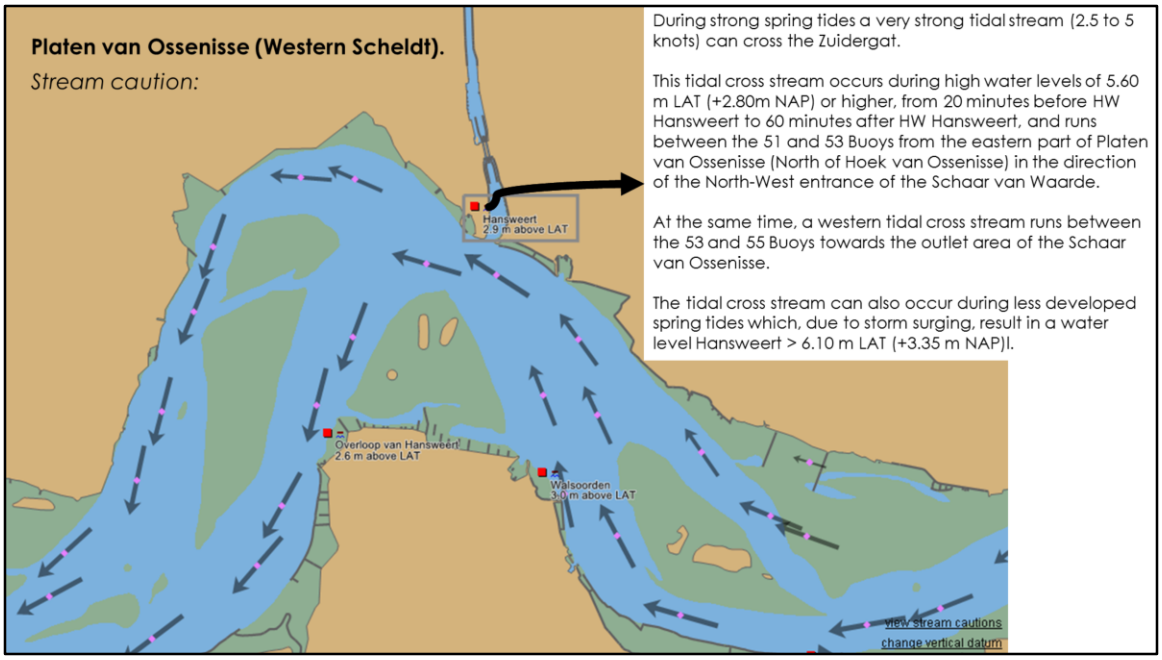
In the last session we saw examples of notice to mariner visualizations and then multiple dataset combined together. Now I'd like to present a brief example of an instance of a modeled dataset combined with its associated textual data.

Example from the Netherlands

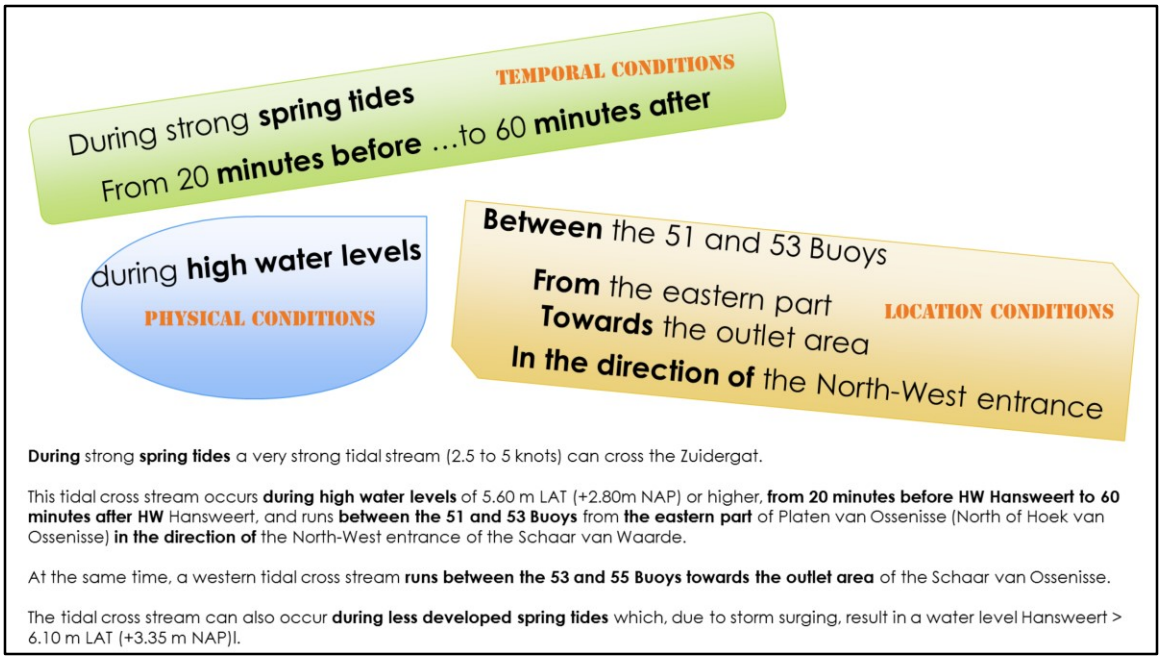
A case of combining the portrayal of modeled tidal data with NL Tides stream cautions:

- The model will only show so much detail.
- The stream caution is more effective with a visual next to it.



I am on the Surface Currents project team for the S-111 and at our meeting last year and again this year, this example was demonstrated as to how to display this data.

Clearly, the stream that contains the caution in this image is too small to have modeled data accurately reflect its conditions. This is a case where the mariner will need more than what the S-111 can provide. Yet, taking the caution and just adding it to the screen like a pick-report is OLD SCHOOL way of thinking….



If we look closely at the data we can see temporal, physical condition and location dependence…

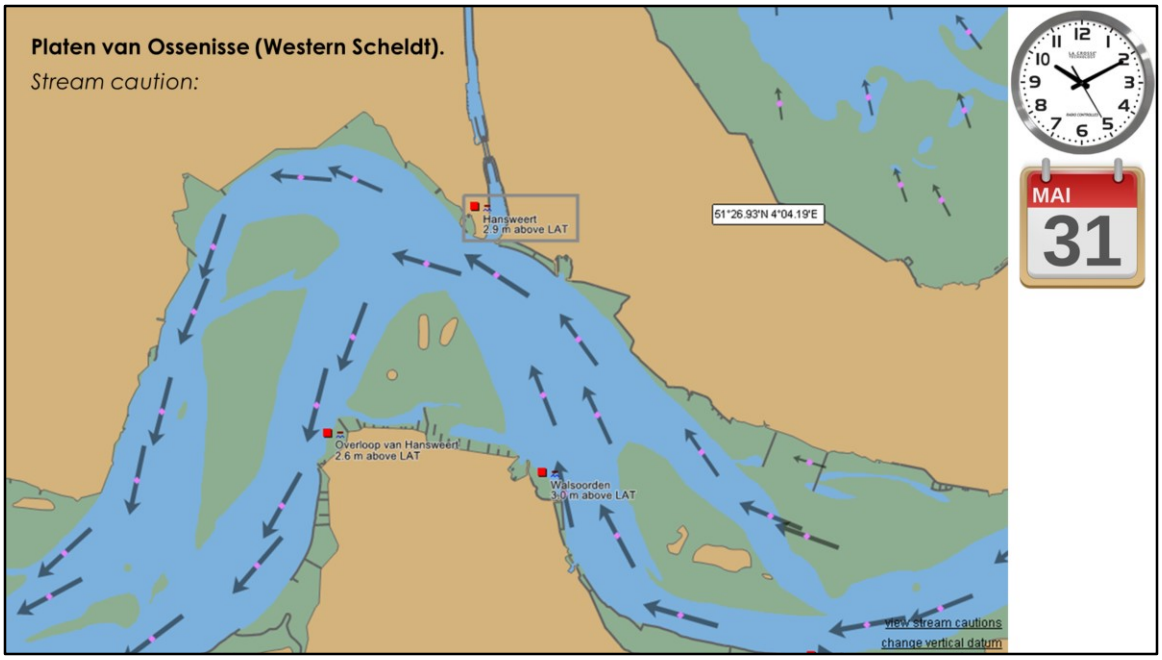
However, the mariner only wants to see what she NEEDS to see.

Ideally, I don't want to have to read these four sentences to determine what applies to me and make the calculations necessary to apply them if applicable.

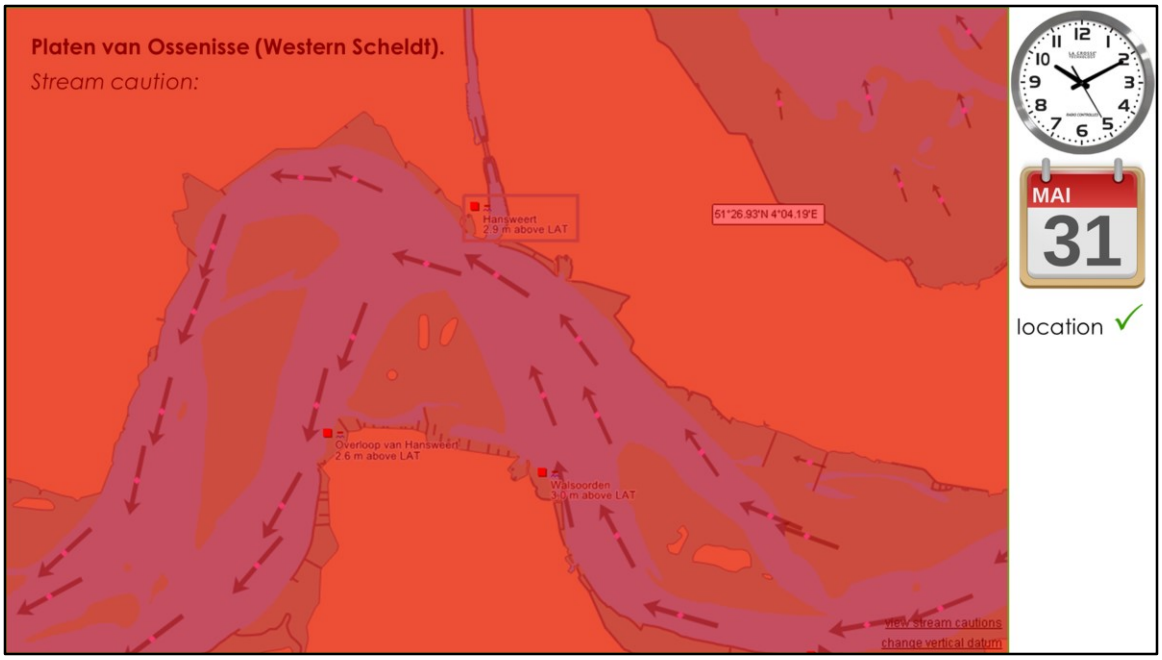
```
<feature id="1">    <feature_name>Zuidergat</feature_name> </feature>

<temporalCondition id= 1>
    <when>spring tide</when>
    <timeFrom>20 minutes before HW</timeFrom>
    <timeTo>60 minutes after HW</timeTo>
</temporalCondition>
<physicalCondition id=1>
    <type>high water levels</type>
    <value units="m">5.6<value>
    <valueplus units="m" type="+" label="NAP">2.80</valueplus>
</physicalCondition >
<area id=1>     <betweenHere>51 Buoy</betweenHere>      <betweenThere>53 Buoy</betweenThere> </area>
<direction>
    <fromLoc>the eastern part of Platen van Ossenisse</fromLoc>
    <toLoc>the North-West entrance of the Schaar van Waarde</toLoc>
</direction>
```

```
<physicalImpact id="2">
    <appliesTo type="feature">1</appliesTo>
    <tidalCrossStream>
        <strengthRange>2 - 5</strengthRange>
         <physicalCondition applies="during">1</physicalCondition>
    </ tidalCrossStream >
    <temporalCondition appliesTo="Hansweert">1</temporalCondition>
    <area>1</area>
    <direction>1</direction>
</physicalImpact>
```

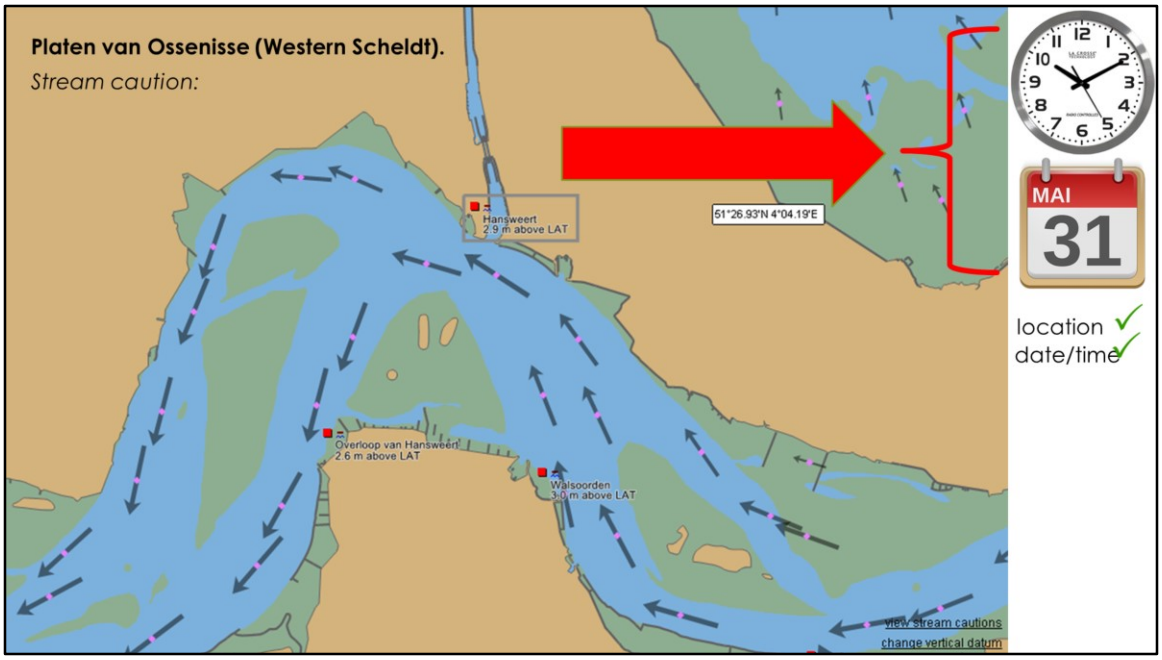
Instead, the system would be able to read Stream Caution and do the heavy lifting for me…



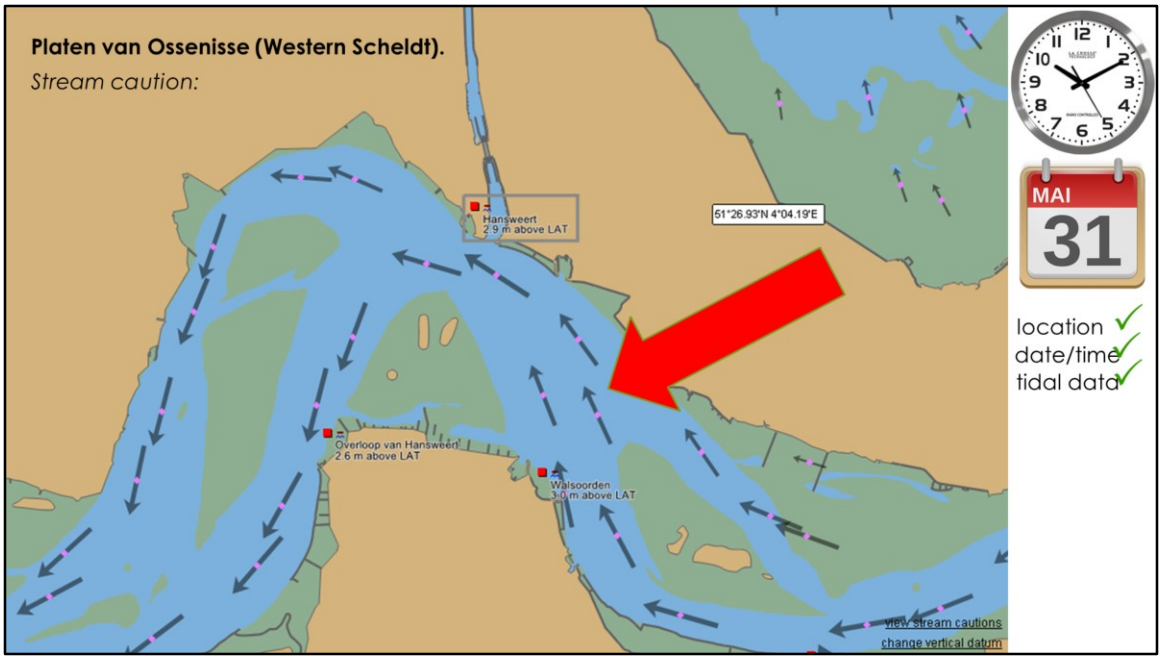
So the system would fetch…



- The location of the viewport (user's planned or current location)

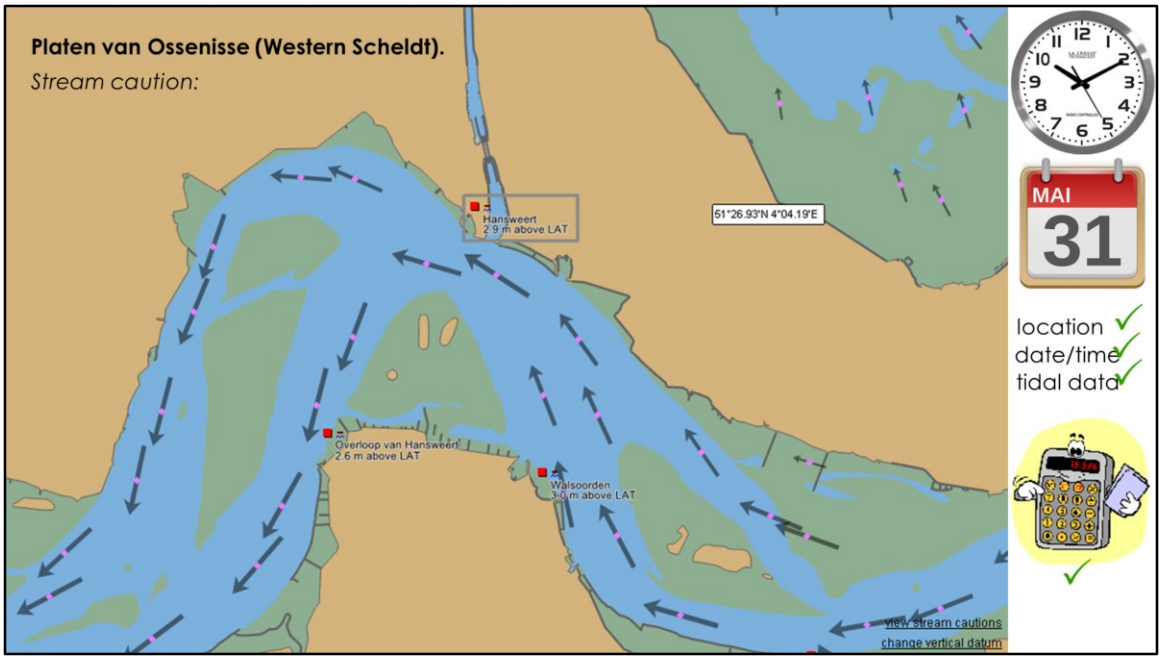


- The current date and time



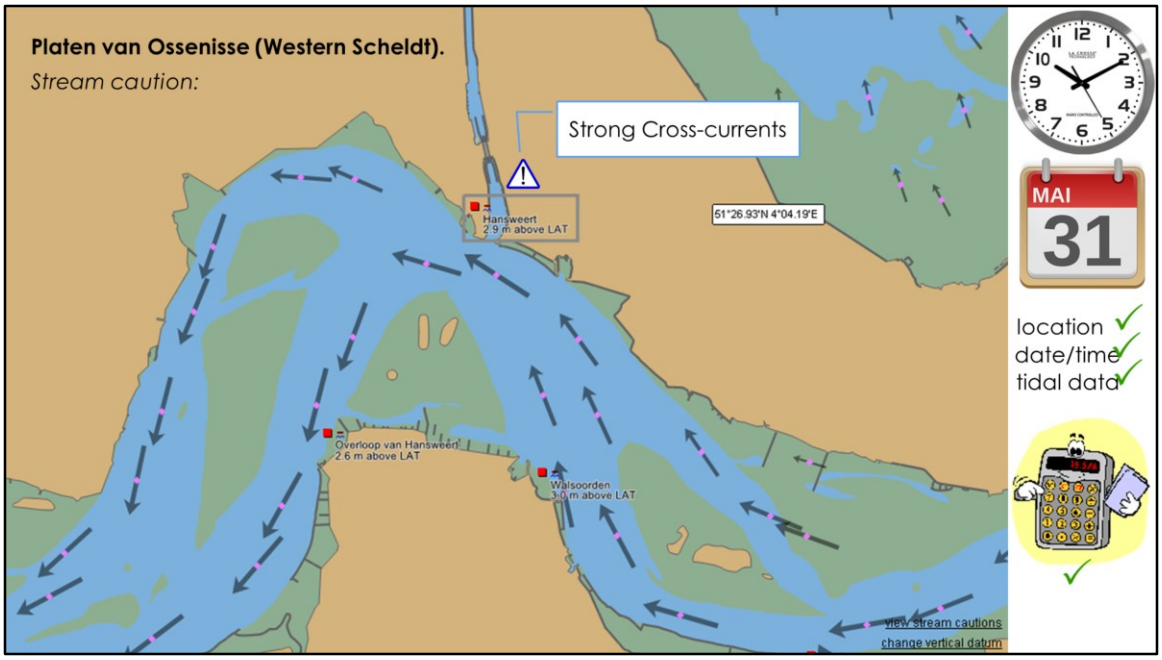
- the tidal/current data
- Calculates the water depth

If and only if all the conditions are met, then the only thing the mariner sees is a Caution like this:

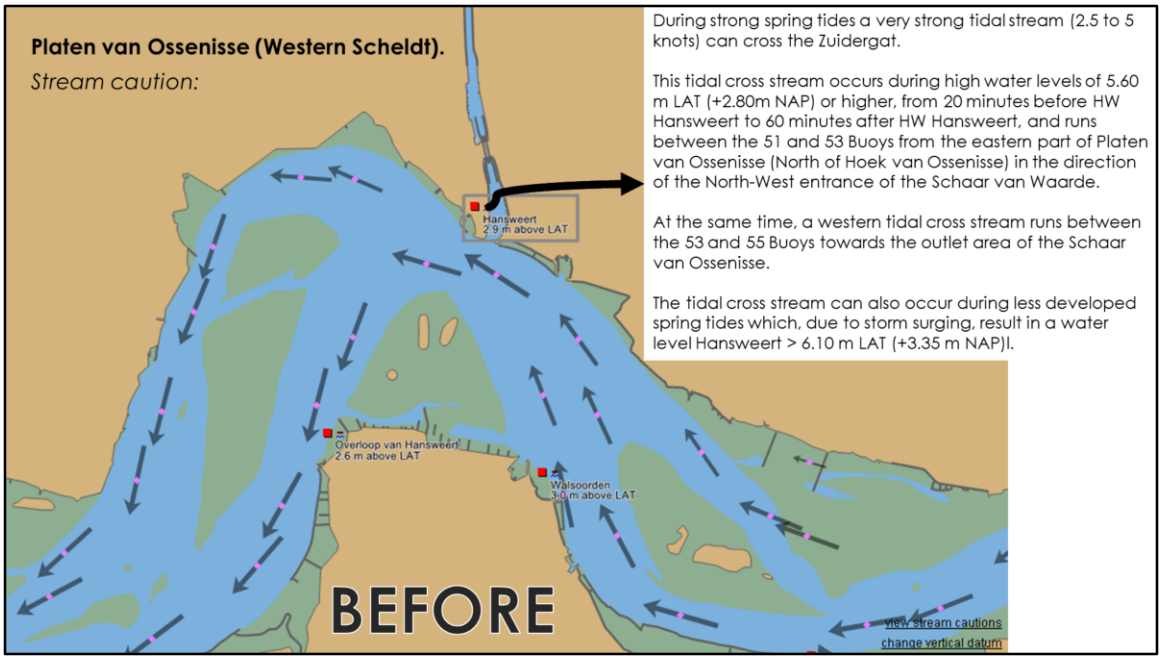


- Calculates the water depth

If and only if all the conditions are met, then the only thing the mariner sees is a Caution like this:

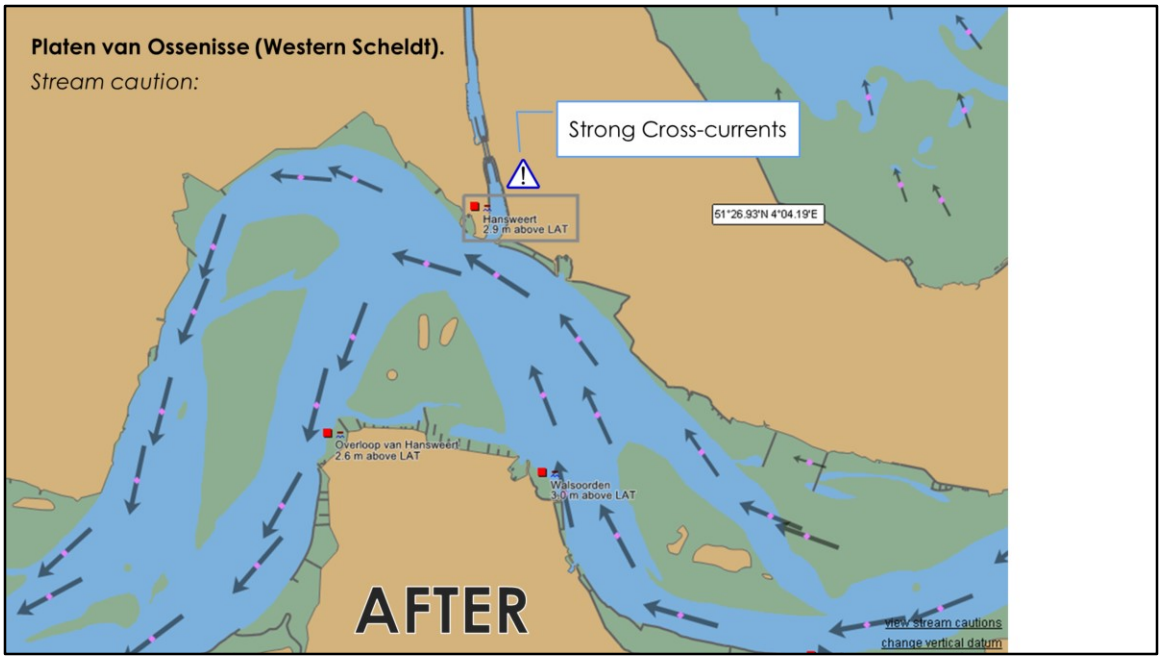


If and only if all the conditions are met, then the only thing the mariner sees when they approach the area (either physically or their mission planning course line) is a Caution like this:



So again….the old view of thinking.

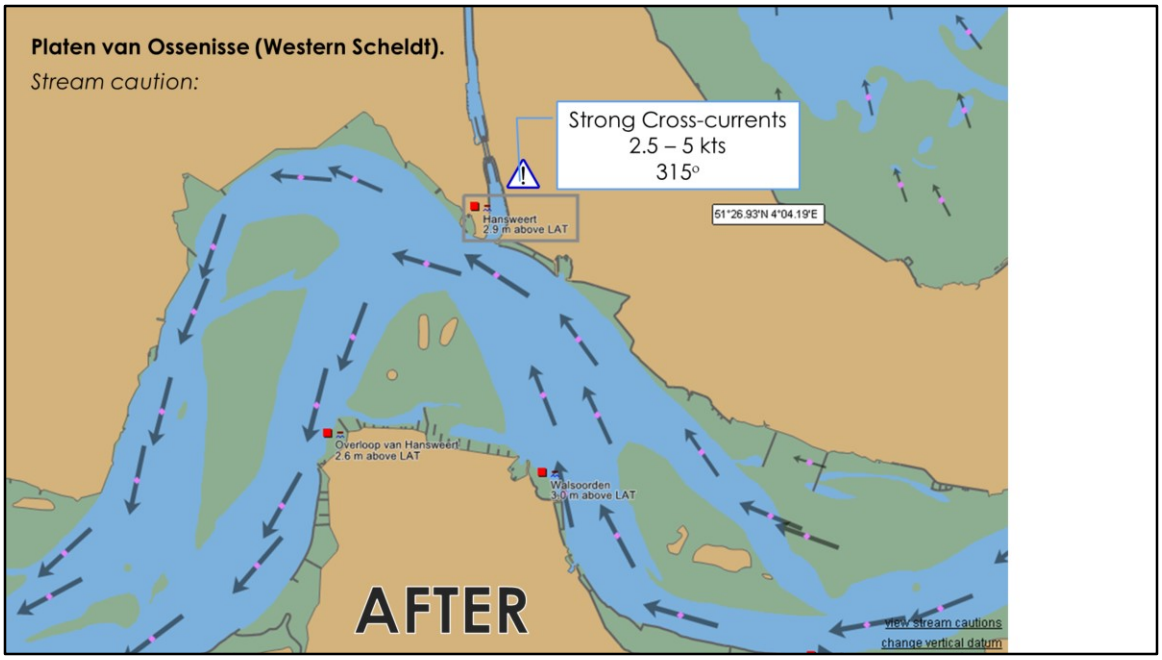
The easy way out…assign all the text to an info object and make it visible in a pick report with a persistent symbol that would clutter the screen.



Or new school of thought….

Mark up the data into machine readable data structure that works in conjunction with the other data available to display only WHAT is necessary WHEN it is necessary!

Like this with the simplest of notices or …



…with minimal *necessary* information.

It may be a bit more work…but once it is done and established…well, I think you get the picture!

Thank you

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5/22/17 – Visualization of Nautical Information Workshop