



# Service Delivery and Public Weather Services An Overview

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# What is Service Delivery?

- Concept is now centre-stage within WMO
- What does it encompass and what does it imply?
- How do NMHSs need to change and develop to attain good Service Delivery?

# Let's think about Pizza....

Tired and hungry on a Friday night, we don't feel like cooking dinner, so we order in a pizza.



# Still thinking about Pizza...

Having phoned in our order, we open a nice bottle of red wine and start to wind down. For our evening to be complete the Pizza service will need to display four attributes:

1. The Pizza we asked for should be the Pizza we get.
2. It should be a tasty Pizza; nice crispy base, good tomato sauce, generous toppings.
3. It should arrive hot.
4. It should arrive on time.

Only one of these depends on the Chef!!

# Still considering Pizza...

What else did the Management need to think about, after hiring the chef?

1. A clear ordering system, which keeps the details of the client and their desired Pizza closely together.
2. A system to allow the person taking the order make a quick estimation as to when the pizza will be ready and delivered.
3. A system of transport that incorporates warmed boxes.
4. Making sure that the delivery drivers know the area thoroughly

# Meteorology and Pizza

- What has all this got to do with NMHSs?
  1. A good product does not necessarily mean a good service.
  2. A good service starts with considering the needs of the client.
  3. Service Delivery is not an “add-on”. It should be fundamental to the way we design our systems - and even our organisations.

# What is Service Delivery?

- One view is that it is the “window-dressing”
  - Presentation
  - Branding
  - Marketing
  - Public Relations
- While Service Delivery should encompass all of these, it should be much more. It should reach back into the way we organise ourselves and our science.
- Our products - forecasts, model output, satellite imagery etc, are just one part of the Service Delivery system

# What is Service Delivery?

We can define the concept of Service Delivery around four “abilities”

## 1. Availability

- Is the product relevant to my needs?

## 2. Dependability

- Will the product be delivered on-time, without fail?

## 3. Usability

- Is the information presented in a manner which I can understand?

## 4. Credibility

- Can I have faith in this product and advice?



# Attributes and Abilities

- Help to define these by asking some questions:
  - Will our information help the client address their particular problem?
  - Do we know and understand the clients problems and concerns?
  - If we do not, should we not ask him or her?

# Remembering our beginnings...

Meteorology (in the modern sense) was conceived as a response to a problem - the loss of sailing ships in stormy weather.

The development of Meteorology was greatly driven by the needs of Aviation in the middle years of the 20<sup>th</sup> century.

Since then the development has been driven primarily by science, especially through Numerical Weather Prediction and Remote Sensing technologies.

# A Complex Challenge

- The development of our science has brought us the capability of providing a lot of useful information to society.
- Society itself has become much more complex, and there is a wide diversity of need, from the most under-developed countries to the most developed.
- The problems facing society are many and multi-faceted.
- The connections between daily life and Meteorology are not as obvious as they once were.
- We must work harder to embed our products and services in business and in society.

# Abilities and Attributes

- Lets examine these a bit more closely to try and define what they mean in the context of meteorological service delivery.



# Availability

- What does the user need? Do they know what they need?
- Does the NMHS understand the nature of the decision which the user has to make?
- Does the user appreciate the extent to which the NMHS can provide useful information and advice?
  - NMHS personnel must take time to get to know the business of the client.
  - Servicing a clients needs might entail decisions on the siting of an observation system, or running a model on a different grid or domain. Providing Availability can reach right back into our infrastructure.

# Dependability

- When does the user need to make his or her decision?
- How does this fit with the cycle of weather analysis and forecasting?
- How can we ensure that the message reaches the client?
- How do the clients needs change over weekends, holiday times?
- Are the clients needs themselves weather-dependent, and do we advise them of this?

# Usability

- Can the client use the information we provide to the fullest possible extent?
- Implies good presentation
  - Scripting skills
  - Graphic design skills
  - Good quality voice delivery (radio, phone)
  - Full use of the technological possibilities, e.g. colour, animation and deeper links on the web.
- Have they been trained to appreciate the full significance of the information?
- Does the client have a contact point in the NMHS with whom they can follow-up and ask supplementary questions?

# Credibility

- Perhaps the most important Ability of all. If a client does not believe in the value of the information, they will not use it fully.
- Understanding the limitations, as well as the possibilities, of the forecast service.
- Understanding that there will be occasional forecast failures.
- Relevant tools to enhance credibility include
  - Verification Scores
  - Quality Management Framework



# Credibility

- Verification Scores

- Not some abstract scoring of meteorological phenomena
- User-based verification involves the client in the verification process
- A feedback process within the forecast system
- A method of identifying weaknesses

- Quality Management Framework

- A tool to address weaknesses.
- Allows the best deployment of resources.

# Credibility

- Cannot over-emphasise the importance of personal contact.
- Humans invest credibility in other humans - not necessarily in systems or organisations.
- The NMHS contact point to the user personifies the service.
- This person carries the brand of the NMHS
- Careful selection and training of suitable people is required.

# Public Service and the Media

- Media are always a special case!
  - A “medium” to other, ultimate, users.
  - Will have a large say in shaping the weather services offered through them.
  - May impede feedback from ultimate users to NMHSs
- Media are partly a client and partly a “medium”.
- NMHS must satisfy two different sets of requirements.

# Public Service and the Media

Media Needs	Public Needs
Timely Delivery	Clarity of Information
Presentation Standards	Predictability of coverage
New Skill Sets	Credibility
Cross-Promotion	
Branding	
Exclusivity	

Media Needs and Public Needs are not mutually exclusive; they often support each other.

# The Web - a special case

- Has vastly increased the amount of available weather information.
- Driven by ease of use and ease of access.
- Has weakened the importance of the personality as presenter of weather.
- This will change as bandwidth increases and compression techniques improve.
- A challenge to NMHSs - can we also become good broadcasters?

# Back to Credibility

- How will the public learn to appreciate the limitations of weather forecasting?
  - Appreciation of the gains as well as the losses.
  - Explicit probabilities / uncertainties.
  - Better awareness and education.
- Yet another challenge for NMHSs

# Service Delivery and PWS

## Exhortation by Cg-XV:

- “Engage in education, awareness and preparedness activities aimed at helping citizens make the best use of forecasts and warnings information, understand the potential impacts of severe weather, and be aware of the appropriate mitigating actions”

# Service Delivery and PWS

- No longer enough to be passive providers of weather information.
- Education and awareness are essential components to maintaining credibility.
- The point of it all:
  - The safety and security of citizens
  - The sustainable development of society
- Our community exists, not for the good of ourselves, but for the good of others.