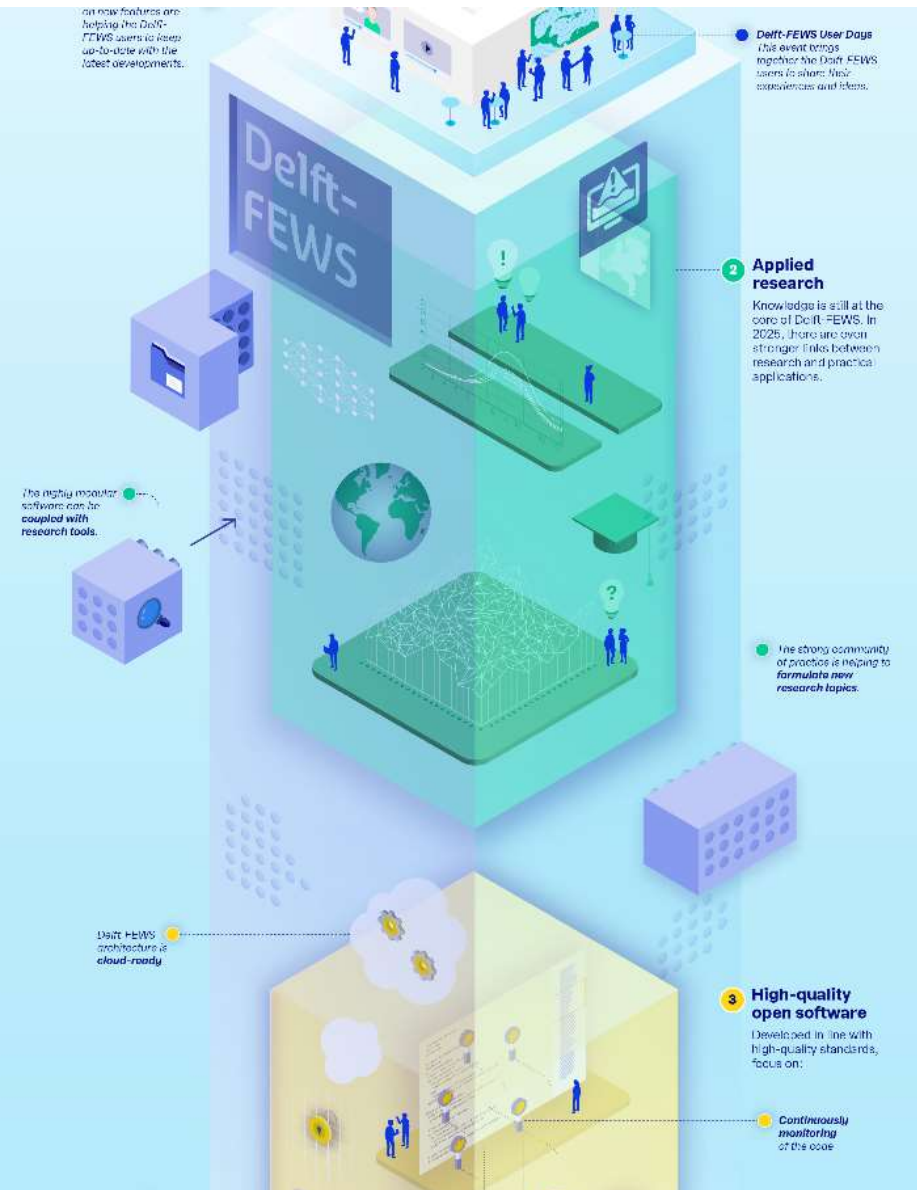**Deltares**

Delft-FEWS Vision & Roadmap Update

Delft-FEWS User Days Australia 24.08.2022

Delft-FEWS Product Management

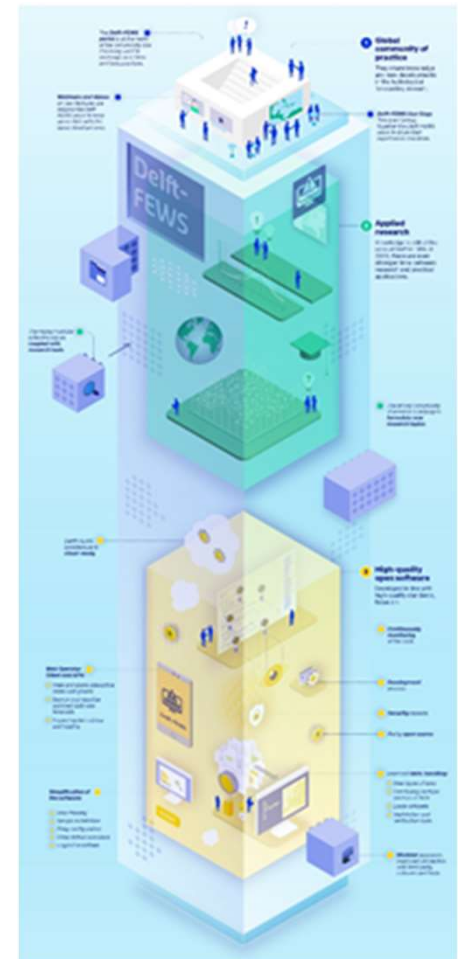Marcel Ververs and Gerben Boot

August 2022

Introduction…

- Welcome, on behalf of Delft-FEWS PM!

- Objective: everyone on the same page

- Roadmap 2022 Update in more detail.

As usual: [Links for more info](#)

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Delft-FEWS PM in more detail: who

Developments	Support & Maintenance	Finances + administration	Events & Community	Product line Operational Forecasting
gerben	marcel	rick/anita	ilonka	nadine

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Delft-FEWS Vision 2025…

- Delft-FEWS Vision 2025 core features
  1. Global Community of Practice
  2. Applied Research
  3. High quality open software
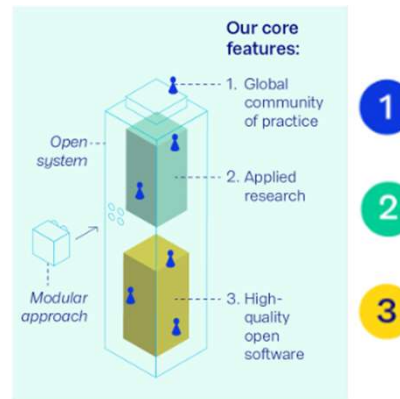
- Show and tell…story, presentations and infographic
  - Delft-FEWS portal: vision and roadmaps
  - Video
  - User Days / Events
  - Updates to the CSB

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Delft-FEWS Vision 2025: timeline

DSD-INT
Nov 2019

**Delft-FEWS
Vision 2025**
Presented

*Delft-FEWS
2020.01*

**July
2020**

**Delft-FEWS
Vision 2025 + roadmap 2020**
Retrospective + outlook

**DSD-INT
Nov 2020**

**Jan
2021**

*Delft-FEWS
2020.02*

**Delft-FEWS
2021.01**

**Delft-FEWS
Vision 2025 + roadmap 2021**
Updates

**DFUDA
DSD-NL
Anwender-
treffen**
May - July
2021

**Delft-FEWS
Vision 2025 + roadmap 2021**
Retrospective + outlook

**DSD-INT
Nov 2021**

**Delft-FEWS
2021.02**

Deltares
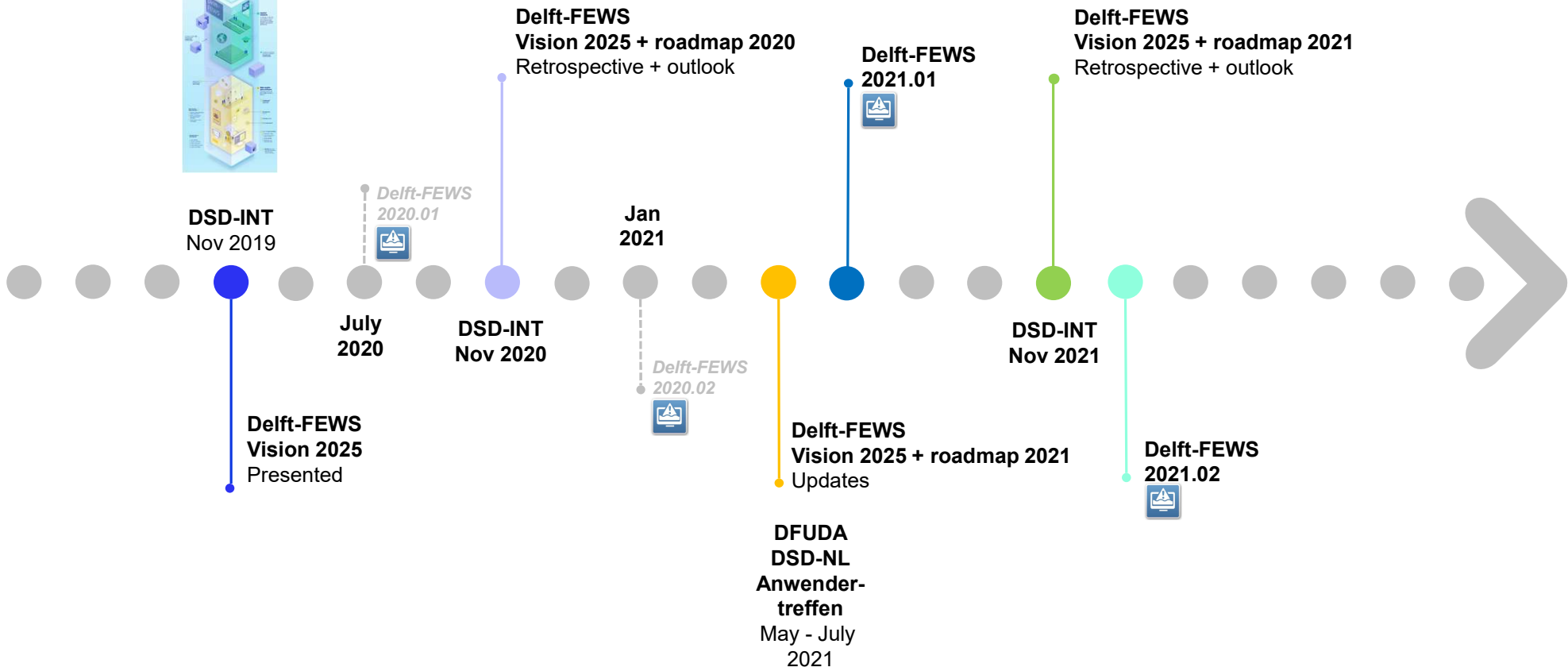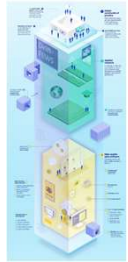
Delft-FEWS Vision 2025: timeline

**Delft-FEWS
2022.01**

**Delft-FEWS
Vision 2025 + roadmap 2022**
Retrospective + outlook

**Delft-FEWS
Vision 2025 + roadmap 2023**
Updates

**July
2022**

**DSD-INT
Nov 2022**
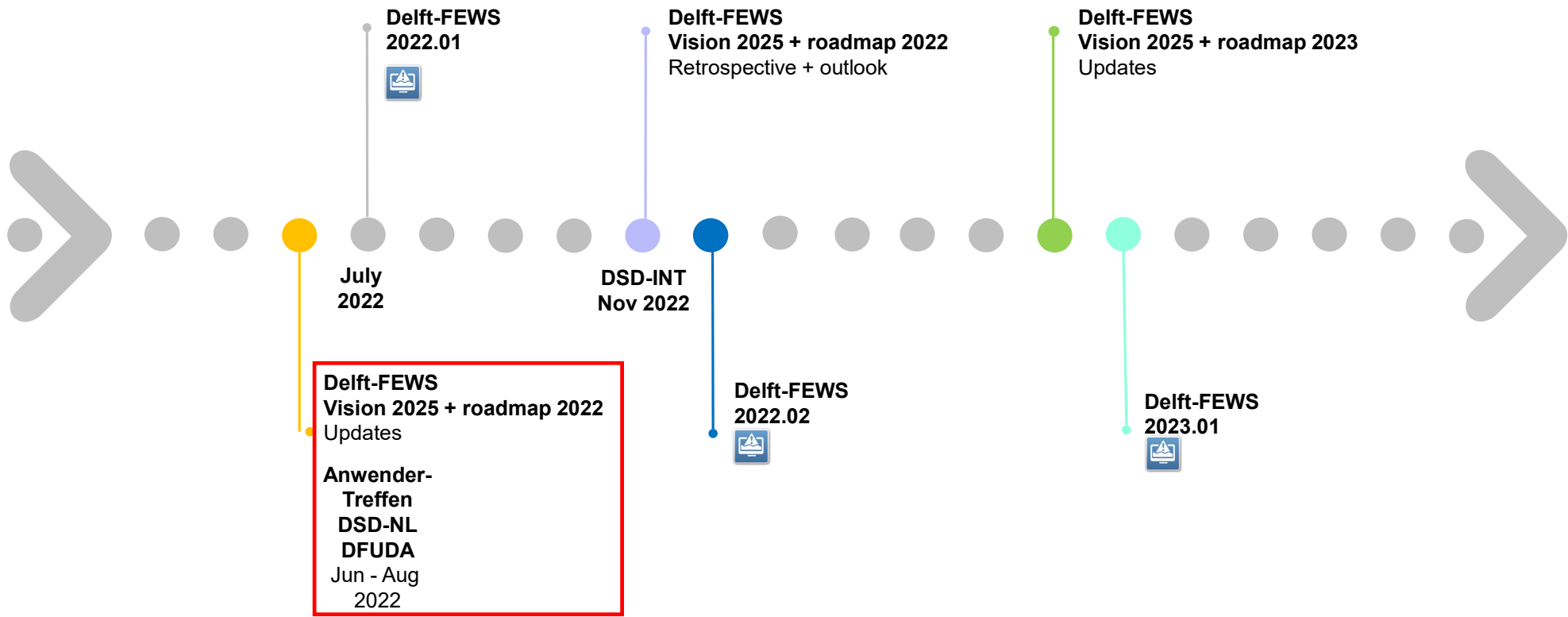
**Delft-FEWS
Vision 2025 + roadmap 2022**
Updates

**Anwender-
Treffen
DSD-NL
DFUDA**
Jun - Aug
2022

**Delft-FEWS
2022.02**

**Delft-FEWS
2023.01**

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Roadmap 2022 - update

To realise the Delft-FEWS [vision for 2025](), we set goals in annual roadmaps.

The focus of a roadmap is to keep the quality of the software components (client-side, server-side, web service, archive) up-to-date.

Focal points are:

- **High-quality open software**
  - Code clean-up
  - Code quality
  - Release process and Test automation
  - Security aspects & cloud developments
- **Web-based Operator Client**
- **Computational Framework**

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Roadmap 2022 – High Quality Open Software
Code clean-up

"To keep the code clean and maintainable, we have identified outdated and end-of-life modules and displays"

> • **Continue the work from 2021**
> • **<F12> option is always up-to-date**
> • **Important third party library updates**

- A wiki page is kept up-to-date to share our latest plans (what components are removed by when) and our progress. The <F12> check in your application is aligned with this WIKI page.

- Expected effort in 2022: ±35 days

- Main contact for this roadmap theme is: Marc van Dijk

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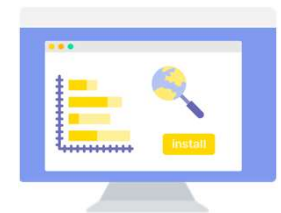
Roadmap 2022 – High Quality Open Software
Code quality

- "Our code quality is constantly monitored and all code commits are checked against the latest java coding rules"

> - **SonarQube code commit analysis**
> - **DevOps pilot**
> - **Increase unit test coverage %**
> - **Transparent reporting**

- Besides that we will actively maintain the (newly structured) Delft-FEWS hard and software requirements page and will launch a Delft-FEWS update strategy page. The latter contains an overview of all supported versions of relevant operating systems, database types and third-party libraries, java and middleware like Tomcat per Delft-FEWS version and by when this will change.

- Expected effort in 2022: ±40 days

- Main contact for this roadmap theme is: Gerben Boot

Deltares
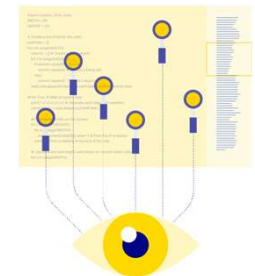
Roadmap 2022 – High Quality Open Software
Release process and test automation

"We are continuously improving our release process to deliver high quality and well-tested releases"

- **Product Risk Analysis**
- **Release Retrospective**
- **Test scripts transferable**
- **Increase automatic tests (Docker)**

- Separating GUI code and business logic is also on our radar this year and we will further complete our **Master Test Plan** to easily derive the our **Release Specific Test Plans**.

- Expected effort in 2022: ±20 days

- Main contact for this roadmap theme is: Marcel Ververs

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Roadmap 2022 – High Quality Open Software
Security aspects *and cloud developments*

"For Delft-FEWS a **security matrix** is available to visualize all security options per Delft-FEWS component"

- **Network Security**
- **Access Management**
- **Threat Protection**
- **Information Protection**
- **Data (encrypted storage)**

- We also respond quickly to our daily checks with respect to OWASP messages (OWASP=Open Web Application Security Project) which runs on our build & test environment (TeamCity)

- Expected effort in 2022: ±40 days

- Main contact for this roadmap theme is: Gert-Jan Schotmeijer

- Documents are available in draft but available on request (and WIKI – Admin Pages)

- Available for questions/discussion (MS Teams) with your IT/security experts!

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Security Matrix
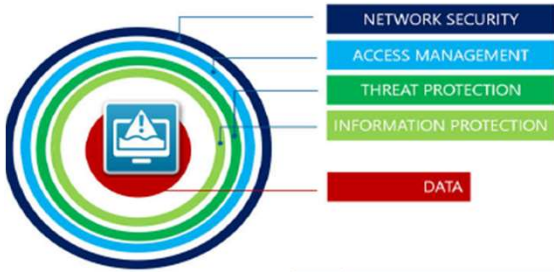
Delft-FEWS security options per component

		A. Encrypted network traffic	B. Port security	C. Access Delft-FEWS Component	D. MFA	E. Role Based Access (OS)	F. Access User	G. OpenID Connect (i.e. Azure Active Directory)	G. OpenID Connect (i.e. Active Directory)	H. Access Audit Trail	I. Change Audit Trail	J. Session Time Out	K. Encrypted storage
BE	1. Forecasting Shell Server	✓	✓	IP-address Port-level	N/A	✓	N/A	✓	✓	🐧⊞ N/A	🐧⊞ ✓	N/A	✓
BE	2. Database	✓	✓	IP-address Port-level	N/A	✓	Role based	✓	✓	✓	✓	N/A	✓
BE	3. Master Controler	✓	✓	IP-address Port-level	N/A	✓	N/A	✓	✓	🐧⊞ N/A	🐧⊞ ✓	N/A	✓
GUI	4. Admin Interface	✓	✓	IP-address Port-level	✓	✓	Role based	✓	✓	✓	✓	✓	✓
GUI	5. Operator Client	✓	✓	IP-address Port-level	✓	✓	Role based	✓	✓	✓	✓	✓	✓
GUI	6. Configuration Manager	✓	✓	IP-address Port-level	✓	✓	Role based	✓	✓	✓	✓	✓	✓
API	7. Archive server	✓	✓	IP-address Port-level	N/A	✓	✓ *	✓	✓	✓ *	✓ *	✓	🐧⊞ ✓
API	8. Database proxy	✓	✓	IP-address Port-level	N/A	✓	✓ **	✓ *	✓ *	✓ *	N/A	N/A	✓
API	9. Web services	✓	✓	IP-address Port-level	N/A	✓	Role based	✓ *	✓ *	✓ *	✓	N/A	✓
API	10. Datafeeds	✓	✓	IP-address Port-level	N/A	✓ ***	N/A	✓ ***	✓ ***	N/A	N/A	N/A	N/A

BE	Back End	🐧⊞ ✓ OS level and Delft-FEWS level	🐧⊞ N/A Only at OS level, N/A for Delft-FEWS components
GUI	Graphical User Interface	✓ Available in Delft-FEWS	✓ ** Partly
API	Application Programming Interface	✓ * Needs special configuration	✓ *** Available in Delft-FEWS, depends on 3th party connection

NETWORK SECURITY
ACCESS MANAGEMENT
THREAT PROTECTION
INFORMATION PROTECTION
DATA

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Roadmap 2022 – High Quality Open Software
Security aspects and **cloud developments**

"Delft-FEWS is cloud agnostic and Deltares is willing to support you to make effective and efficient choices migrating Delft-FEWS to a cloud-environment"

- **Incorporate cloud services in Delft-FEWS components**
- **Sharing knowledge for migrating to the cloud**

- In 2022, we continue learning from our ongoing cloud (migration) projects. These projects are focusing on the up- and downscaling of computational cores using docker containers and switching components on/off from a financial perspective.

- From a knowledge sharing perspective we will capture these experiences in our documentation WIKI and we will complete the documentation based on the material(s) we previously shared in the "Delft-FEWS in the cloud" webinar (from January 2022).

- Main contact for this roadmap theme is: Gert-Jan Schotmeijer

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Roadmap 2022 – Web Operator Client

- End of 2021 / early 2022: development & innovation sprints
  - Improve the underlying FEWS webservices
  - Organize the development process and tooling
  - Investigate and experience integration of Web OC components in other web-based systems

- **Deliver Web OC MVP in 2022**
- **Involve (potential) users in UX/UI design**
- **Approach external stakeholders for co-creation**

- Expected effort in 2022: ±140 days
- Main contacts for this roadmap theme are: Daniel Twigt and Tom Bogaard

-

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Roadmap 2022 – Computational Framework

- The Computational Framework is the *mode* of Delft-FEWS to run scenarios which are not strictly connected to the 'here & now' like in operational forecasting systems. You can define and run scenarios in the (far) past or future, visualize, compare and manage them.

> - **What-If Editor and What-if Template functionality fully available, also for Client-Server systems**
> - **Interaction with Open Archive for storing and searching scenarios**
> - **Exchange of scenarios between users**
> - **Deliver blueprints for Deltares models**

- Expected effort in 2022: ±55 days

- Main contact for this roadmap theme is: Peter Gijsbers

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Contact

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