

# **JBA Consulting: Past, Present and Future**

Focussing on my recent flood forecasting experiences in Vietnam

Matthew Cowdell

[matthew.cowdell@jbaconsulting.com](mailto:matthew.cowdell@jbaconsulting.com)

# JBA Consulting – who are we?



Catchment and River Restoration

Catchment Hydrology and Modelling

Coastal Flood and Erosion Risk Management

Ecology and Environment

Flood Risk Management

Model Auditing and Management

River Hydraulics and Modelling

Software

Working with Natural Processes

# JBA Consulting – who are we?

**JBA**  
consulting

Catchment and River Restoration

Selling

Management

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Working with Natural P



**19** NATIONAL

(Sweden, Switzerland, UK, Ireland, Germany, Singapore, Australia, Cambodia, USA)

# JBA Consulting – who am I?

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Photo courtesy of Karen Cowdell, mother



# Contents

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## Past

- Where did it all begin?
- Where have we worked?

## Present

- Our current projects
- **My recent flood forecasting experiences in Vietnam**

## Future

- How can this help us in the future?

# Past



# Past – How did it all begin?

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- One man and his dog (almost)
- The Jeremy Benn of Jeremy Benn Associates



# Past - Projects around the world



Created with mapchart.net ©



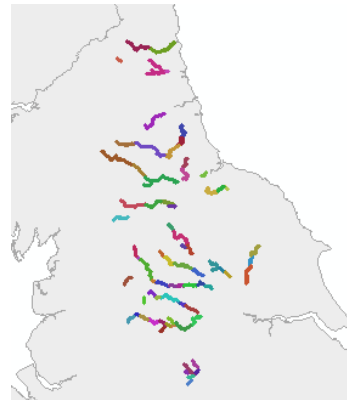
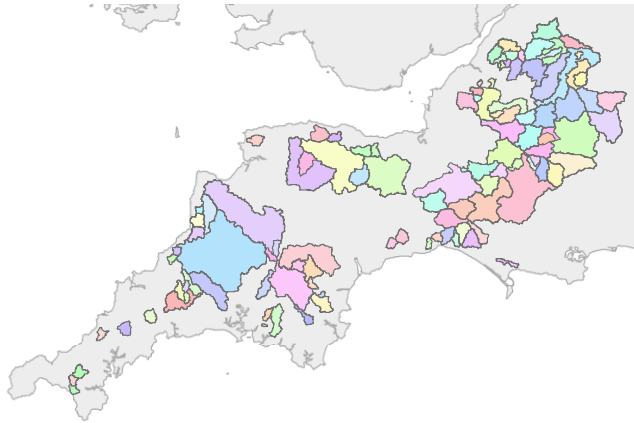
# Present

# UK activities – model convergence

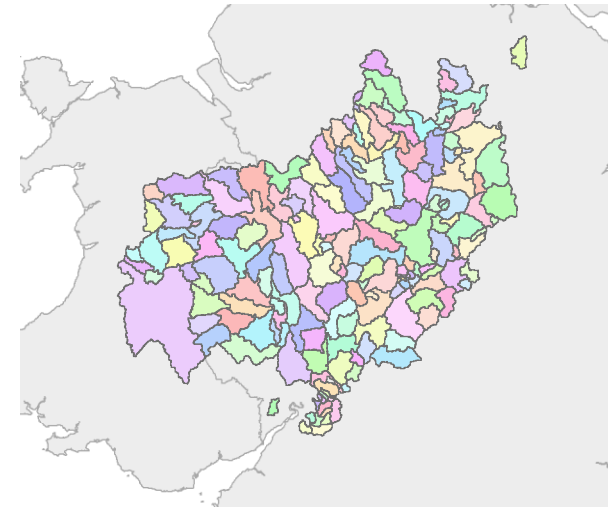
- **What is the strategy?**

North East England

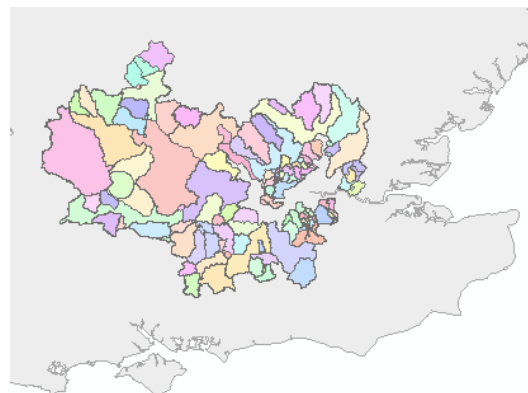
South West England



The Midlands

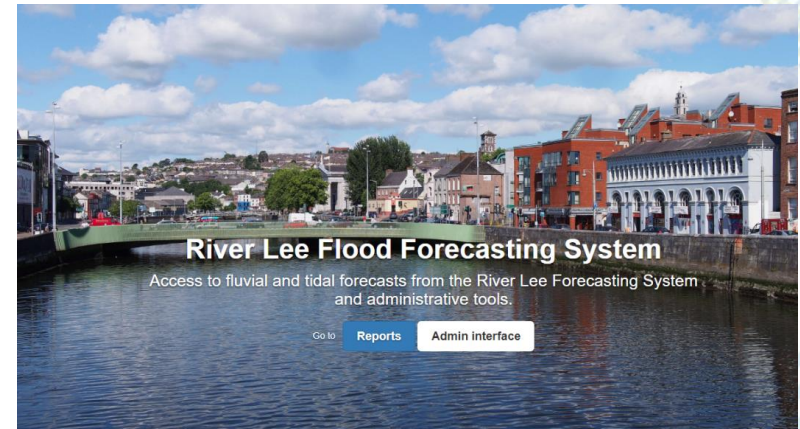
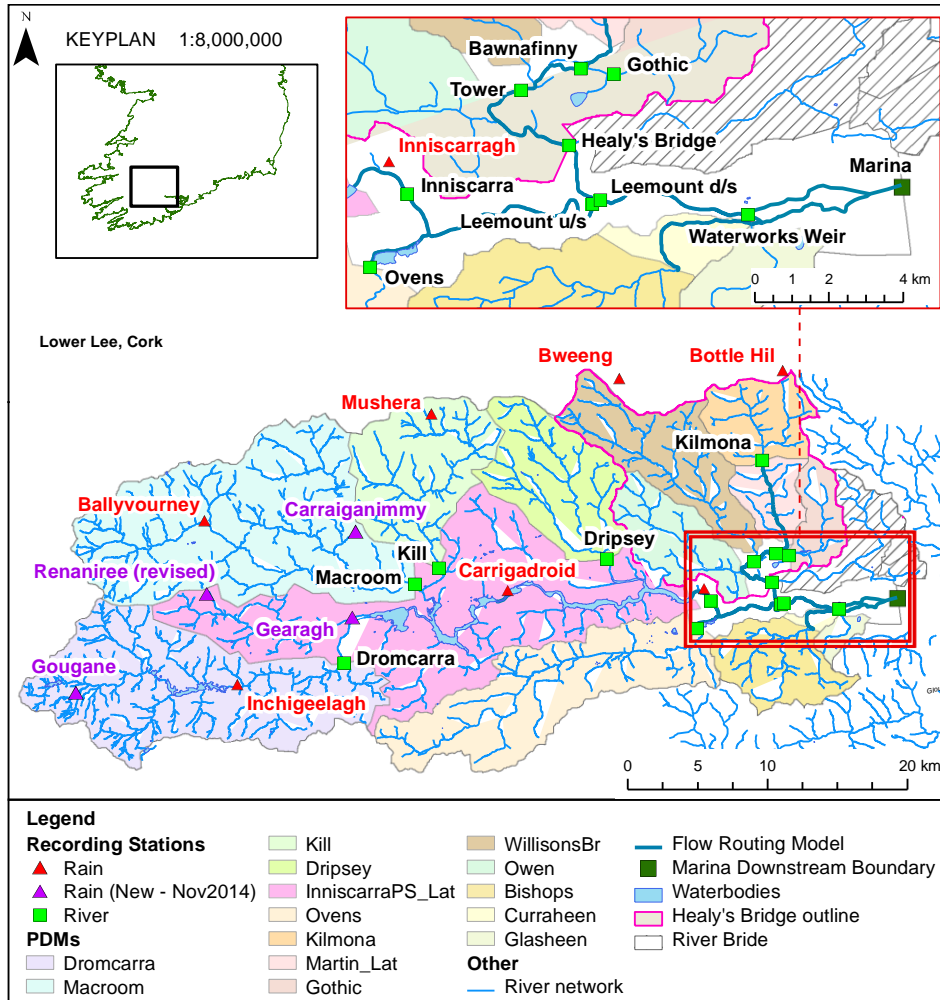


Thames region



**> 700 models  
for conversion  
Within 3 years**

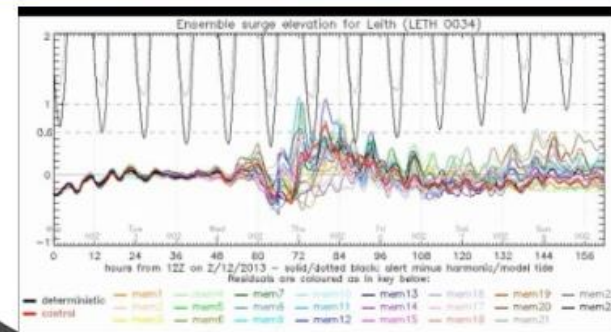
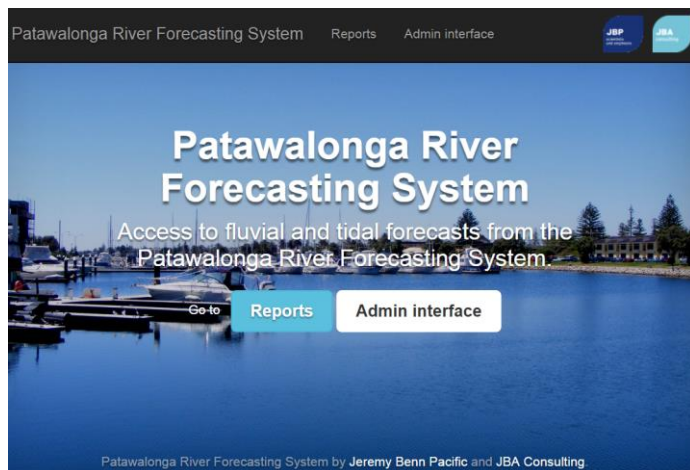
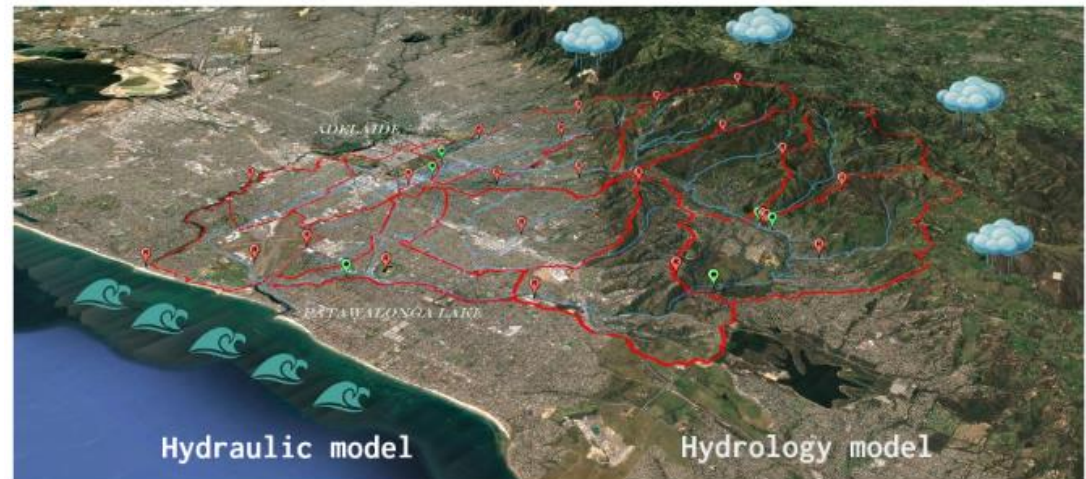
# Forecasting system for River Lee, Ireland





# Forecasting System for Pat Lakes, Australia

- Automatic rainfall, flood and coastal surge forecasting and warning system





# Vietnam

## New forecasting system



# Vietnam – flood risk

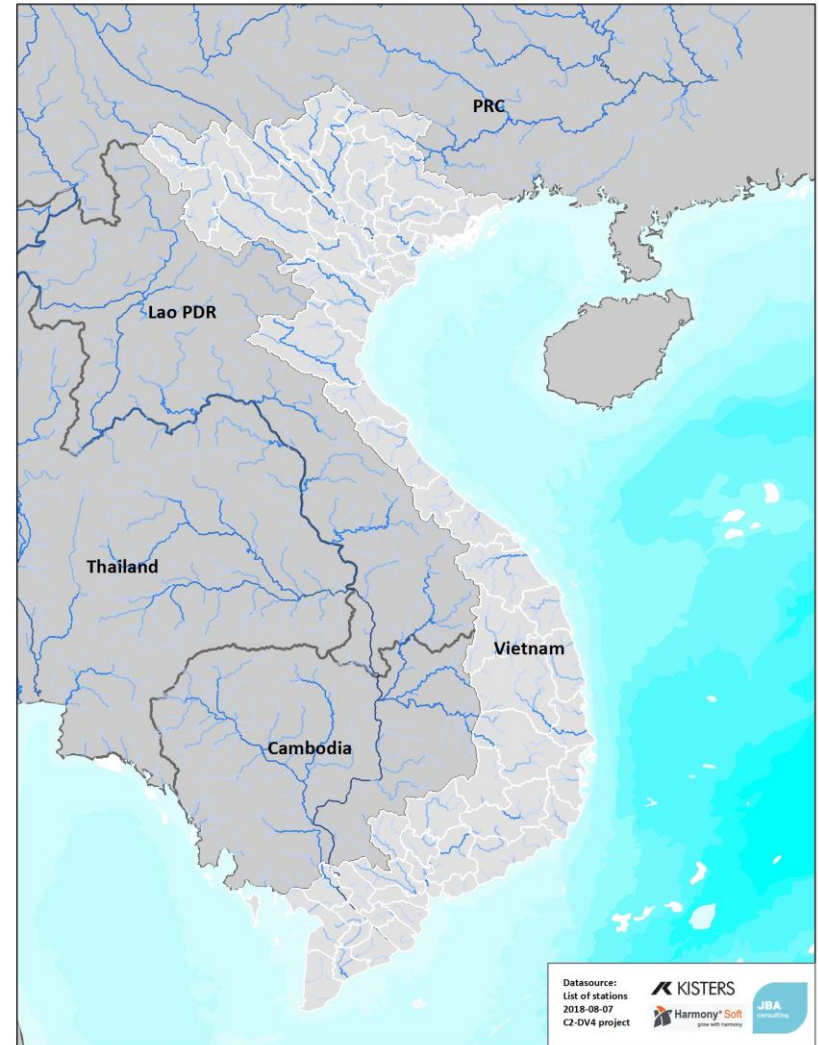
- Flood risk from multiple sources

WORLD NEWS JULY 24, 2018 / 5:53 AM / 3 MONTHS AGO

## Vietnam flood death toll rises to 27, more rain forecast



Reuters, 2018



Datasource:  
List of stations  
2018-08-07  
CZ-DV4 project

KISTERS

Harmony Soft  
powered by KISTERS

JBA  
consulting

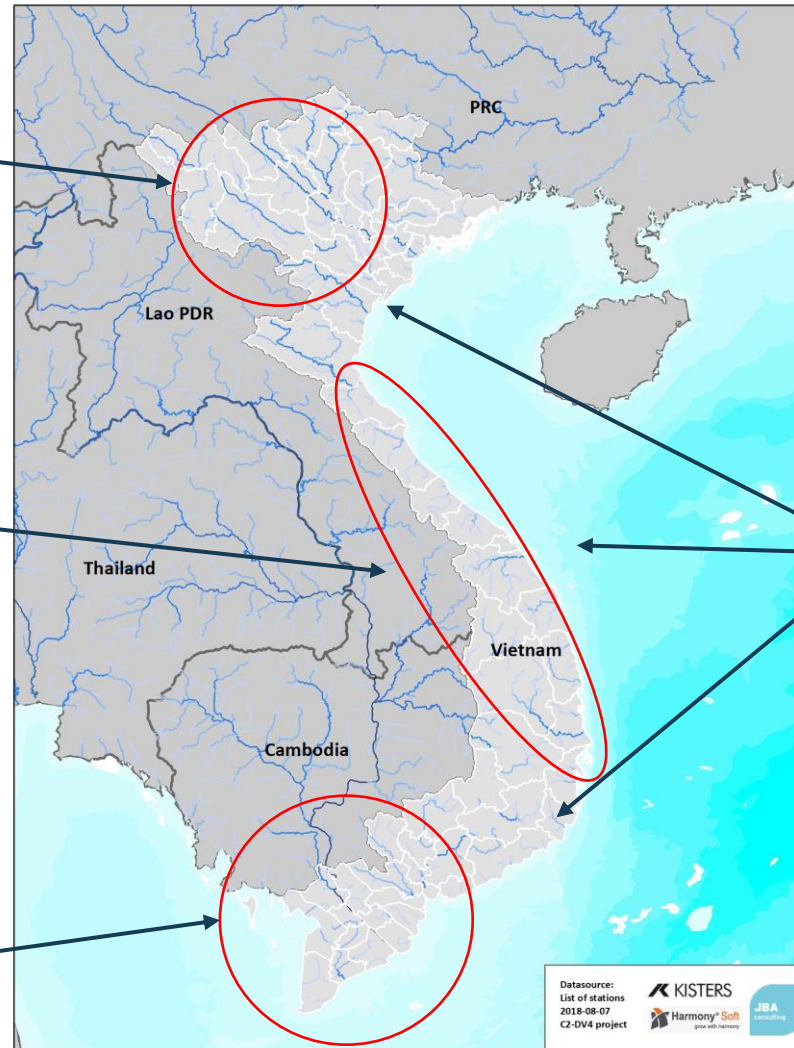


# Vietnam – flood risk

Land and mudslides  
in mountainous  
Northern regions

Flash flooding in  
Central regions

Large flat floodplains  
in Southern regions



Multiple areas of  
overtopping and  
storm surge risk

# **Vietnam – current approach**

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**What do they do now?**

**How do they do it?**

**Why do they need something else?**



# Vietnam – what do they do now?

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- Forecasting procedure – guided by the eight steps
  1. Collect data (including checking)
  2. Analyse the current situation
  3. **Run forecasting models and review outputs**
  4. Discussion between forecasters
  5. Create a bulletin
  6. Publish the bulletin and notify relevant authorities
  7. Continue to monitor the situation and update the bulletin
  8. Review the bulletin's accuracy after the event

# Vietnam – how do they do it?

- Custom-built flood forecasting software

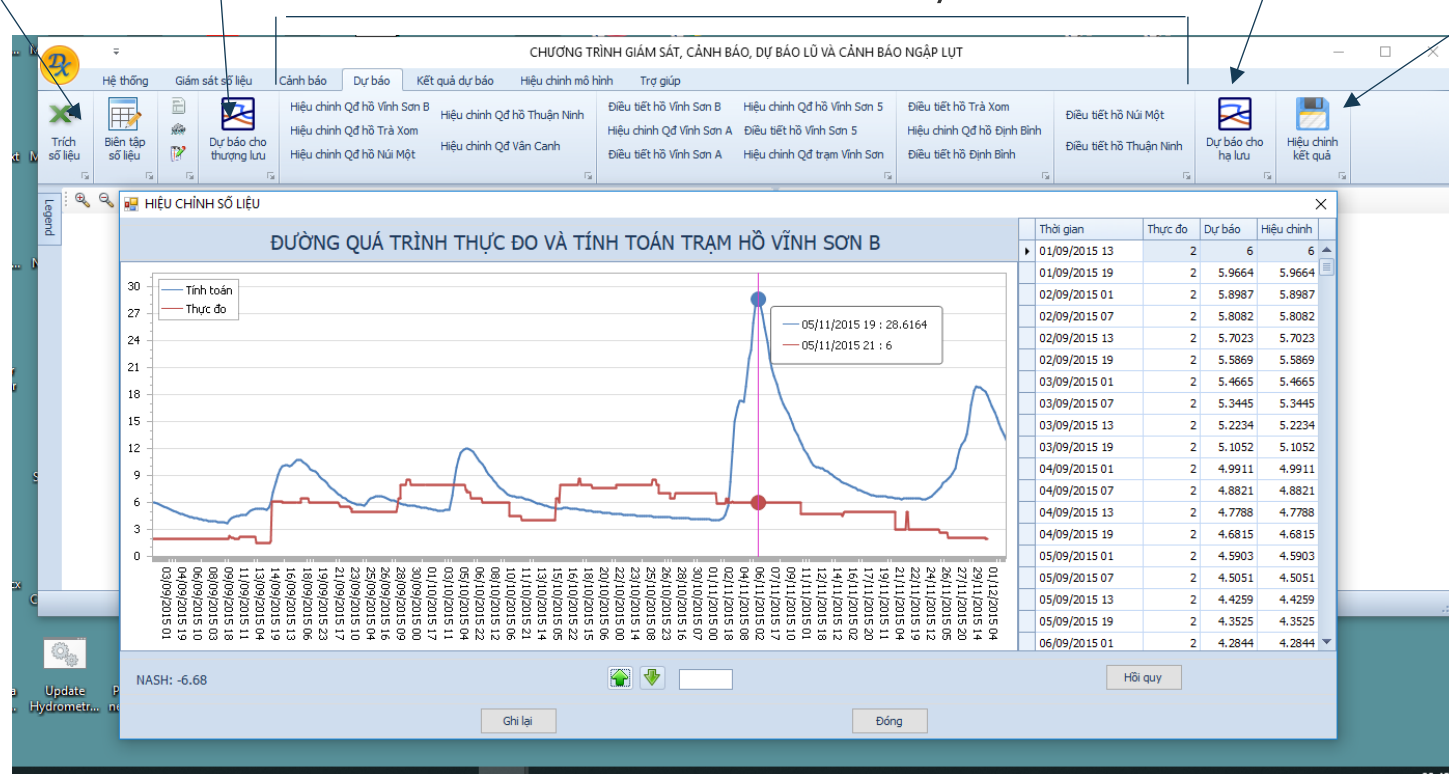
Data pre-process

NAM

Reservoir functionality

MIKE11

functionality Post-process



## Why do they need something else?

# Vietnam - what is the plan?

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## **World Bank 5 package:** Vietnam Managing Natural Hazards Project

- **Comprises five components**
- **Our component:**

### **Strengthening Weather Forecasting and Early Warning Systems**

#### **Development of a Software System for data integration and Forecasting**

# Vietnam – who is going to do this?

**JBA**  
consulting



## **KISTERS**

Lead partner focussing on the Central Data Hub (CDH) using WISKI and the Service Layer (KISTERS Web Portal)

**JBA**  
consulting

## **JBA**

Partner with focus on the Forecasting Support System (FSS) using Delft-FEWS



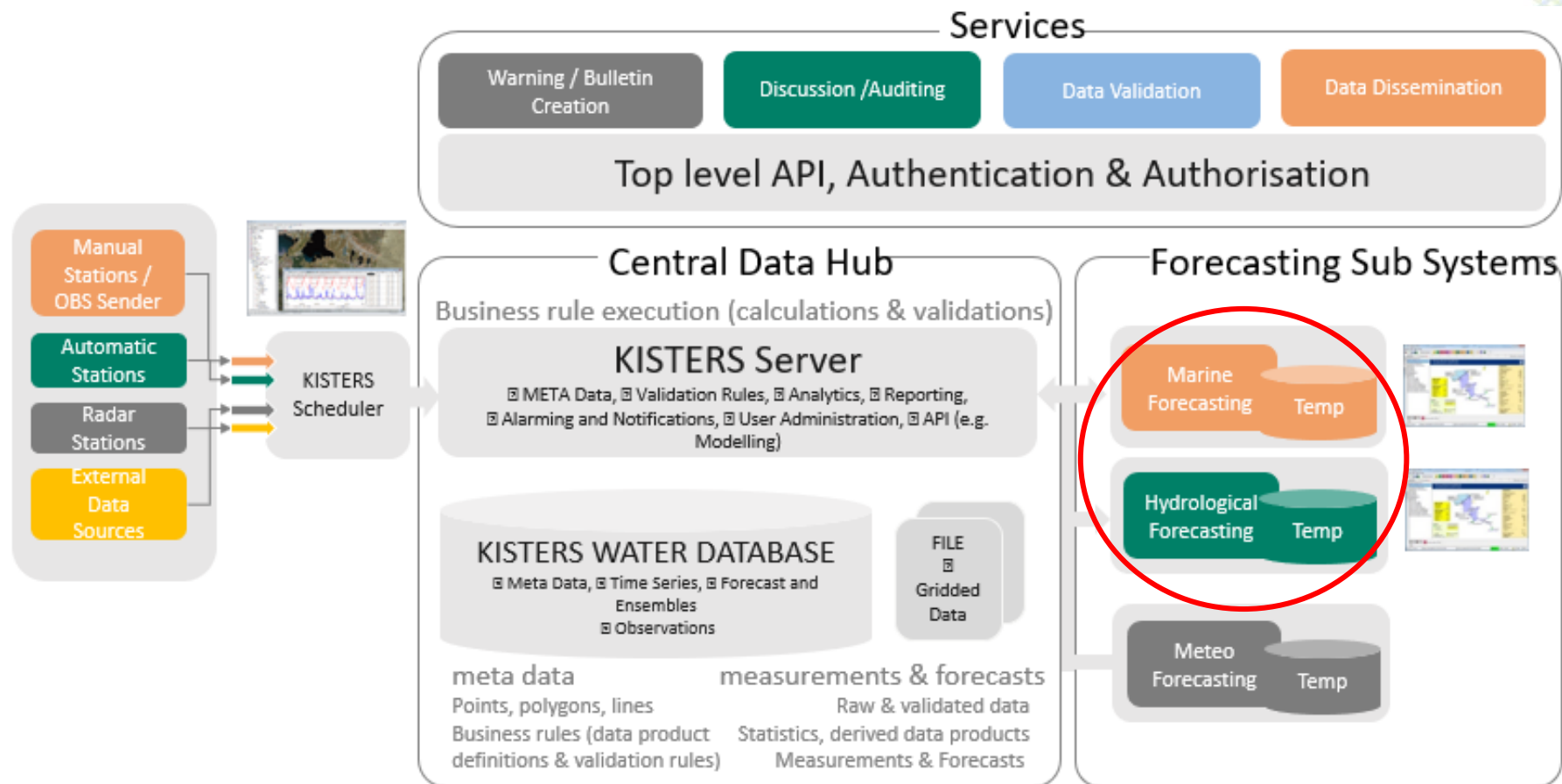
## **Harmony Soft**

National partner supporting KISTERS and JBA, hardware commissioning, IT and training





# Vietnam – how is this going to be delivered?



# Vietnam – my main activities

## Key tasks regards the forecasting support system:

- Configuring models
- Automating the process
- Helping the forecasters to do their job

Models	
Inland	Coastal
NAM MIKE11 * MARINE hydrological model Reservoir model	* ROMS SWAN * SuWAT

\* New FEWS model adapter

# Vietnam – what have been the challenges so far?

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- **Challenges:**

- Schematisation – particularly **reservoirs**
- Inconsistent approach
- Programme and **data provision**
- Model versions and compatibility

# Vietnam – personal challenges?

- Meetings, presentations and discussions
- Trying to remain productive!





# Vietnam – personal challenges?

- Considerations - cultural differences



# Vietnam – overcoming the challenges?

- Relationship building and working together



# Future

With Mystic Matt

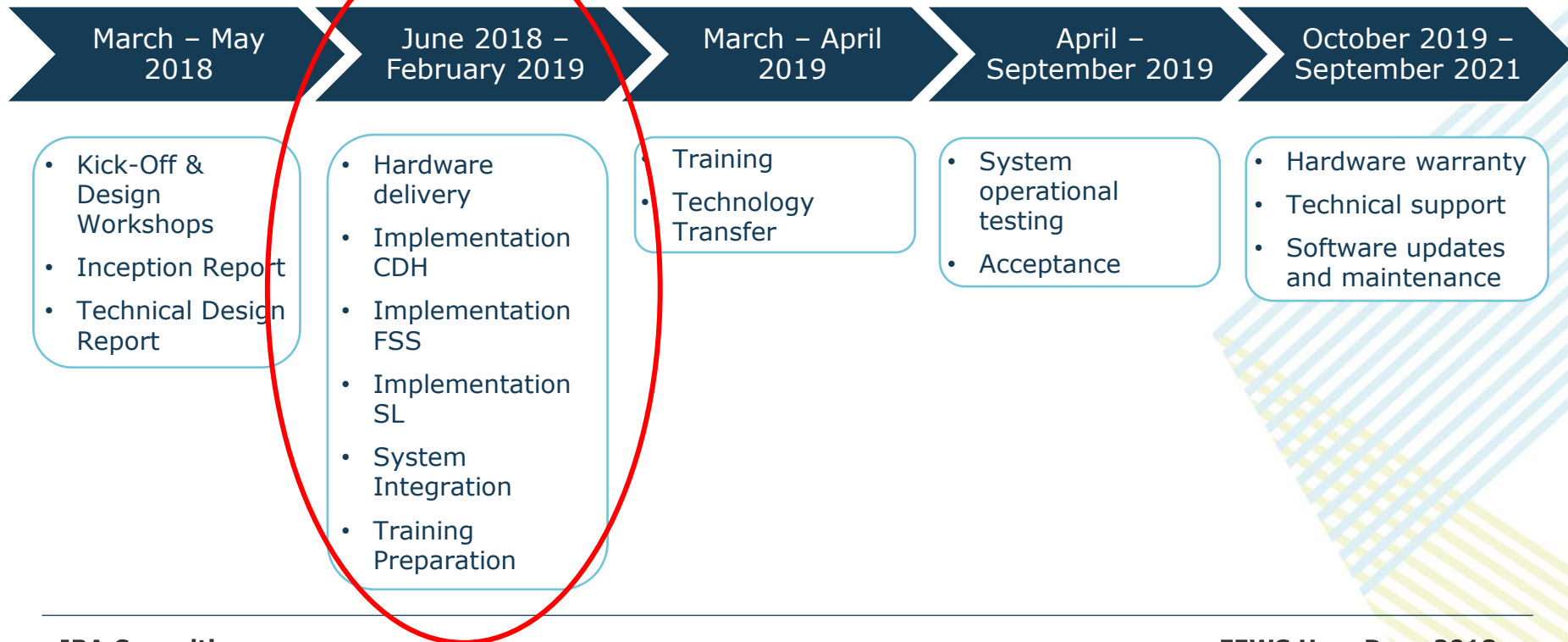




# Future – what's next for Vietnam?

- **Vietnam**

- Uptake by the ministry
- Maintaining consistency
- Training





# Future – wider considerations?

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- **Past and present experiences**

- Collaboration
- Innovation
- Preparation
- All about the people

# Thank you for listening

**Any questions, advice or thoughts?**

## **References**

JBA Consulting website, 2018 ([www.jbaconsulting.com](http://www.jbaconsulting.com))

Reuters, 2018 (<https://www.reuters.com/article/us-asia-storm-vietnam/vietnam-flood-death-toll-rises-to-27-more-rain-forecast-idUSKBN1KE0CL>)

P118783, 2018 (<http://projects.worldbank.org/P118783/vietnam-managing-natural-hazards-project?lang=en&tab=overview>)