

ODK Summit - June 2025 - Rome

# 10 years

Using  and  
designing forms



This year I celebrate 10 years using ODK.

From our first form to the 50 we use now, our way  
to design forms has evolved a lot as ODK did.

This talk is a good occasion to draw a kind of big  
picture of this story ;-)



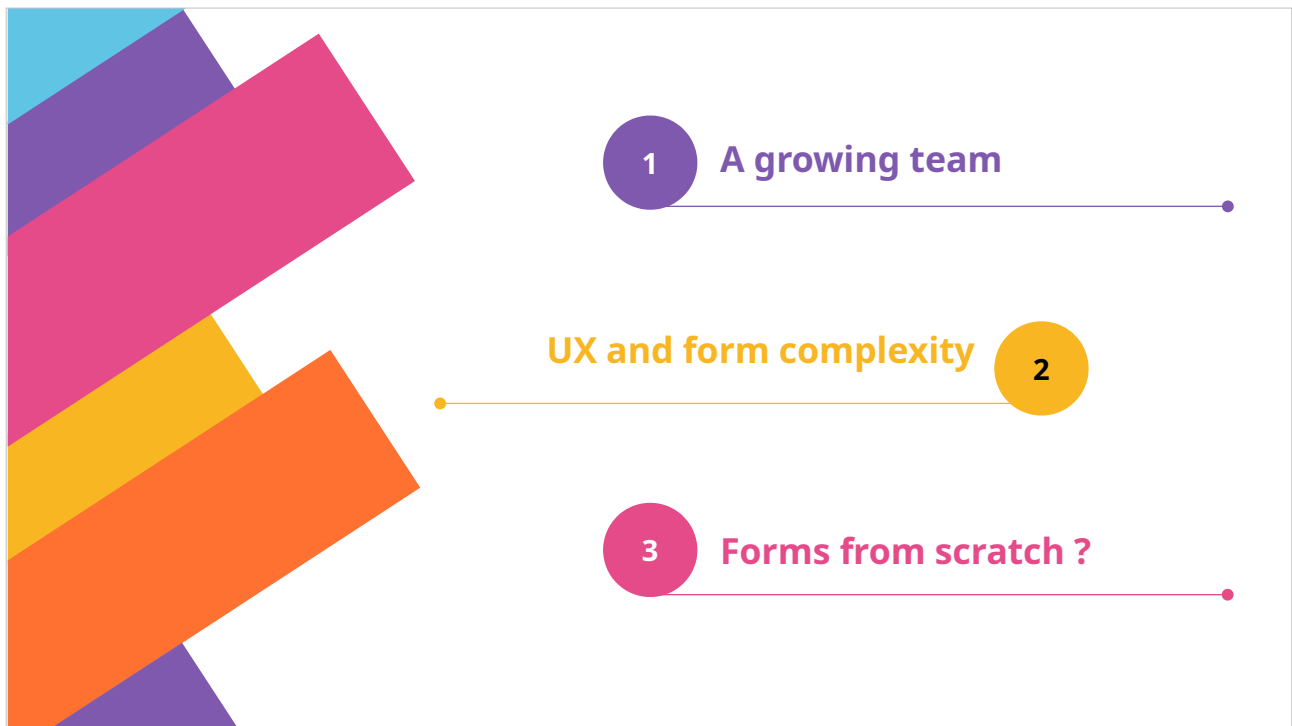
Mathieu Bossaert  
Montpellier (South France)

Database (PostGIS) administrator / SQL fan  
Geomatician

ODK fan (team, tools, community)

→ french translation (Central / Collect / tutos)

→ PG connectors : central2pg → pl/pyODK



Our team grew up as ODK and it has had some consequences on user needs discussions and form design.

In the same time, ODK added great fonctionnalités, and we had to modernize some parts, without breaking old and proven dataflows.

We started to copy/paste question blocks from our form « library » to create new ones.

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## A growing team / 2015



This was the team in 2015.

Easy to discuss together, one form designer (me).

A simple directory was sufficient to manage the form library.

Nathalie joined me to design forms and we introduced a « changes » tab in our xlsforms.

Each change was documented.

Data analysis and mapping was mainly done within PostGIS (SQL based reports) with simple dblink/FDW access to Aggregate's database

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A growing team / 2025



git



10 years later, it's not the same game.

160 colleagues + ~ 20 trainees

Discussing user needs has become more complicated and we dedicated a forum category to ODK forms.

Since march of this year, we moved some of our forms directories to a git repo as we are now 5 colleagues who potentially design forms.

Data analysis is still done within PostGIS. We use ODATA API and pyODK, both integrated into PG functions to create a kind of database replica to connect dashboards and mapping tools on.

## UX and form complexity

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2015 tip : using phone number  
to encode user's preferences  
10 « possibilities »



Our first form was a kind of field notebook to naturalist observations :  
animals, plants, mushrooms, habitats, described on points, lines or polygons

It was sometimes too much complicated for users who simply wanted to map for example plant points.

So in order to make it lighter and more efficient, we “hacked” the phone number question to encode the user's preferences.

For example, relevant question for plants (ex.) are only shown if the phone number contains number 5



## UX and form complexity

2

2025 : question block  
to encode user's preferences  
→ `$(last-saved#settings)`

New question types shown  
alongside the « old ones »  
→ Calculation of the non null one

The image displays three overlapping screenshots of a mobile application interface. The top screenshot, titled 'SICEN', shows a preference menu with options for 'Types de géométries saisies' (oui/non), 'Points' (selected), and 'Lignes'. The middle screenshot, also titled 'SICEN', shows a preference menu for 'Thématiques des données à collecter' with options for 'Faune', 'Flore', and 'Champignons & lichens?'. The bottom screenshot, titled 'suivi\_maille\_bota', shows a preference menu for 'Méthode d'affichage des mailles' with options for 'fond de carte inerte (classique)' and 'mailles cliquables (nouveau en test 2024)' (selected). The interface is clean and modern, with a white background and blue accents.

Today, to achieve the same, we can use a block of question at form start. Those settings do persist between versions through #last-saved values.

At the beginning of the form, the user can ask to modify its preferences.

When ODK team develops a new widget that can enhance user experience, we can introduce it in forms in a progressive way by adding one new question using this widget and calculate the non null value between the former and the new question, with no impact on the dataflow :-)

Here an example, in the foreground, with two questions to « select » a grid cell on a map (geopint + GIS vs. select from map)

## UX and form complexity

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This illustrates our most complicated form, adapted to 13 farm habitats evaluated according to 3 criteria / 33 indicators.

Cristiano (our roman colleague) stands with a wine grower, in front of an hedge.

This project, mainly funded by the European commission aims to enhance the ecological potential of farms.

ODK is used for this ecological part of the diagnosis. It has been duplicated on a lizmap server to help users to modify / complete their data (geo) after submission.

A good way to appreciate how easy it is to build forms with xlsform !



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### xlsforms from scratch ?

an xlsform can be compared to bricks  
we can reuse it to create a new thing  
we all have a form library

- template normalizes forms
- make it easier to reuse
- encourage sharing



All the forms include some reusable parts : to identify the user, to set user's preferences, to plot a point, to select from map from a geojson...

Building a new form make me think about a kid playing with bricks, like my nephew on this picture.

The xlsform template help us a lot to normalize our forms and makes it really easy to reuse, adapt and share.

We can now all use and adapt the same bricks !

This can help a lot of potential users to onboard !

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## xlsforms from scratch ?

Please share your own bricks  
with the community !  
on the [forum](#) or anywhere else like  
[biodiversityforms.org](https://biodiversityforms.org) or [protocols.io](https://protocols.io)



Don't hesitate to share your own forms and bricks  
with the community !

Over the forum or everywhere else ! Like we try to  
do with [biodiversityforms.org](https://biodiversityforms.org), wich is a simple git  
based website.

We need some more time to well document the  
forms but at least they are publicly shared.

And for people lookink for a more academic way to  
share their forms as protocoles, a website like

<https://protocols.io> is a great solution :

<https://dx.doi.org/10.17504/protocols.io.kqdg3xr2qg25/v1>

...  
THANK YOU

— • • & • • —

**LET'S PLAY  
LEGOODK**

Thanks you so much for making this meeting possible  
Thanks you so much for the discussions, the coffee,  
the smiles !  
And let's play LegoODK together !