

Shellfish Solutions

Industry-led data collection, storage and use

Mapping solutions to control where and when to harvest the right size product to meet market demands

Solutions techniques de cartographies pour controller où et quand on peut récolter les produits de la bonne taille afin de rencontrer les besoins du marché

Scallop fishery has unique problems

- **Cost of fishing is high: Skippers want a system to locate where to find the best catch!**
- **Fishermen rely on memory and paper records to plan their next day fishing**
- **Research sampling insufficient and sporadic**
- **Need a 'bottom-up' contribution by fishermen to manage a sustainable fishery**
- **Fishermen often contribute data, but rarely see results or participate in management – they want to be active in the process**

Our solutions solve scallop fishery problems

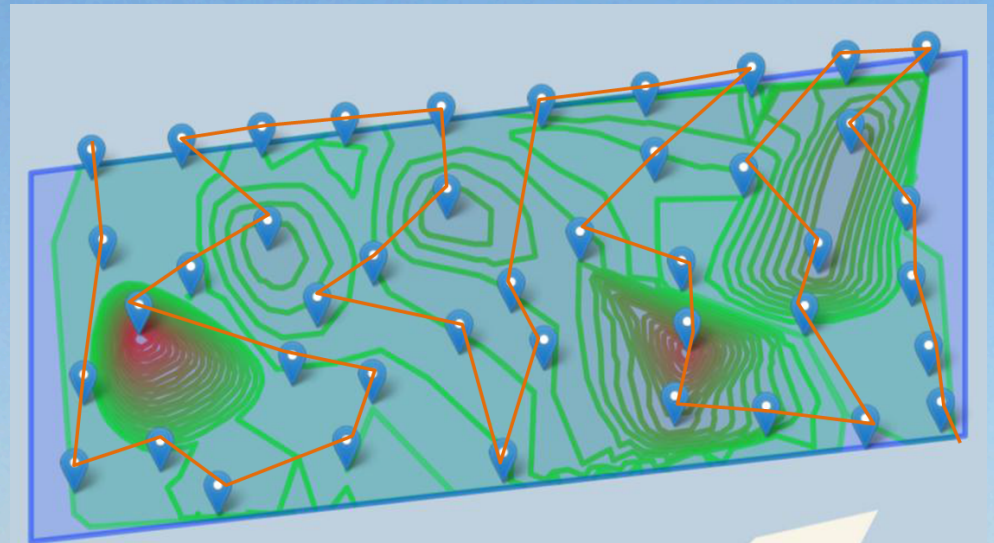
Harvest



1- Crew enters catch data per tow

2-Data processed on remote server

3- Captain gets real-time map to visualize where scallops are

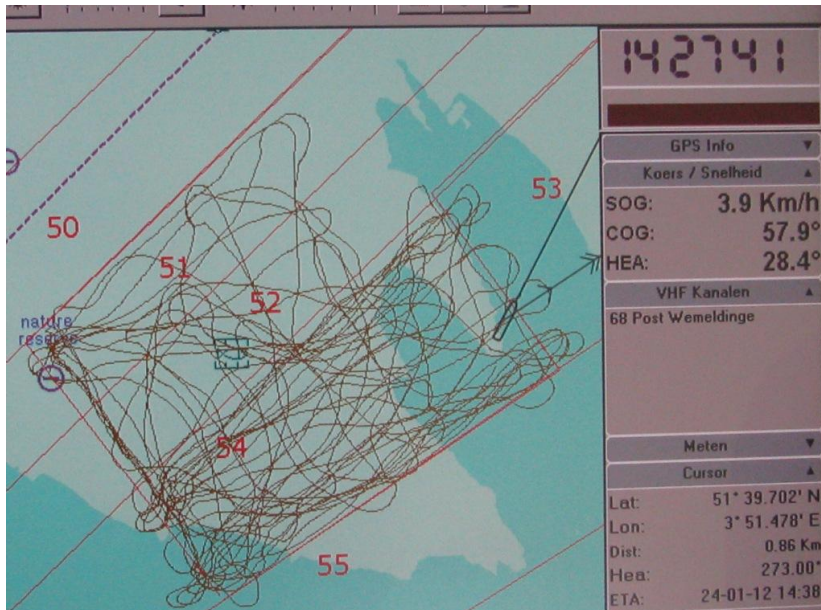


Scallop fishermen get more value in
capturing data at sea

What's in it for me?
Qu'est ce que j'en retire, moi?

Present situation during fishing

1- Fishermen very good using a mix of technologies to plot fishing trips (Loran, VPS, depth sounders, plotters).



You know where you fished, but poor record of what size was caught where!

2- Paper logbooks are messy!



na. 6000 - 500 mt (H180)
10-10-06 Bally 18 TSK 1000
10-10-06 Bally 45 ULTS 300
12-10-06 Bally 45 ULTS 4200
17-10-06 Bally 18 TSK 1700 mt 65 in bus
17-10-06 Bally 45 ULTS 300 mt 65 in bus
25-10-06 Bally 18 TSK 500 mt 65 in bus
25-10-06 Bally 22 H180 1400 mt 65 in bus
5-10-06 Inschel. 50 100
500
4500
Meep 14 2500 mt half was
(Mid Link Laten staan) 9000 mt Tobaal H180



What is the benefit for fishermen to collect data?

Is it simple to implement?

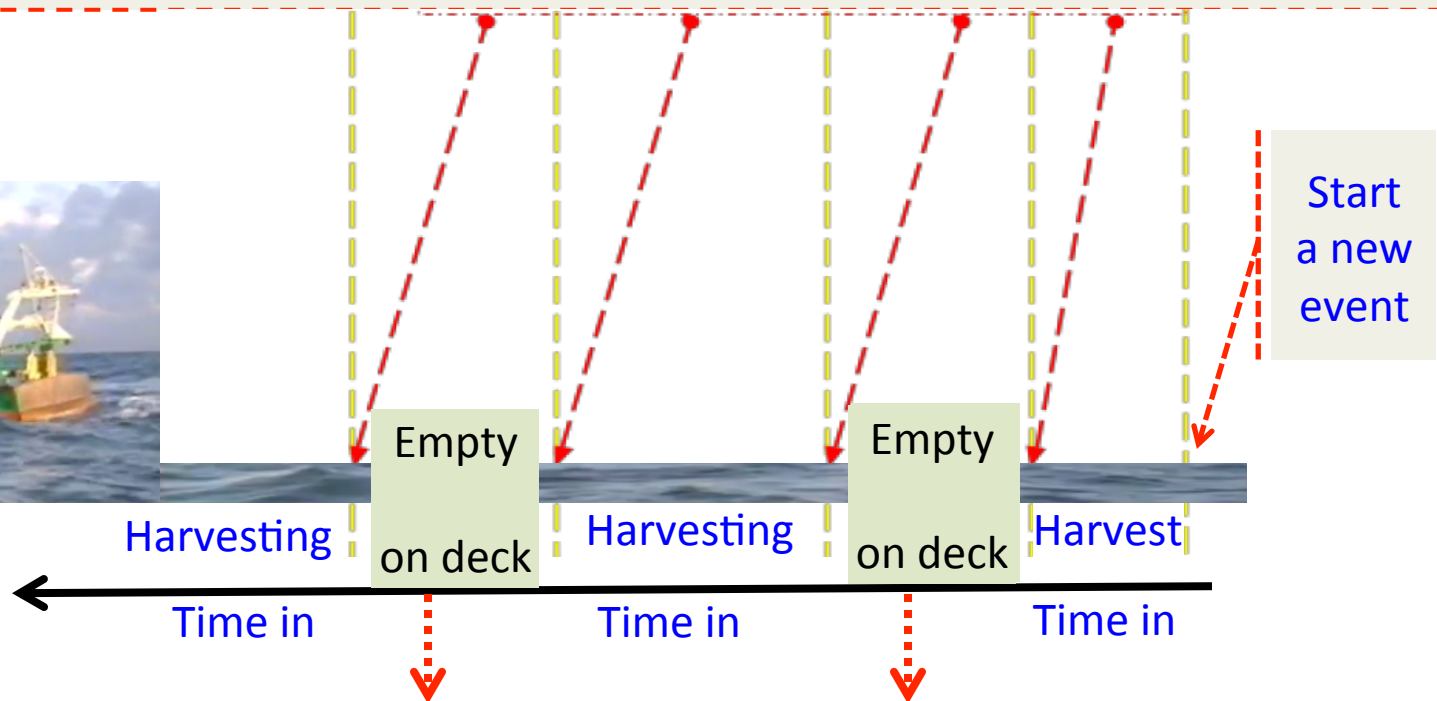
What results do fishermen get?

What is benefit to fishery management?

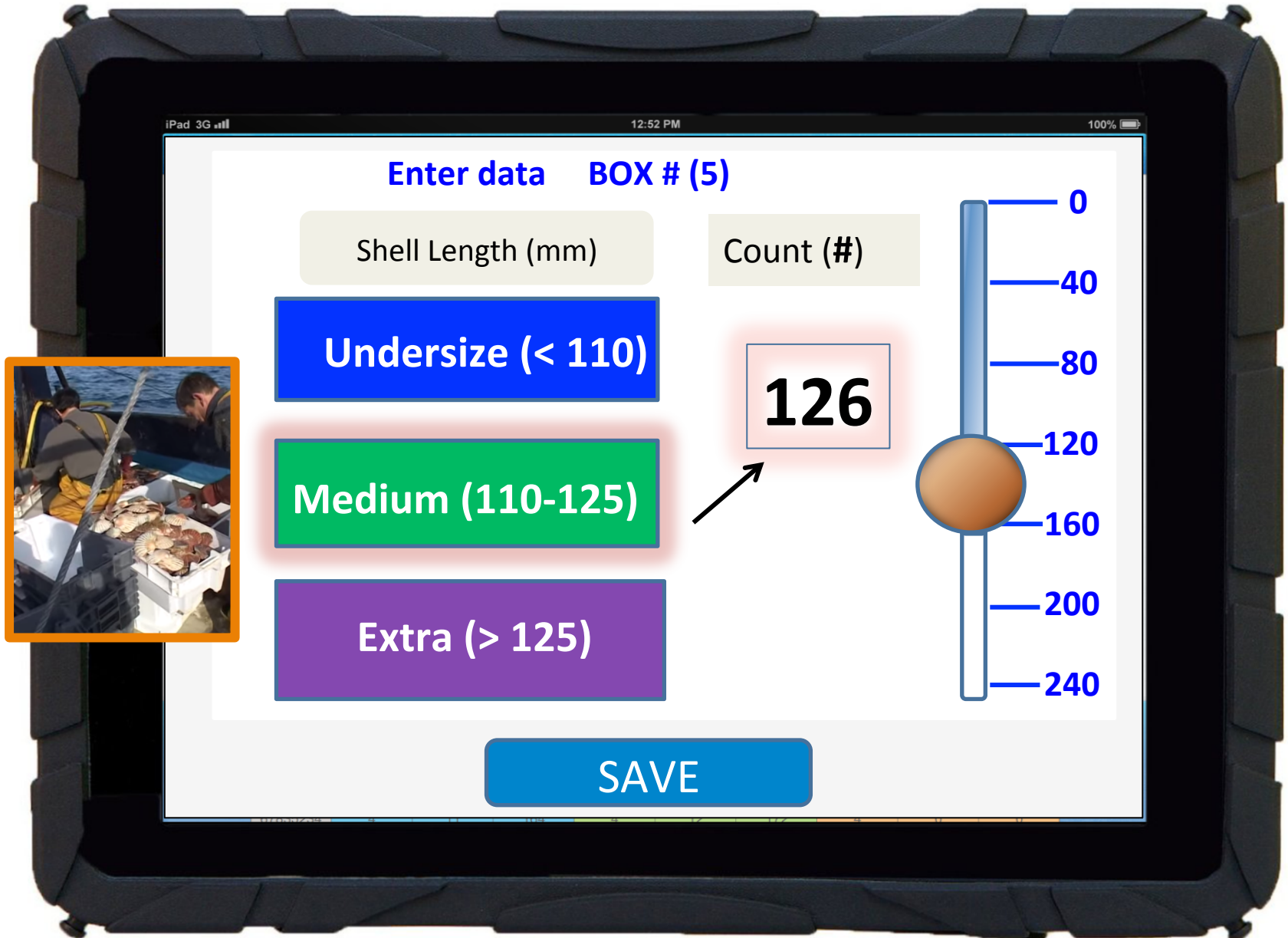
Implementation

Track each event automatically as dredge in/out sea : match data

- Where (Lat-Long)
- When (Time-date)
- What (Dredge ID)
- Why (Dredge **IN** water = **harvesting**; dredge **OUT** = **empty** on deck)
- How **Catch data** entered by crew:➤ Link to iVMS



Touchpad data input on deck: Count/box or Kg/box



Enter data BOX # (5)

Shell Length (mm) Count (#)

Undersize (< 110)

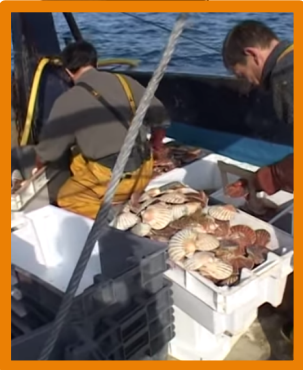
Medium (110-125)

Extra (> 125)

126

SAVE

0 40 80 120 160 200 240



Touchpad data input on deck: Count/box or Kg/box

Enter data BOX # (5)

Shell Length (mm)

Count (#)

Undersize (< 110)

Medium (110-125)

Extra (> 125)

157

SAVE

0

40

80

120

160

200

240

Touchpad data input on deck: Count/box or Kg/box

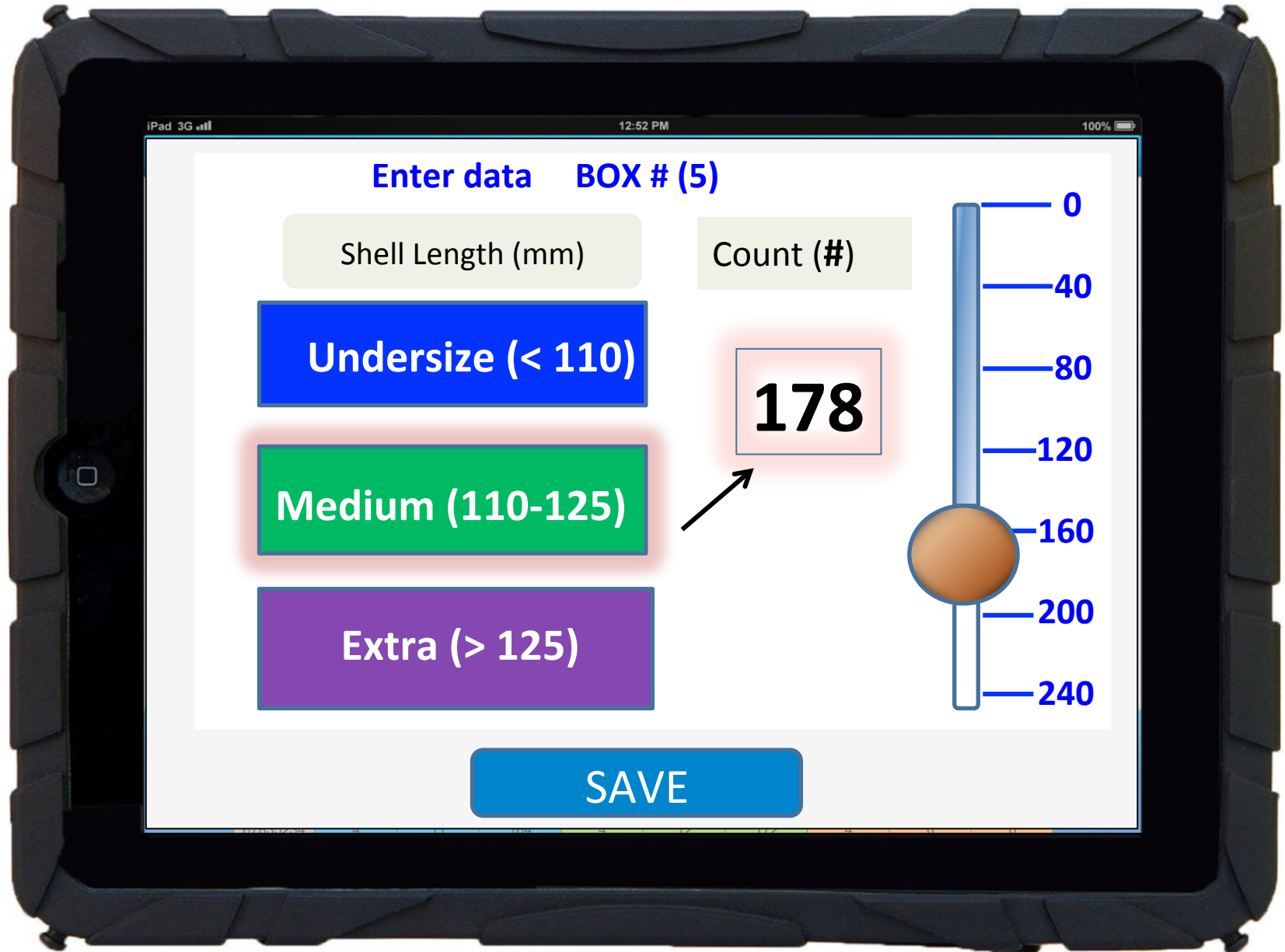
iPad 3G 12:52 PM 100%

Enter data BOX # (5)

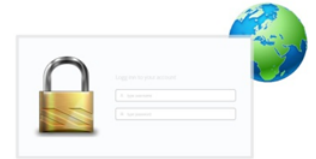
Shell Length (mm)	Count (#)
Undersize (< 110)	178
Medium (110-125)	
Extra (> 125)	

SAVE

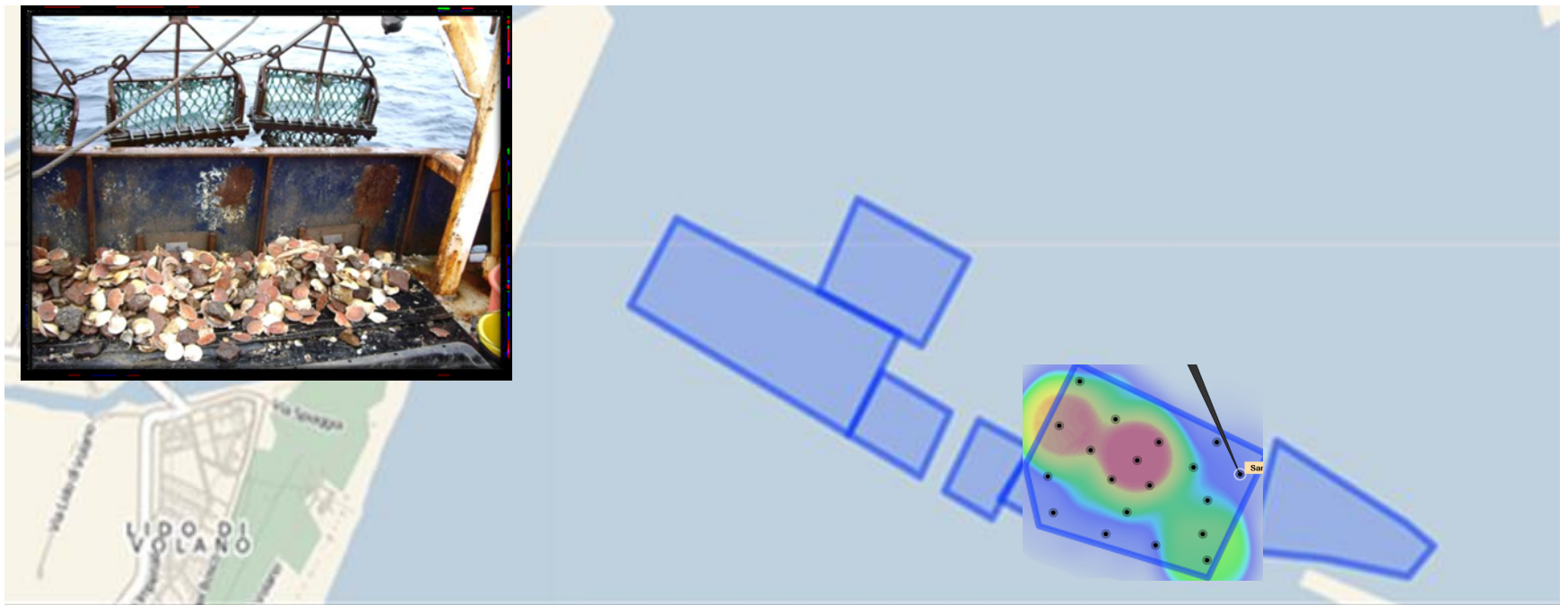
0 40 80 120 160 200 240



Scallop fishermen have secure access to their own data input/maps

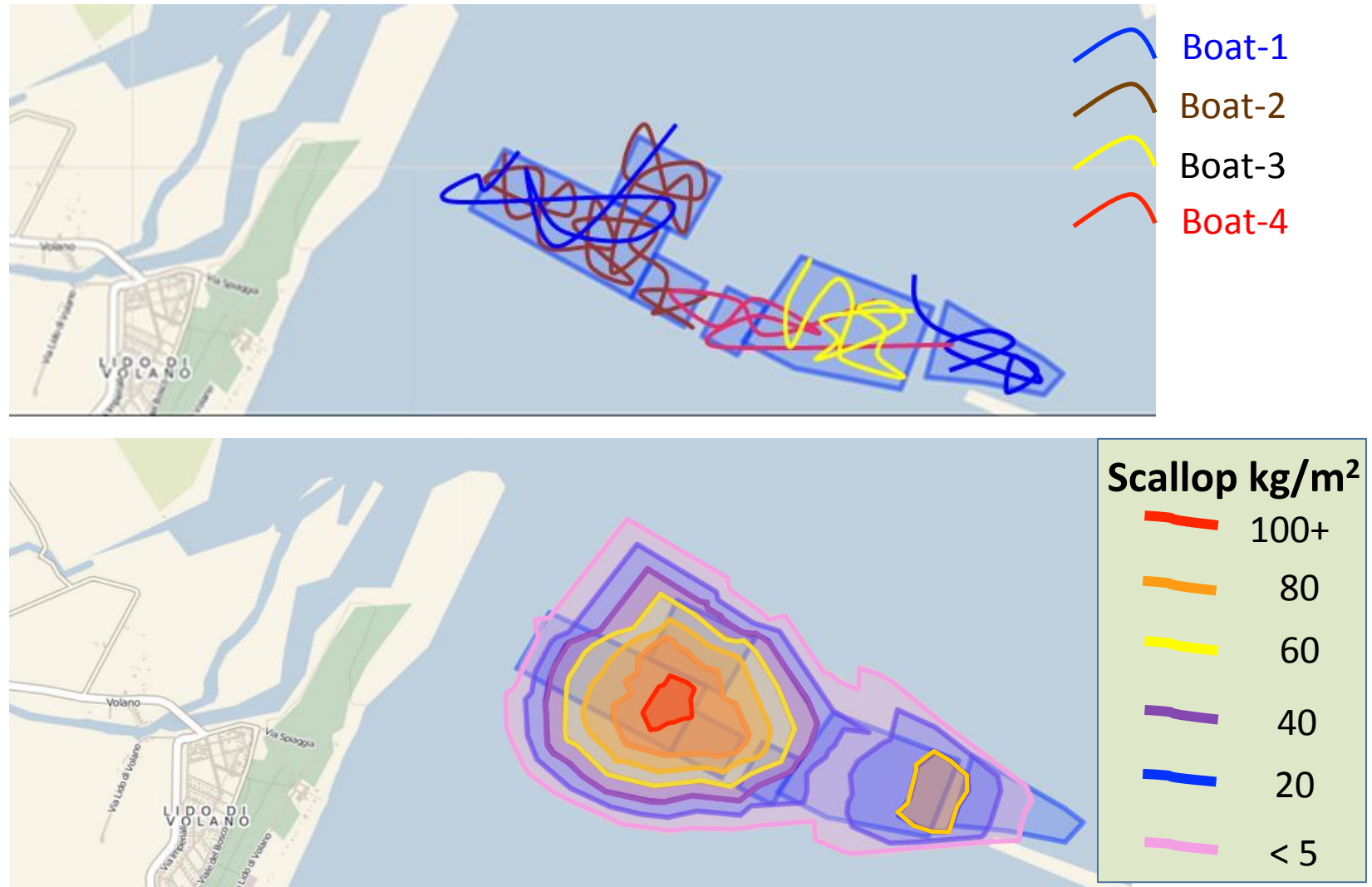


Each scallop boat logs his own catch data for the area fished



Fishermen get more control over their livelihood (€ €)!

Combine multiple fishing trips from many boats and areas into 1 map for stock management



Resulting benefits to fishermen

1-Fishermen get visual feedback based on data quality

- Secure access by fishermen to their data
- Visualization of own catch data
- Can select where the best yields are or will be
- Better planning & control to reduce fishing effort

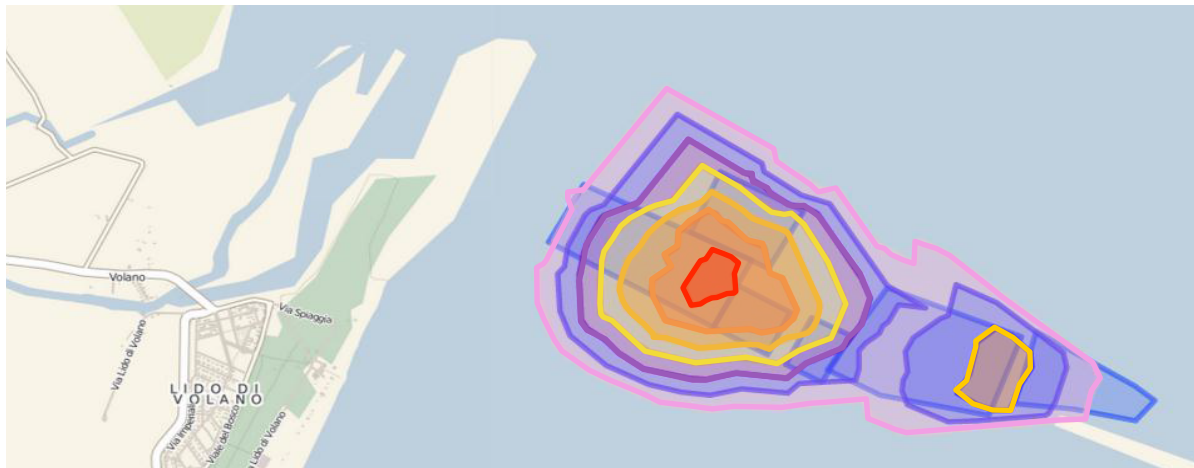


Resulting benefits

Benefit to stock management

2-Public-private ownership in stock management plan

- Increase in spatial & temporal coverage
- Combined catch data anonymized in fishery planning
- More trust in data for building sustainable industry
- Better management oversight



Conclusion

Next steps for a pilot with Shellfish Solutions

Bottom-up data input: Fishermen take part in the HOW?

- User-testing of input information (Secure login)
- What catch data they want to see (Visualization)
- What info can increase yields (Sustainability)
- What feedback reduces fishing effort (Efficiency)

Public-private pilot project

- Integrate data inputs to communicate with select users
- Design pilot with user-testing
- Decide what management wants as outputs
- Incorporate 'modelling of data' for better map output and scientific relevance

Merci
Thank you

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