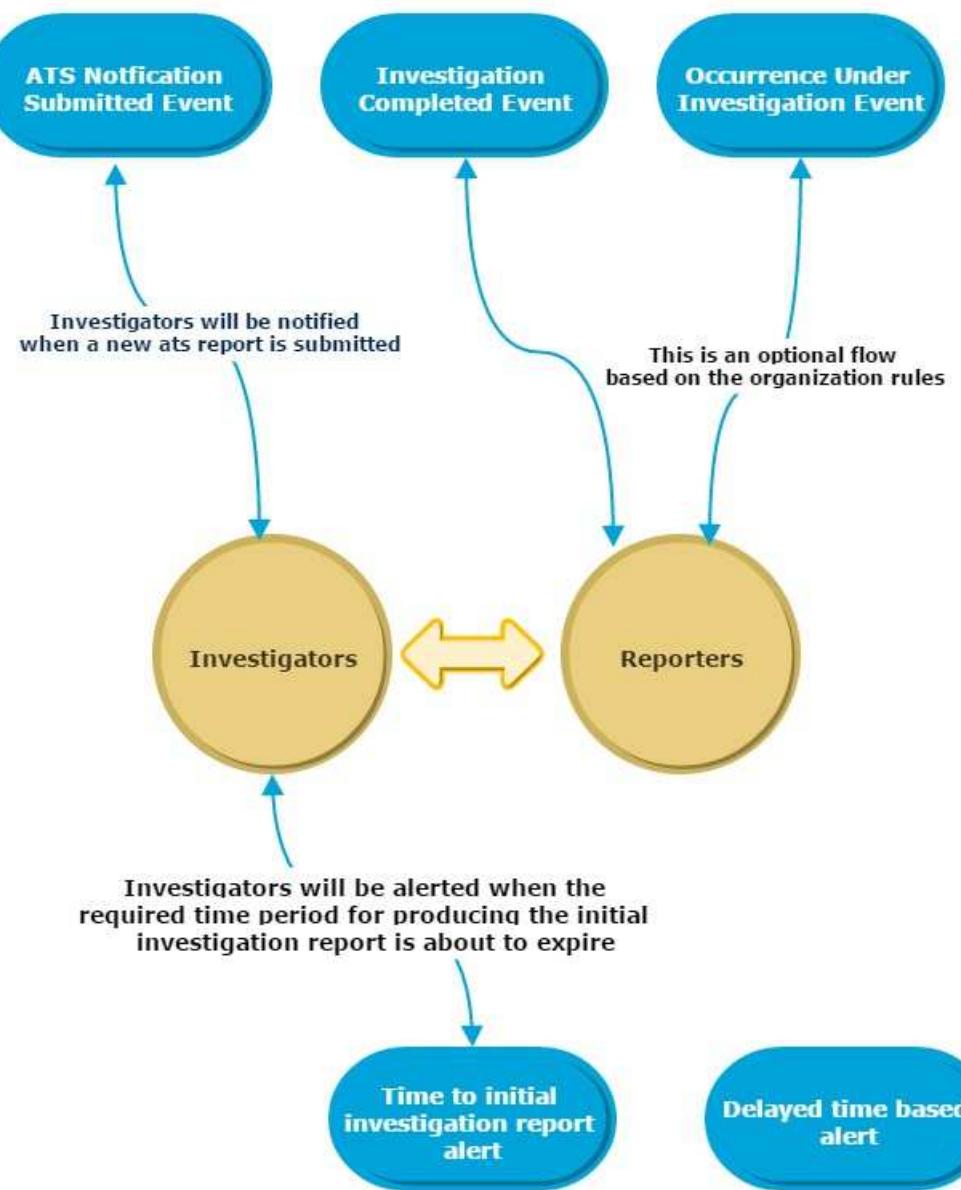


# Re-engineered user management system

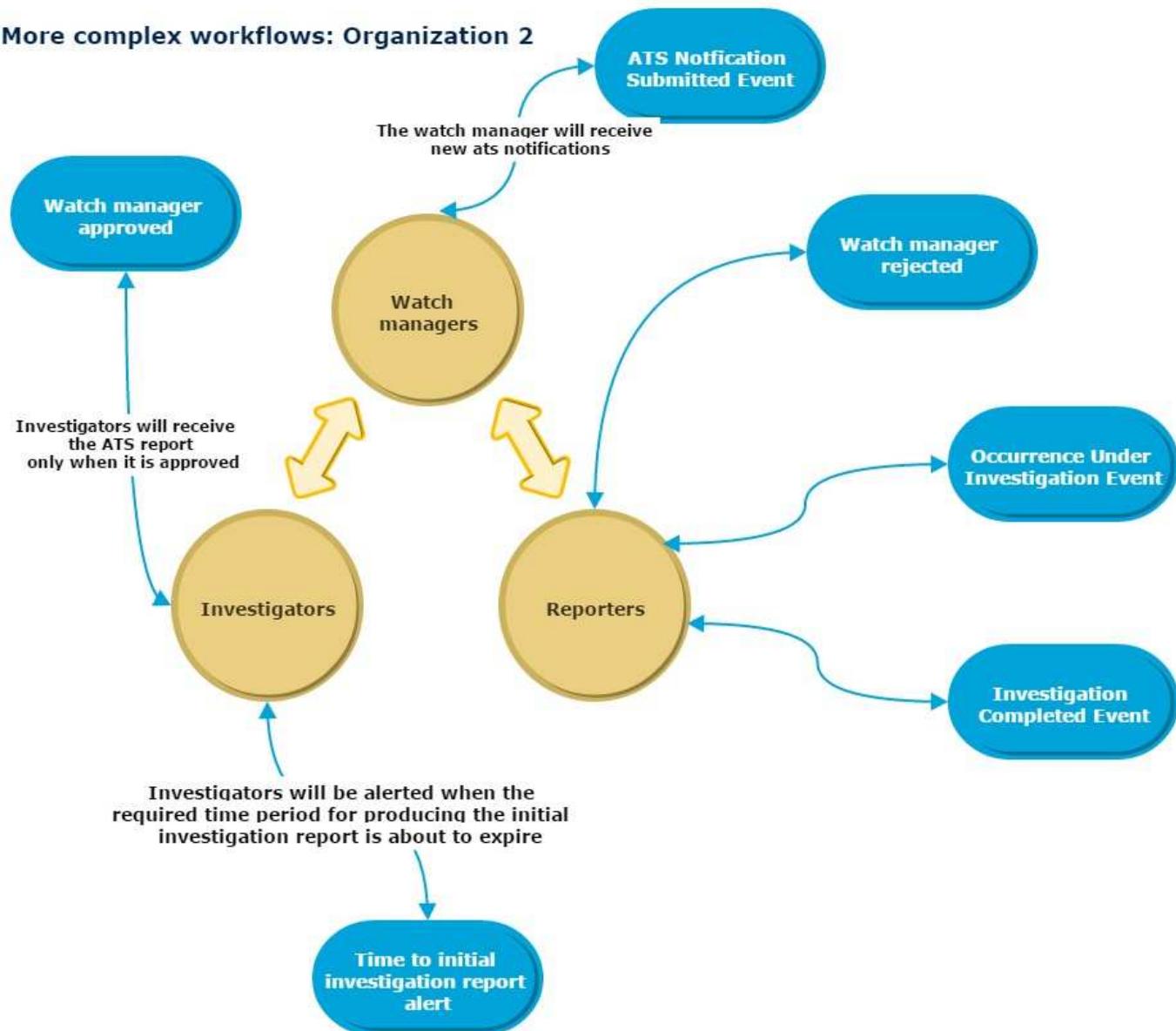
## Authentication & Authorization as two different processes



## Custom workflows: Organization 1



## More complex workflows: Organization 2



## What do you need to do (with our support) to deploy eTOKAI



- Choose server (EUROCONTROL NM or internal in your ANSP/FAB)
- Review forms and taxonomy
- Build forms and update taxonomy
- Build the SMS flow in the tools
- Set-up the units, regions, organisations, staff allocation and rights, distribution lists (all administration of the tool)
- Train the administrators
- Train the investigators
- Allow period for testing and feed-back
- Go live
- (mapping old taxonomy/database to new taxonomy to import your history)



**Thank you for your attention !**

**Questions?**

