

Ubcasting Weather services in Kokkola:

VEO - Vaisala Environment On-line
1/2008-1/2009

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Ubcasting Project Workshop 10.9.2008



Vaisala Environment Online (VEO) project

VEO project is part of Ubiquitous Weather Service project (UBICASTING), which is part of UBICOM program financed partly by TEKES Finish Funding agency of technology and innovation.

This is a consortium project where Vaisala is partnering with:

Finnish Meteorological Institute (FMI); *Mesoscale modelling, nowcasting, traffic, air quality and chemical release models. Kokkola case the ESCAPE model plays important role.*

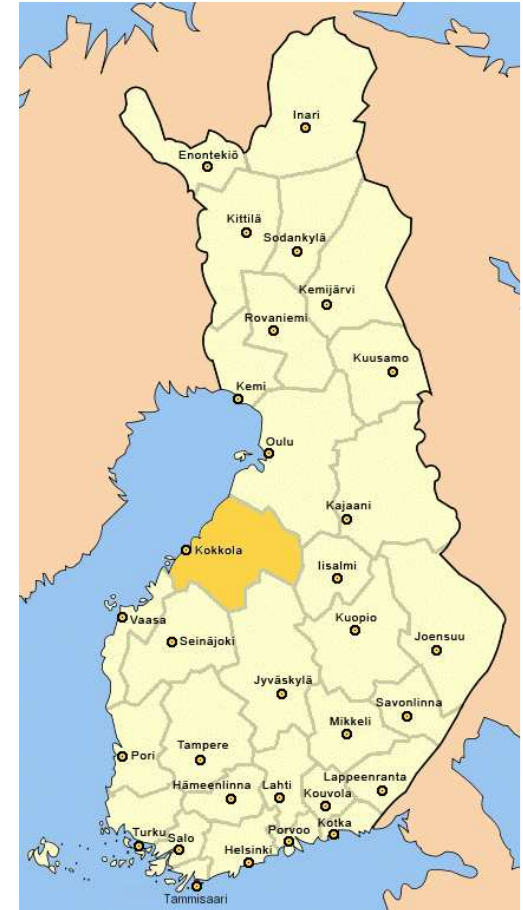
INSTA Defsec ; *Situational Awareness Software with Chemical Release Model (ESCAPE)*

Vaisala; *User interface project – Vaisala Environment Online, including weather information combined with forecasts and other environmental information.*

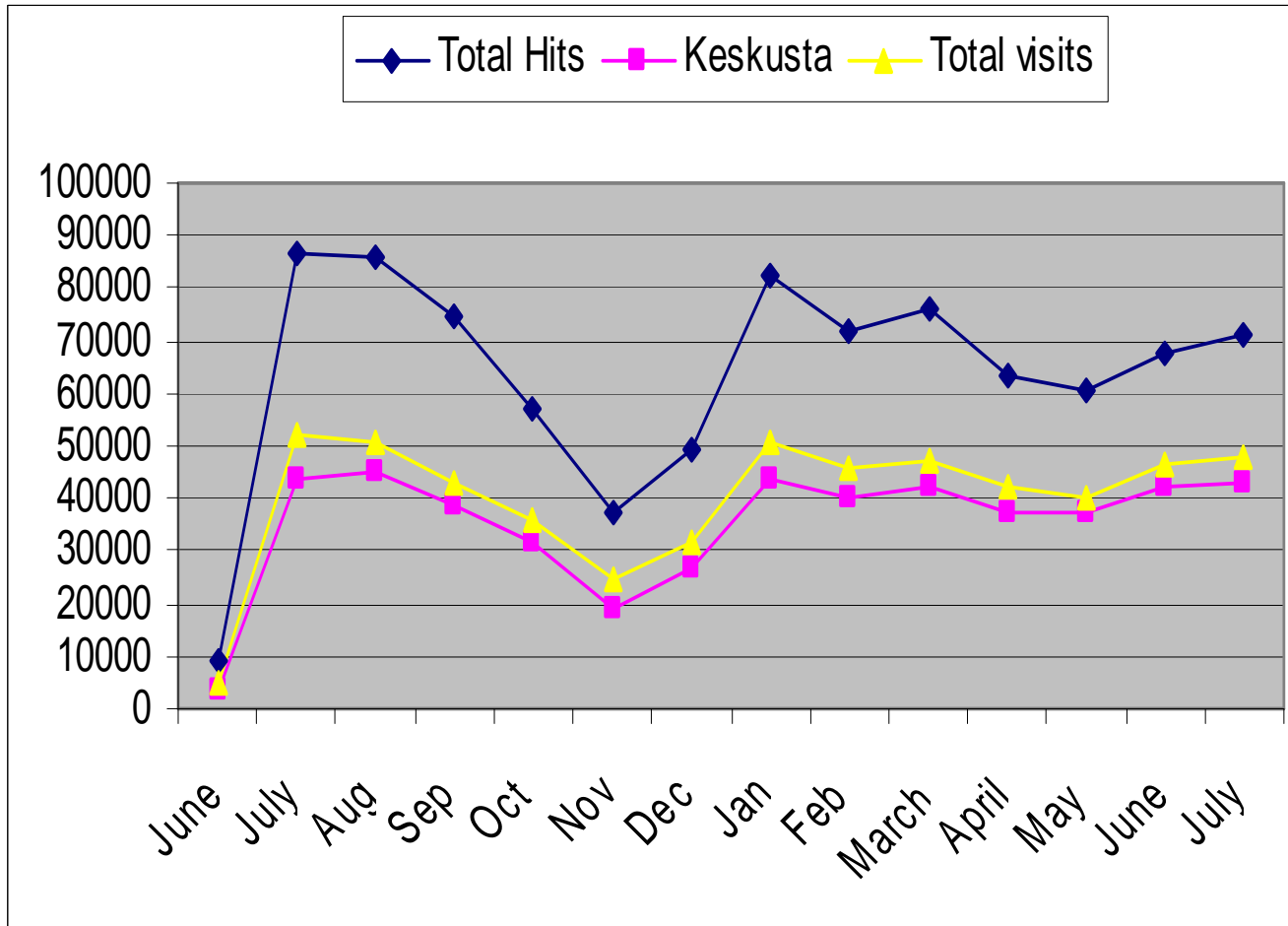
Kokkola's weather network

The Vaisala Weather Service network of Kokkola started in June 2007. This network together with Finavia's and FMI's weather stations forms the basis for VEO project.

Kokkola has the largest inorganic chemical industry area in Scandinavia, which offers a very good platform for industrial application



Statistics 06/2007-08/2008



Total Visits

606 800

Total Hits

959 700

since 26.6.2007

VEO pilot project

Customer needs are represented by **Kokkola Industrial Park (KIP)** where next companies OMG, Boliden, Kemira, Yara, Kemira Fine Chemicals, OnePoint, Neste Oil, Rauanheimo (port operator) and Port of Kokkola have been very active. In addition also Kokkola's Energy, Kokkola city environmental office, fire and rescue service, education, technical and sport departments of **Kokkola City**, Media house Keskipohjanmaa and Landfill company have participated the project.

FMI supports chemical release model 'Escape' and weather data, weather radar data and forecasts.

Insta Defsec is developing situational awareness software with Escape model to be tested in industrial area.

Vaisala offers the weather service and user interface for a trial period.

Pilot project result -> First concept of user interface where environmental data from above mentioned partners is combined.

VEO user interface

<http://www.kokkolankeli.fi>



The VEO user interface concept development

1. The most important customer groups were determined
2. Face to **face interviews** with the customer were performed
3. The **internet survey** was performed to confirm and detail the concept
4. The user interface **concept was created** together with co-operation partner Fusion
5. The **concept was tested** with the customers in the workshop
Adjustment of the concept
6. The VEO development project started together with two subcontracting companies Fusion and Eficode

Welcome

News

Kemikaalivuoto

+ Lisää sivu

KIP Etelä

29.08.2008 09:33

Lämpötila, °C

12.4



Suhteellinen kosteus, %

73.9

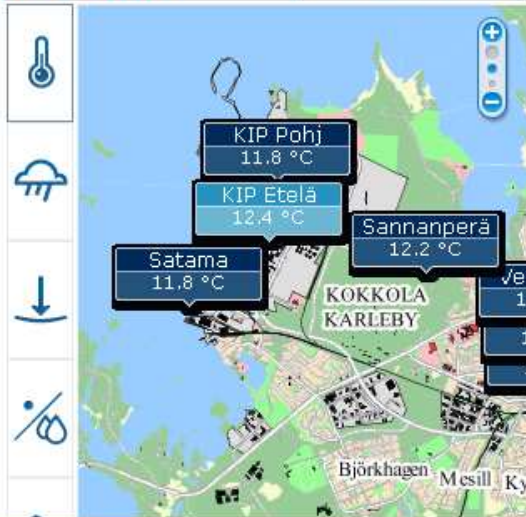


Lisää komponentteja

Suurena koko näytölle Poista moduli

KIP Etelä

29.08.2008 09:33



KIP Etelä

29.08.2008 09:33

Havaintotiedot ja ennuste



Lisää komponentteja

Suurena koko näytölle Poista moduli

Keskusta

09:30



<http://www.kokkolankeli.fi>

General issues achieved in VEO user interface

- Modular user interface design
- Customers can modify themselves the displayed parameters
- Data/information is presented on the map
- Real time meteorological data and forecast combined
- History data availability

(Note: The user interface not aplicable for IE 6.0)

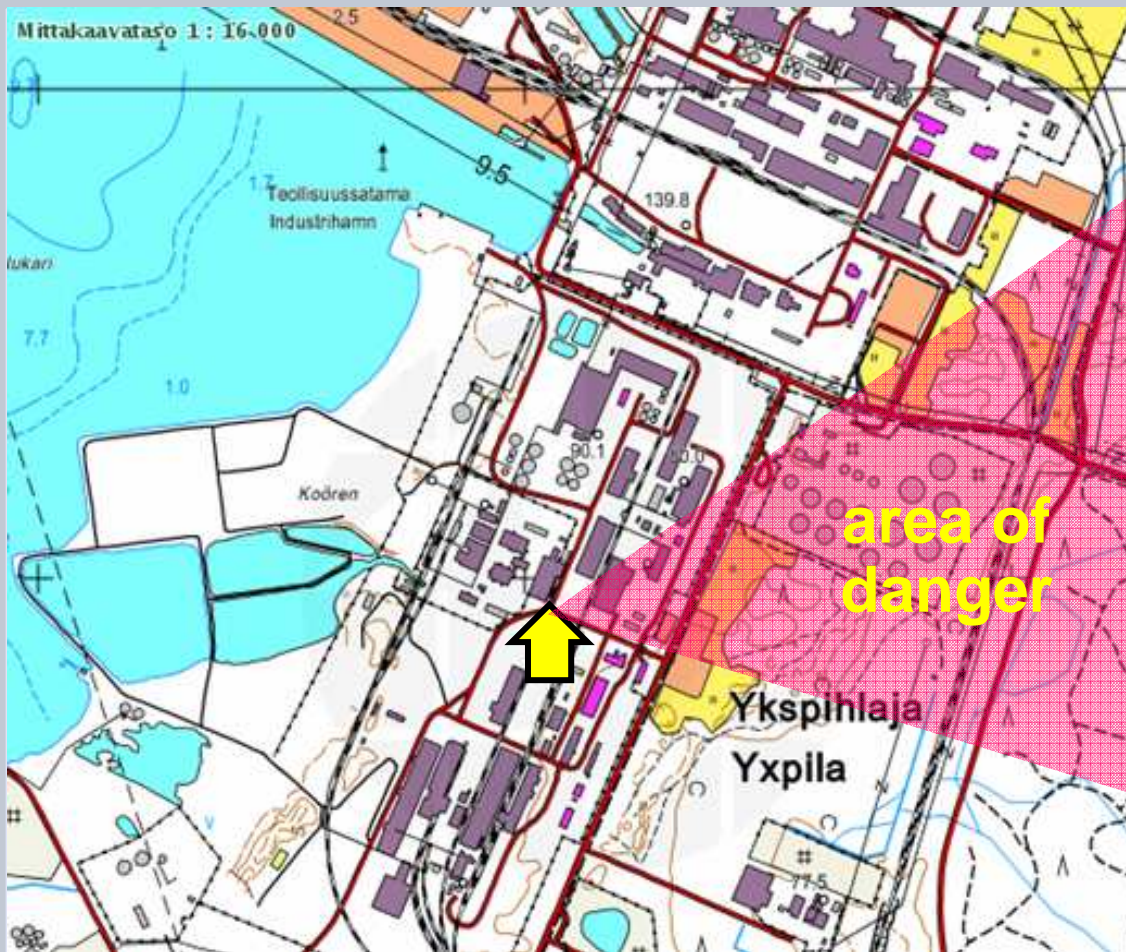
Future: Chemical release model and alarms available for pilot

Teollisuusalueen sää

Sadetutka

Kemikaalivuoto

+ Lisää sivu



Insta iCM

Choose the released chemical:

unknown

ammonia

phosphoric acid

chloride

sulphuric acid

nitric acid

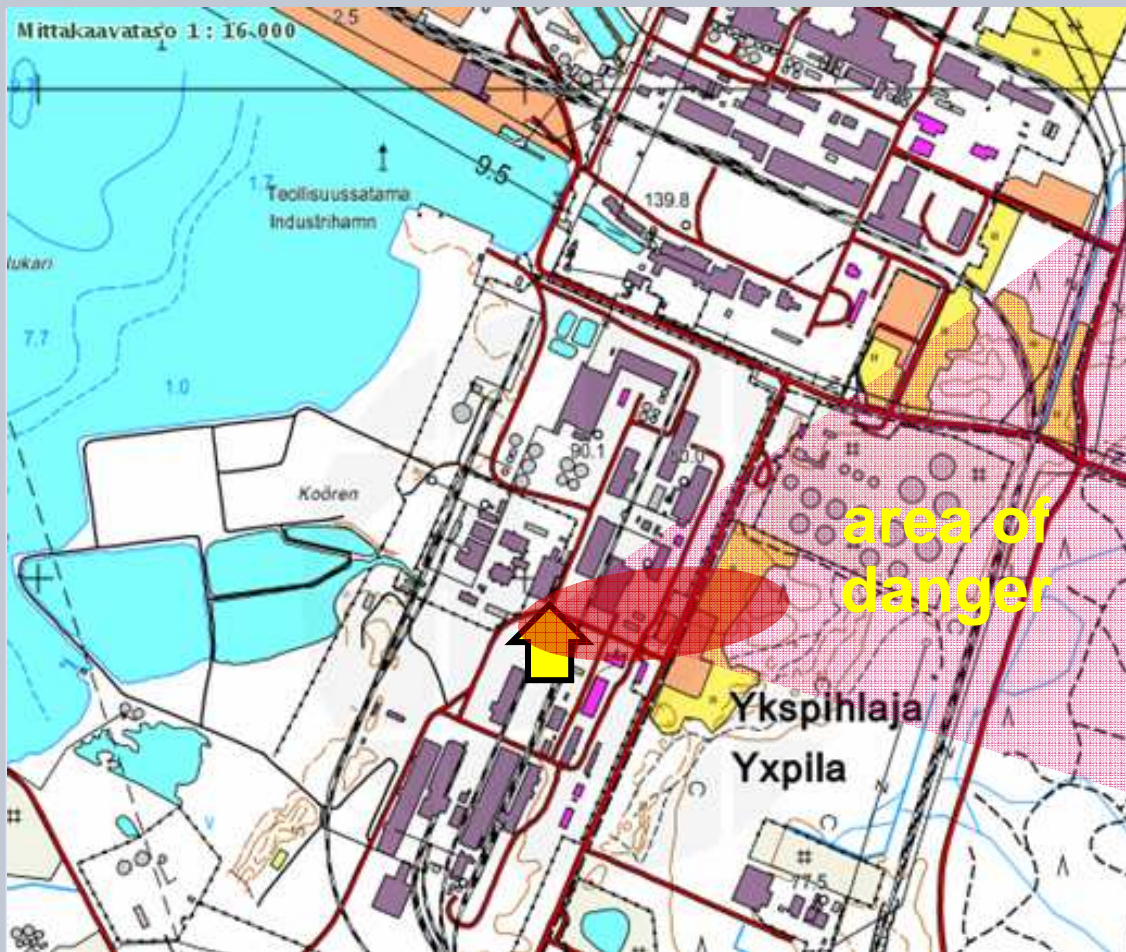
- When the chemical is unknown, choose the 'unknown' option. ESCAPE model will show the area of danger, which is calculated from wind direction and stability.

Teollisuusalueen sää

Sadetutka

Kemikaalivuoto

+ Lisää sivu



Insta iCM

Choose the released chemical:

unknown

ammonia

phosphorous acid

chloride

sulphuric acid

nitric acid

- When the chemical is known, ESCAPE will show the area of danger sector (pink area) and the immediate area of danger = evacuation area (dark red area)..

Observation Network at Kokkola

1. Kauppatori/Market place
2. Keskusta/Center- weather camera point
3. Kokkolan satama/Port of Kokkola
4. *Kruunupyyn lentoasema/Kruunypyö Airport (Finnavia)*
5. Storkohmo
6. Suurteollisuusalue/Eteläinen KIP/South
7. Suurteollisuusalue/Pohjoinen KIP/North
8. *Tankarin majakkasaari/Island of Tankar (FMI)*
9. Uintikeskus VesiVeijari/Swimming Center VesiVeijari

STEP 1. Enlargement of network

10. Mast installations at Sannaperän cell phone mast
11. Yliopistokeskus / University Center
12. *Fire and Rescue service (FMI)*
13. *Air quality information from Kokkola City*

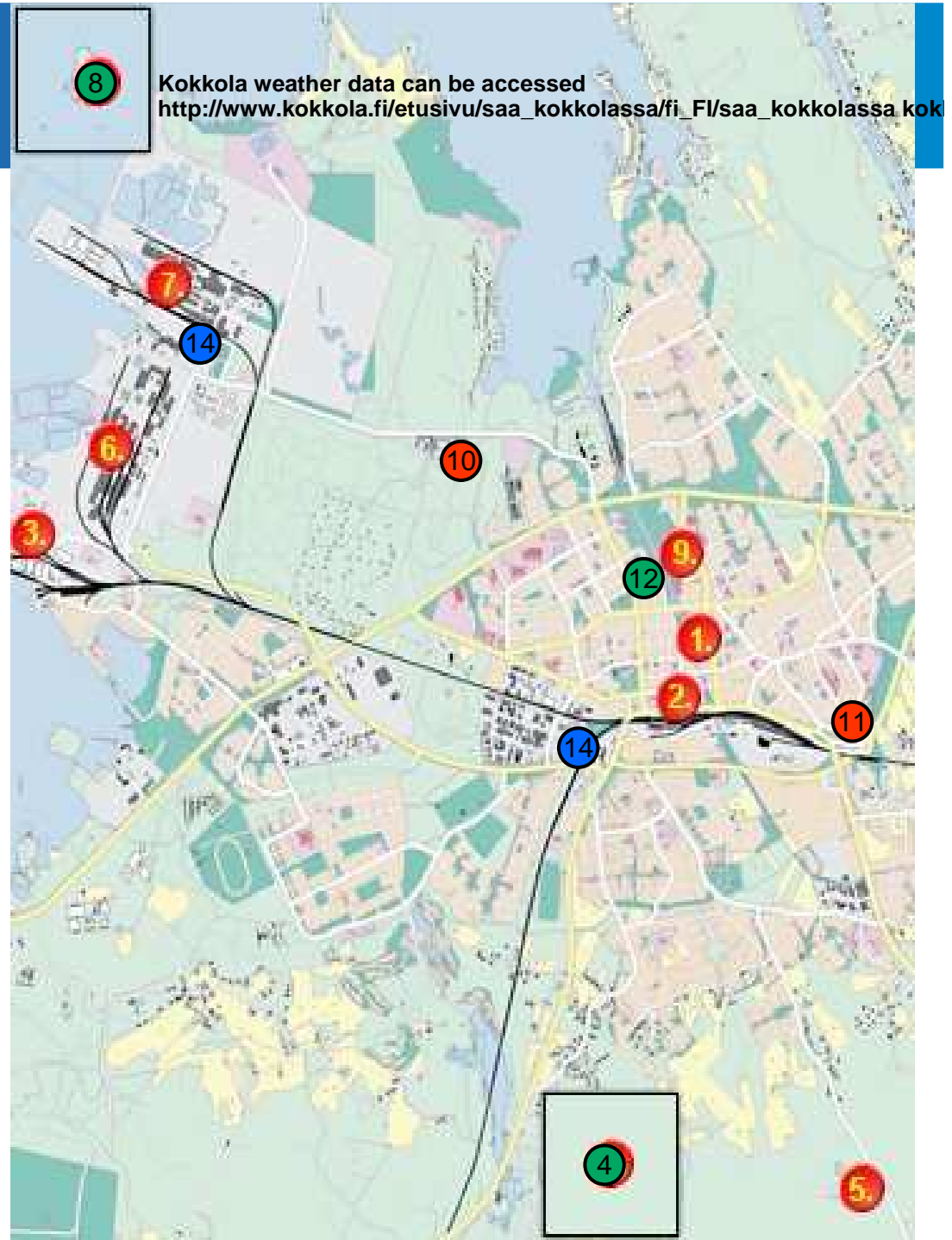
STEP 2. Enlargement of network

14. *Optical Sensors for slipperiness (not existing yet)*
15. *Water Level (not existing yet)*

Black text already connected

Green text will be connected in near future

Blue text future plans



Project Schedule

	2008							
	1-2	3-6	7-8	9	10	11-12	1(4)/2009	
Userinterface determination	←→							
User interface build up		←→						
The first version in pilot use			←→					
User trials Kokkola Industrial Park, Port of Kokkola, City env. office					←→			
Possible network enlargement (?)						←→		
Usability test					←→			
Chemical release model pilot together with Insta Defsec					←→			
End of the project and customer feedback							←→	

Thank you – Kiitos !