

# How can ICTs answer some of big data questions about small- scale fisheries

Dr Serge Raemaekers  
[www.ABALOBI.org](http://www.ABALOBI.org)



Rome, 18-21 November 2019

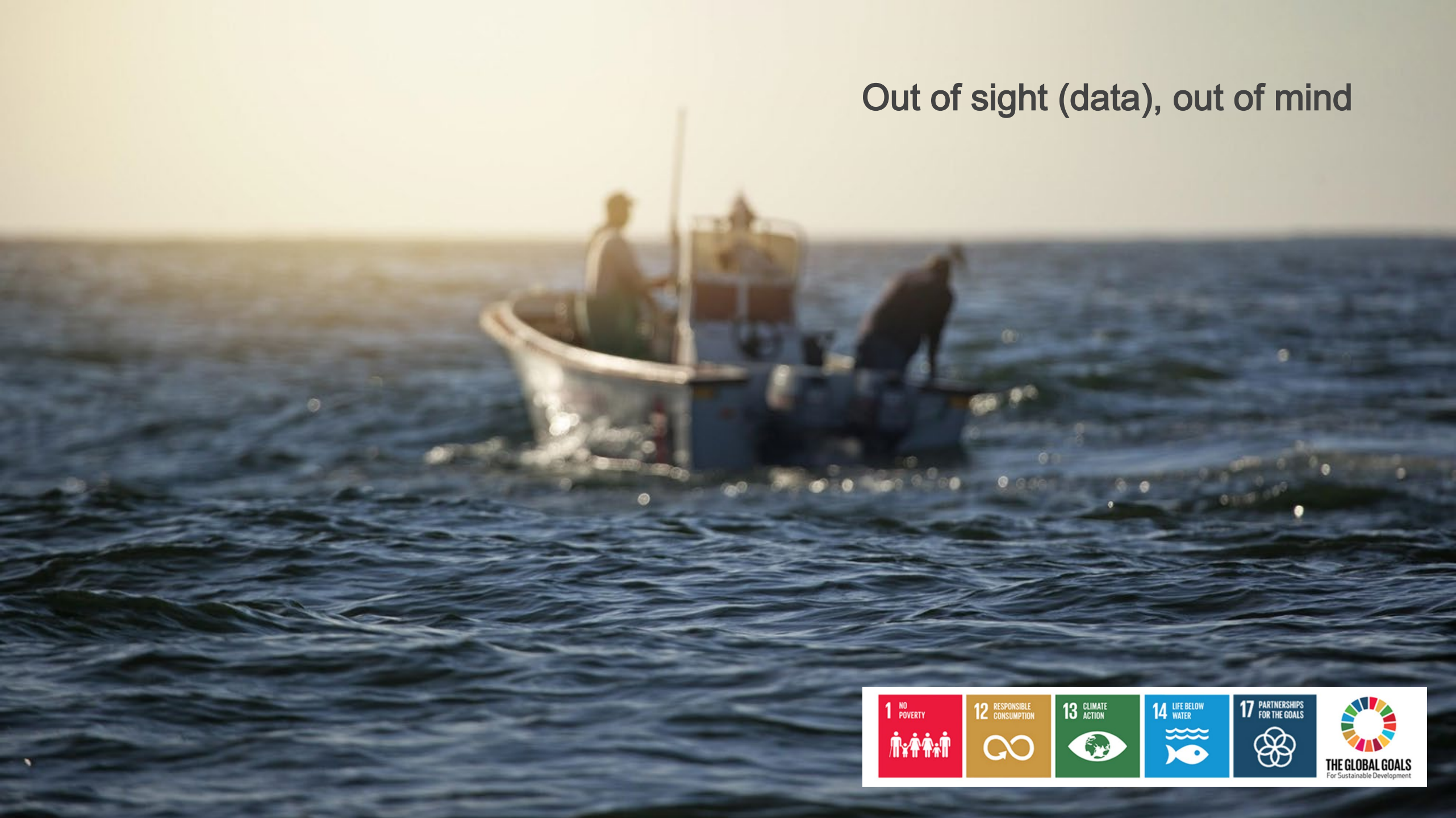


# SMALL-SCALE FISHERIES SUPPORT GLOBAL FOOD SYSTEMS





# Out of sight (data), out of mind



# HOW CAN ICTS ANSWER SOME OF BIG DATA QUESTIONS ABOUT SSF?







## GENERALISED CONCERNS

LACK OF SUITABLE SYSTEM FOR SSF

CUMBERSOME

Including non-digitised systems

NOT SUFFICIENTLY CUSTOMISED

Particularly for complexities of SSF

SUSTAINABILITY

Sustainability beyond funding cycles?

(VERY) REMOTE SUPPORT

UNENGAGING



# MANY PROMISING INITIATIVES USING MODERN ICTS IN SSF SPACE

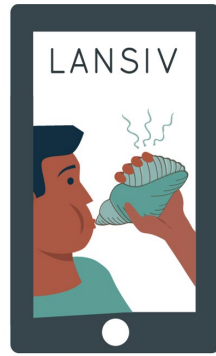
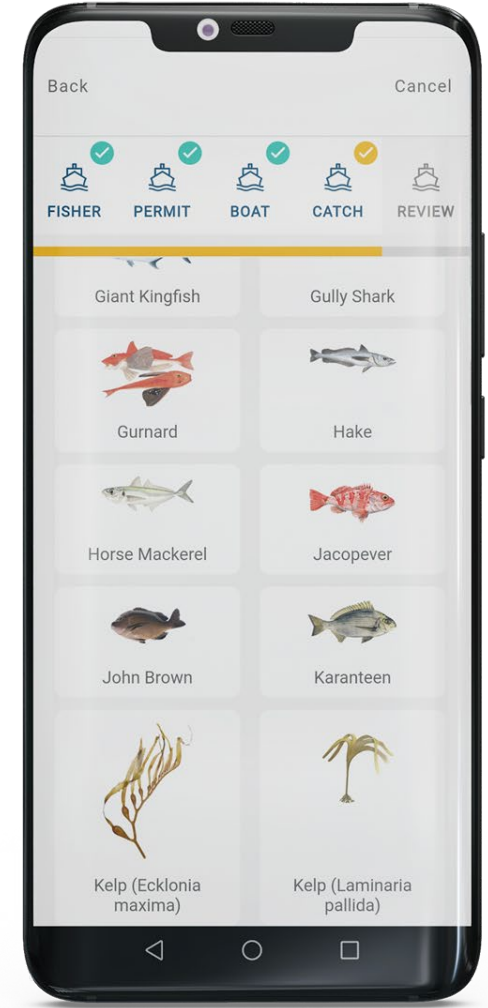


**SmartForms Mission**

Deliver a platform that combines

- **Forms builder** for mobile App customization
- A **mobile App** to collect and review fishery data
- **Hub** for data management

As a do-IT-yourself platform for scientific observers and fishers



and others...



# ENTRY POINTS

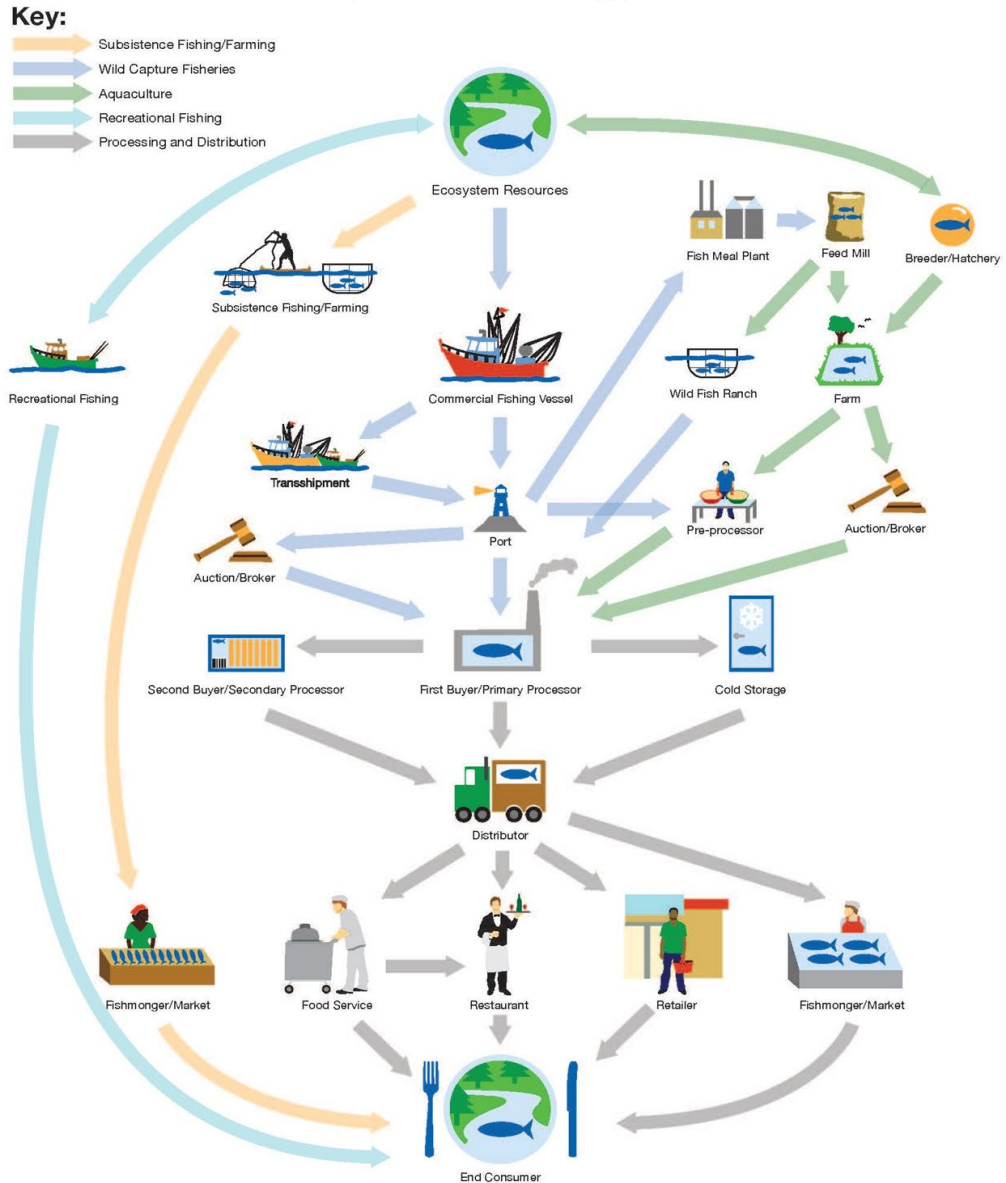
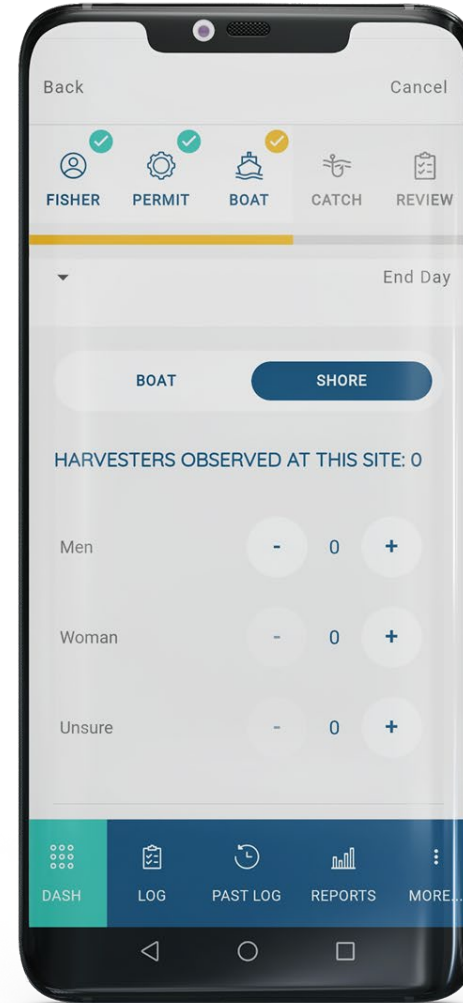


Image source: FishWise (2018)



# KEY DESIGN PRINCIPLES (OF INITIATIVES WITH TRACTION)



1

START SMALL

2

DESIGN FOR TRUST

Human-centred design/Co-design

3

CLEAR TECH/DATA OWNERSHIP

Data is power

4

REAL-TIME DATA FEEDBACK

It's all about the right visualisations & process

5

BALANCE NEEDS

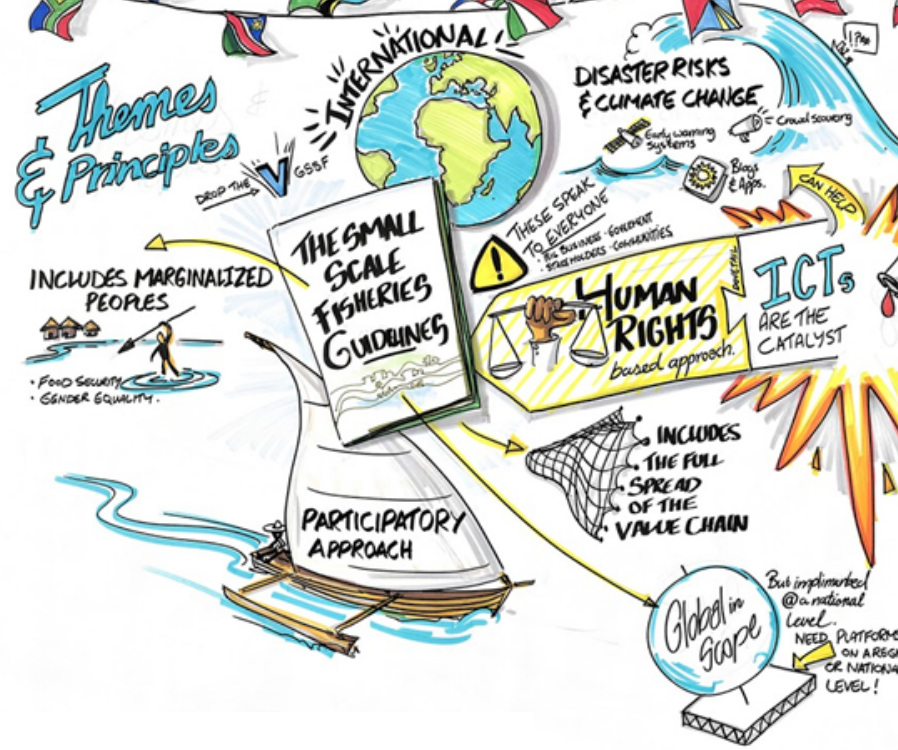
Local knowledge vs. Mainstream data needs





## # ICT4 Fisheries & VGSSF

### Themes & Principles



**DISASTER RISKS & CLIMATE CHANGE**

Early warning systems  
Coral seaway  
Bios & Apps

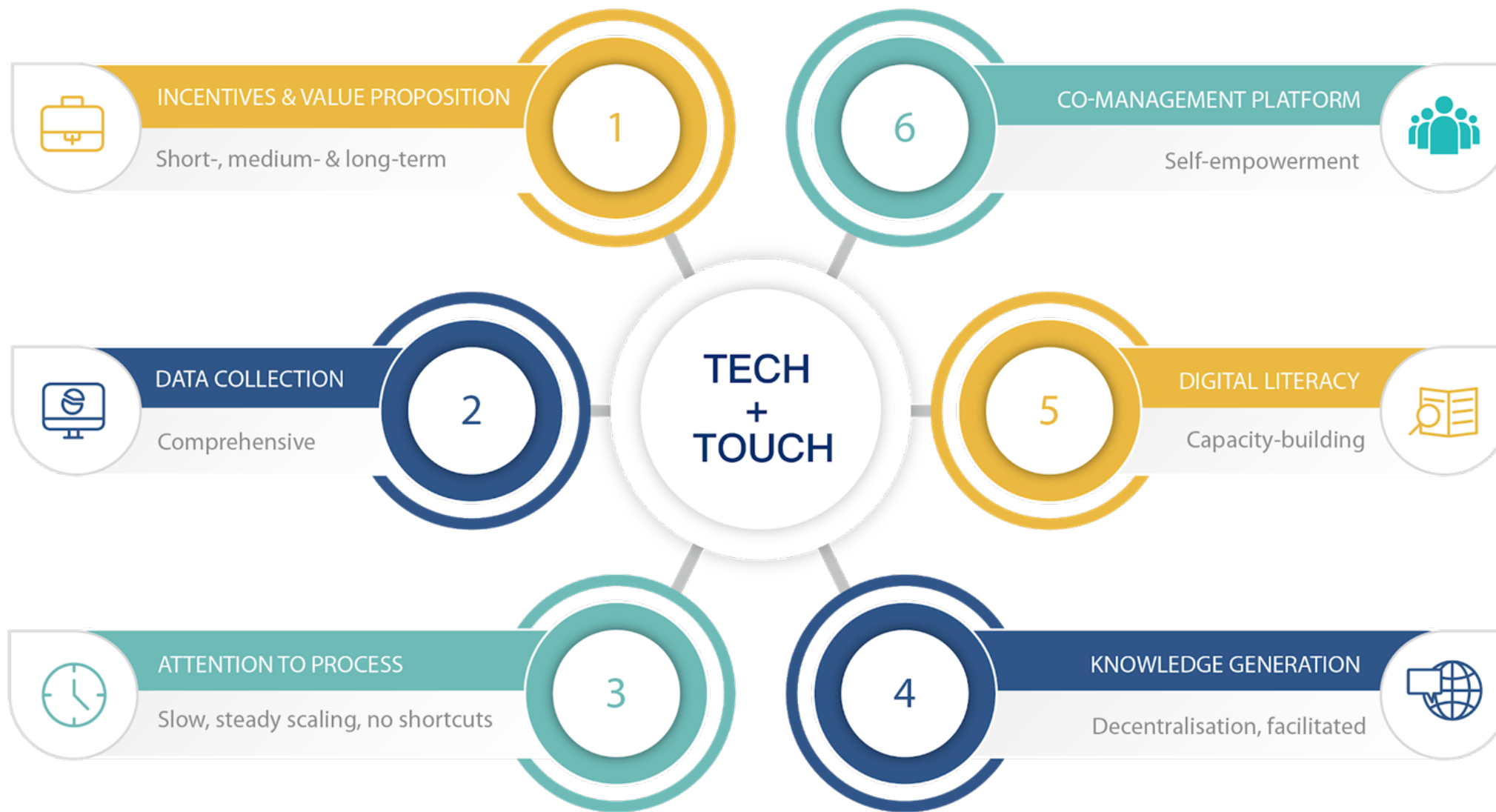
### Early Insights

- ICT as an entry point for broader conversation & development.
- DATA OWNERSHIP** & informed consent key.
- POWER & ICT** & value of fishery.
- TRACEABILITY** promotes awareness & engagement among end consumers - can also increase fisher bargaining power.
- ICT can improve communication between fishers & rescuers & therefore fisher security.
- DATA COLLECTION** is tricky. Keep initial tech simple & build on it from there.

### Navigational Aids



# IMPLEMENTATION MODEL IS CRITICAL





# RECOGNITION, RIGHTS & ACCESS STILL KEY CHALLENGES FOR SSF



FISHING FOR OUR DIGNITY

NO FISH NO EAT

WE NEED OUR FISH  
DUFF IS DEAF  
WE FIGHT FOR RIGHTS

Fishing for our Dignity  
We Fight For Rights

NO FISH NO EAT

WHAT WILL WE GET IN OUR BASKET & WE WANT FISH



*carpenter*



SILVER



ABALOBİ  
ICT4FISHERIES *from hook to cook*  
www.abalobi.org

f abalobi.org t abalobi\_app ✉ hello@abalobi.org



Scan\* here!  
The Catch of  
the Day has  
a story ...

\* Android: Use our QR scanner app: <http://abalobi.info/QR>

\* iPhone: Use your camera to scan!

#abalobi #fromhooktocook #storiedseafood #fishwithastory  
#whofishesmatters #slowfish #fairfish #traceableseafood



# KEY CHALLENGES



Scepticism:  
Impact of ICTs  
& data

Scepticism:  
Big data –  
unethical use/  
monetisation

Security of  
cloud-based  
systems

Self-service  
& maintenance

Scalability  
& over-  
customisation

Sustainability  
& costs

# RECOMMENDATIONS



05

## SHARED TECH ECOSYSTEM/COLLABORATION

- Careful curation & terms of use
- Faster scale to drive impact
- Locally owned implementations but pooled capacity for data management
- Transparent & grassroots process

03

## CLEAR VENDOR/TECH SOLUTION IDENTIFICATION PROCESS

01

## COLLABORATION WITH LOCAL & GLOBAL FISHER ORGANISATIONS IS KEY



04

## CREATIVE FEES MODEL - INTEGRATED INCENTIVES

02

## FOCUS ON INTEROPERABILITY, STANDARDS & DATA LINKAGES INCL. GOVERNMENT







Food and Agriculture  
Organization of the  
United Nations

SUSTAINABLE  
DEVELOPMENT  
GOALS

# Partnering with FAO to make fisheries sustainable

Working for  #ZeroHunger