



Use of the KORINA-App for engaging citizens and agencies in detection of invasive plant species in Saxony-Anhalt, Germany

IUFRO 125th Anniversary Congress 2017, Freiburg, 20.9.2017



KORINA

Independent institute for environmental issues - UfU e. V.

Projects in Saxony-Anhalt, Germany:

- 2010-2015 “Early warning system and planning of measures against invasive plant species in protected areas of Saxony-Anhalt”. **Formation of KORINA.**
2017-2018 „Implementation of the action programme for invasive alien plants in protected areas of Saxony-Anhalt“, both funded by European Agricultural Fund for Rural Development
- 2016-2019 “ENVISAGE - Recording and management of invasive alien plants on agricultural areas to safeguard the agricultural productivity“
funded by the Rentenbank



KORINA - Coordination Centre Invasive Plants in protected areas of Saxony-Anhalt



action plan of KORINA

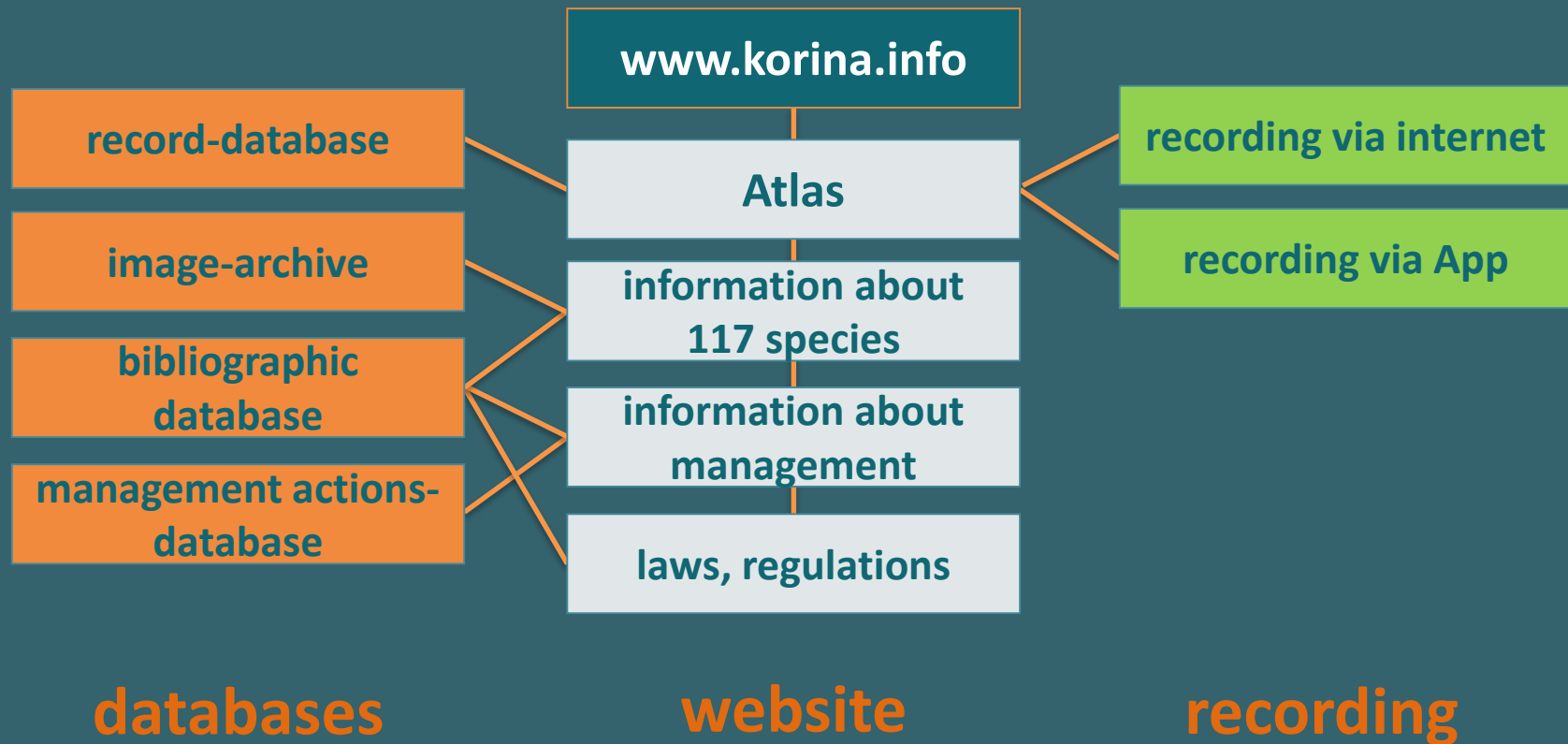
KORINA	Prevention	Early warning and rapid response	Control and renaturalisation
Public relations work	<ul style="list-style-type: none"> information about the risks of introducing and spreading invasive species in newspapers, presentations and field trips 		
	<ul style="list-style-type: none"> teaching material and teaching methods for schools 	<ul style="list-style-type: none"> appeal to join the actions 	<ul style="list-style-type: none"> promotion of measures to control invasive alien plants
Networking	<ul style="list-style-type: none"> network of stakeholders and experts in Saxony-Anhalt, Germany and Europe Training of stakeholders 		
		<ul style="list-style-type: none"> rapid information about new incursions of alien species, rapid assessment and measures 	<ul style="list-style-type: none"> coordination of management actions
Information management (www.korina.info)	<ul style="list-style-type: none"> web-based database “Alien plants in protected areas in Saxony-Anhalt” with currently 78300 datasets, where new data can be added via internet and KORINA-app specific information about selected invasive plant species based on internal bibliographic database (3100 datasets) Image collection (13.000 images) 		
		<ul style="list-style-type: none"> rapid information about new incursions of alien species can be distributed via the web-based database 	<ul style="list-style-type: none"> information about effective measures; consulting service for stakeholders
Monitoring	<ul style="list-style-type: none"> Mapping of invasive plant species by stakeholders and volunteers Use of remote sensing for mapping of selected species Systematic area sampling control of success of measures 		
Assessment	<ul style="list-style-type: none"> Analysis of the impact of selected potentially invasive plants Invasive alien plants species Black List for Saxony-Anhalt 		
Management		<ul style="list-style-type: none"> implementation of rapid measures or rapid coordination of measures 	<ul style="list-style-type: none"> Tests of control methods Coordination of actions and stakeholders Database of management actions in Saxony-Anhalt

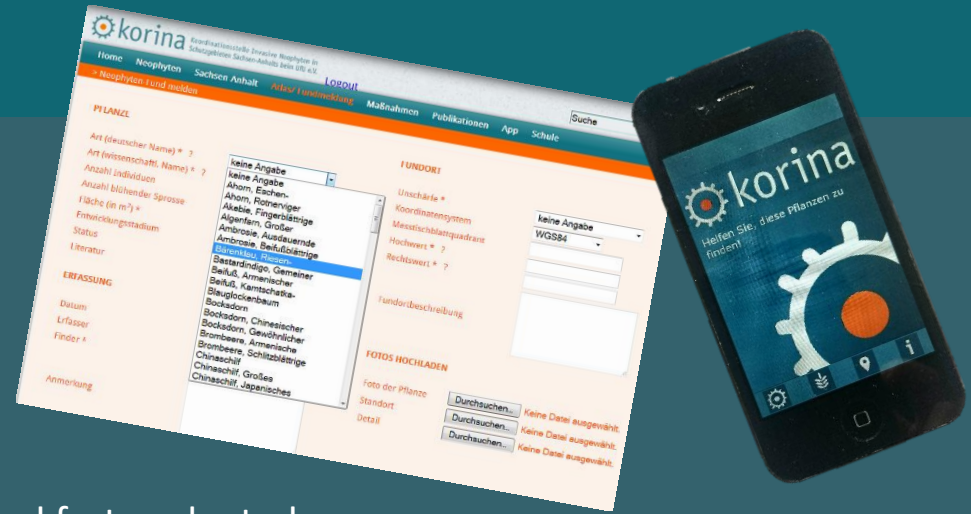
action plan of KORINA

KORINA	Prevention	Early warning and rapid response	Control and renaturalisation
Public relations work	<ul style="list-style-type: none"> • information about producing and spreading invasive species in newspapers, presentations and field trips • teaching schools 	<ul style="list-style-type: none"> • appeal to join the actions 	<ul style="list-style-type: none"> • promotion of measures to control invasive alien plants
Networking	<ul style="list-style-type: none"> • network of stakeholders in Germany and Europe • Training of stakeholders 	<ul style="list-style-type: none"> • information about new incursions of alien species and assessment and measures 	<ul style="list-style-type: none"> • coordination of management actions
Information management (www.korina.info)	<ul style="list-style-type: none"> • web-based database "Alien plants in protected areas" with 78300 datasets, where new data can be added via internet and KORINA-app • specific information about selected invasive plant species (3100 datasets) • Image collection (13.000 images) 	<ul style="list-style-type: none"> • rapid information about species can be added to database 	<ul style="list-style-type: none"> • information about effective measures; consulting service for stakeholders
Monitoring	<ul style="list-style-type: none"> • Mapping of invasive plant species by stakeholders and volunteers • Use of remote sensing for mapping of selected species • Systematic area sampling • control of success of measures 		
Assessment	<ul style="list-style-type: none"> • Analysis of the impact of selected potentially invasive plants • Invasive alien plants species Black List for Saxony-Anhalt 		
Management		<ul style="list-style-type: none"> • implementation of rapid measures or rapid coordination of measures 	<ul style="list-style-type: none"> • Tests of control measures • Coordination of management actions with stakeholders • Database of management actions in Saxony-Anhalt

we are the first federal state of Germany with such an institution and management plan

Information system





- Recordings via internet or app
- New records are instantly online and fast evaluated
- Improved location accuracy, image and area size mandatory
- Possibility to add new information to an old recording, thereby creating a history of a population, including absence information

Target groups for recording

- Botanists and conservationists
- conservation authorities
- local authorities
- citizens
- students (schools and colleges)



Costs of the KORINA-app

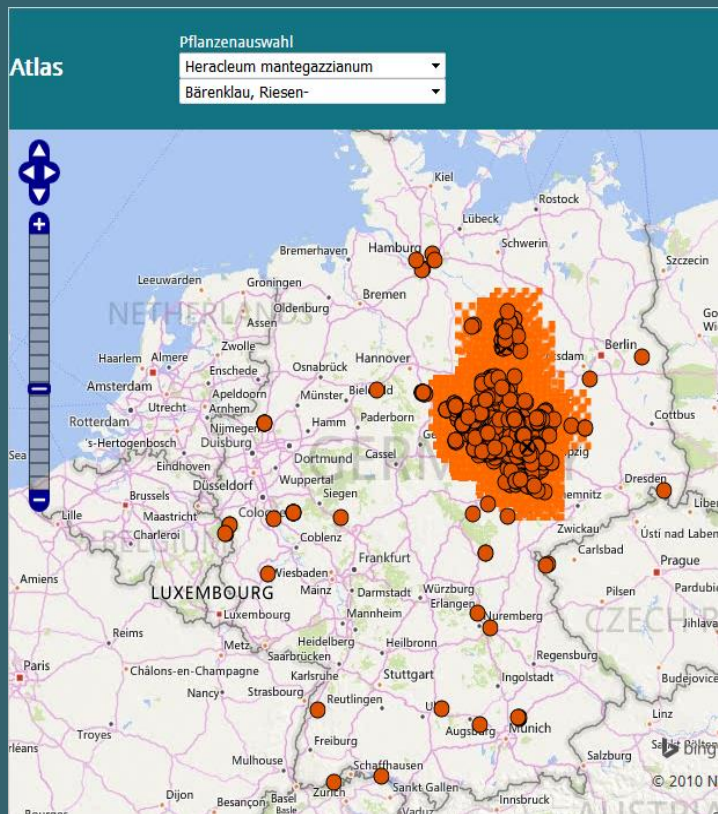
	costs		
	development	design	outreach material
2018	4.700,00 €		
2017	11.750,00 €		
2015	1.285,20 €		
2013-2014	20.766,81 €	2.737,00 €	poster, postcards
2011-2012	11.745,30 €	1.487,50 €	
total	50.247,31 €	4.224,50 €	

Analysis of the recorded data




Database “Invasive Neophyten in Schutzgebieten Sachsen-Anhalts“

- 124 taxa of alien invasive plants and potentially invasive plants (116 species, 8 genus)
- 78.278 datasets
- 66.172 datasets from the state agency for environmental protection in Saxony-Anhalt (first record from 1775)
- 12.106 datasets generated during KORINA-projects

Area of recordings



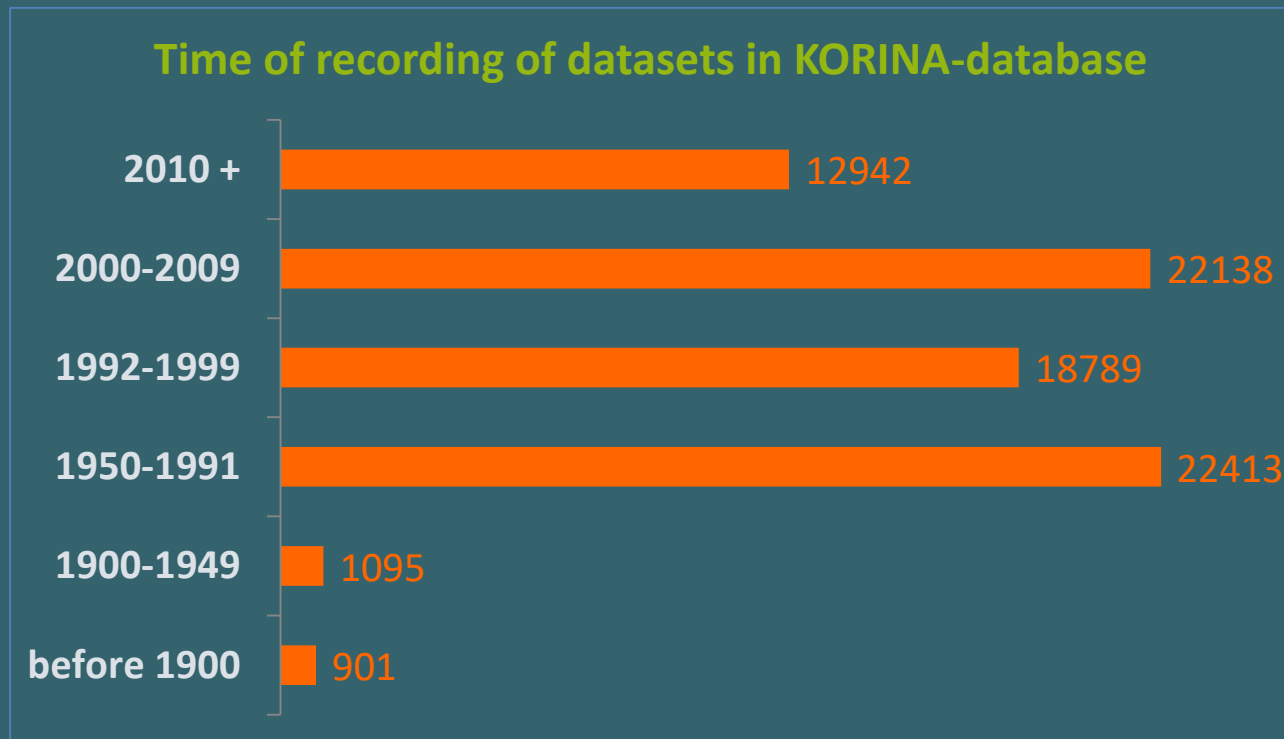
Legende:

-  Vorkommen im Meßtischblatt
-  punktgenaues Vorkommen
-  Bestand nicht mehr vorhanden

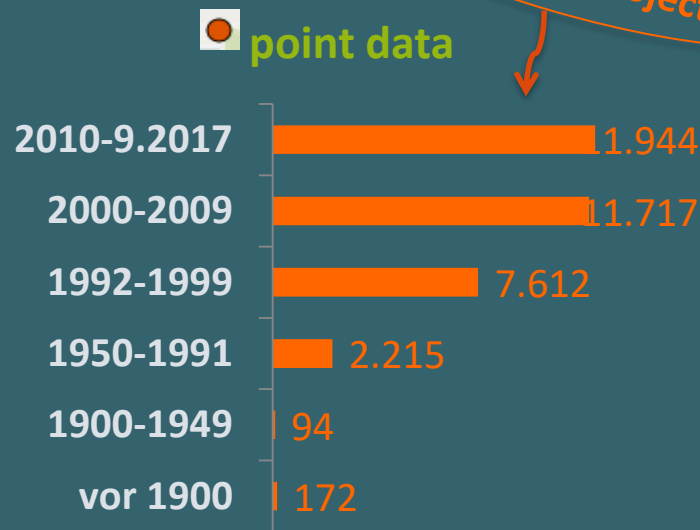
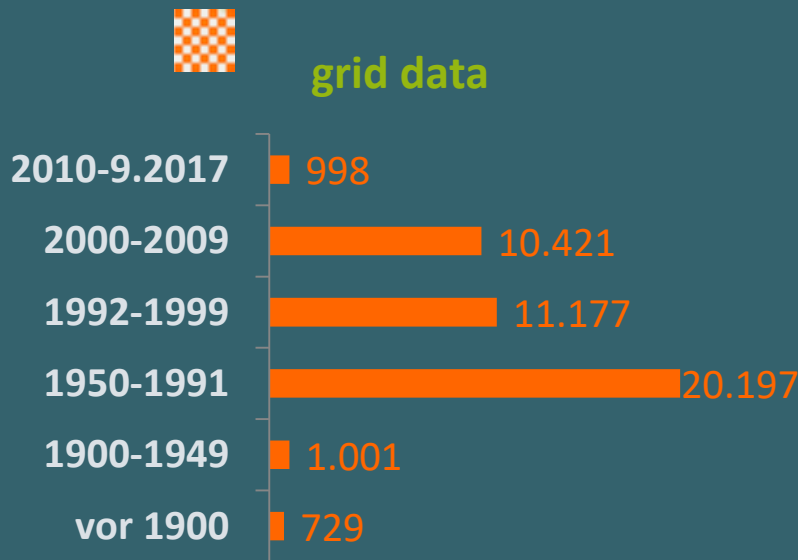
11736 datasets from Saxony-Anhalt

370 datasets from elsewhere

Time of recording



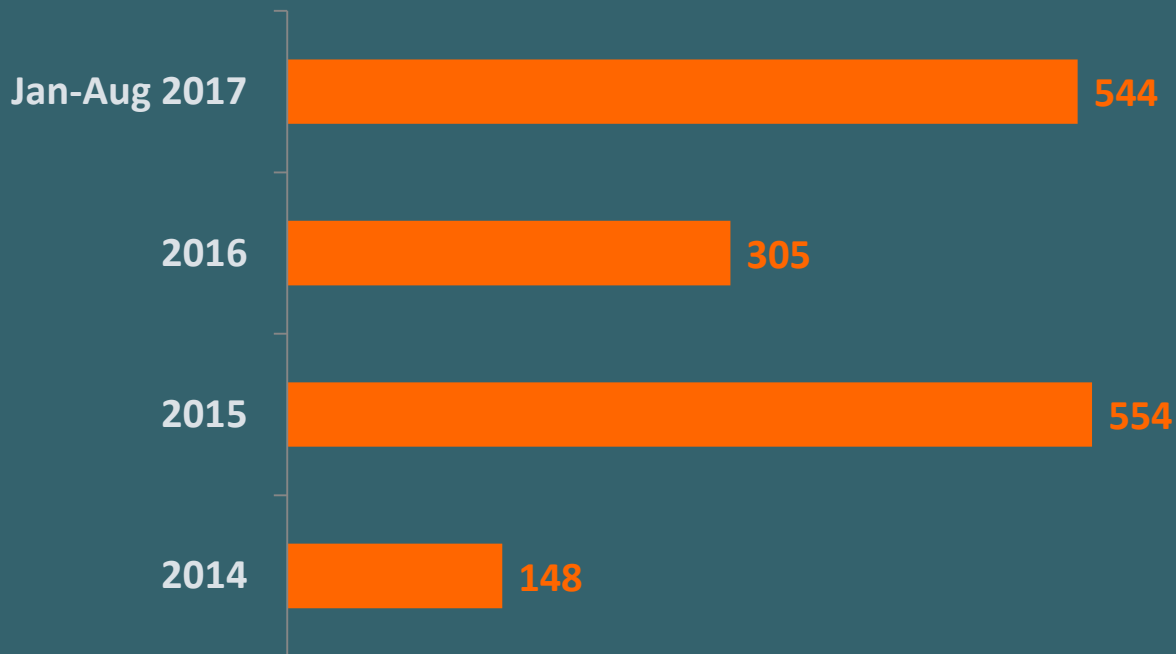
development of data quality



11.271 datasets generated
in KORINA projects

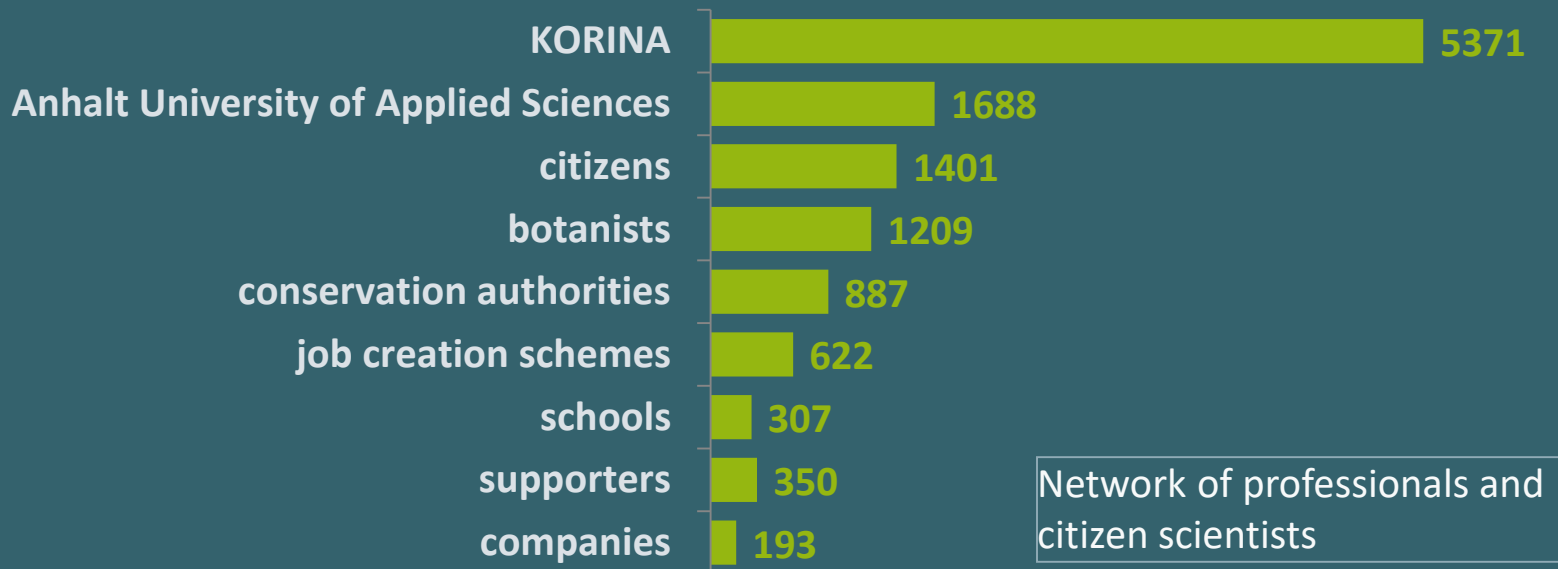
App recordings per year

Number of App-recordings per year



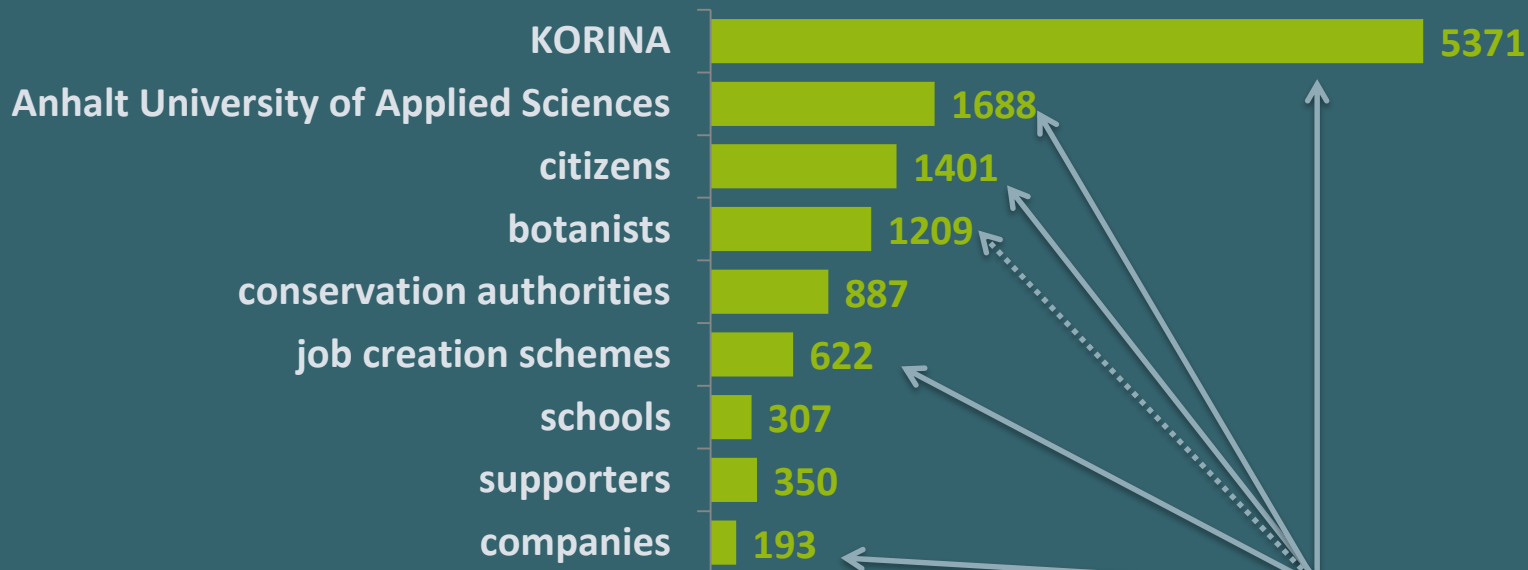
Numbers of recordings per stakeholder group

Number of recordings per group



Numbers of recordings per stakeholder group

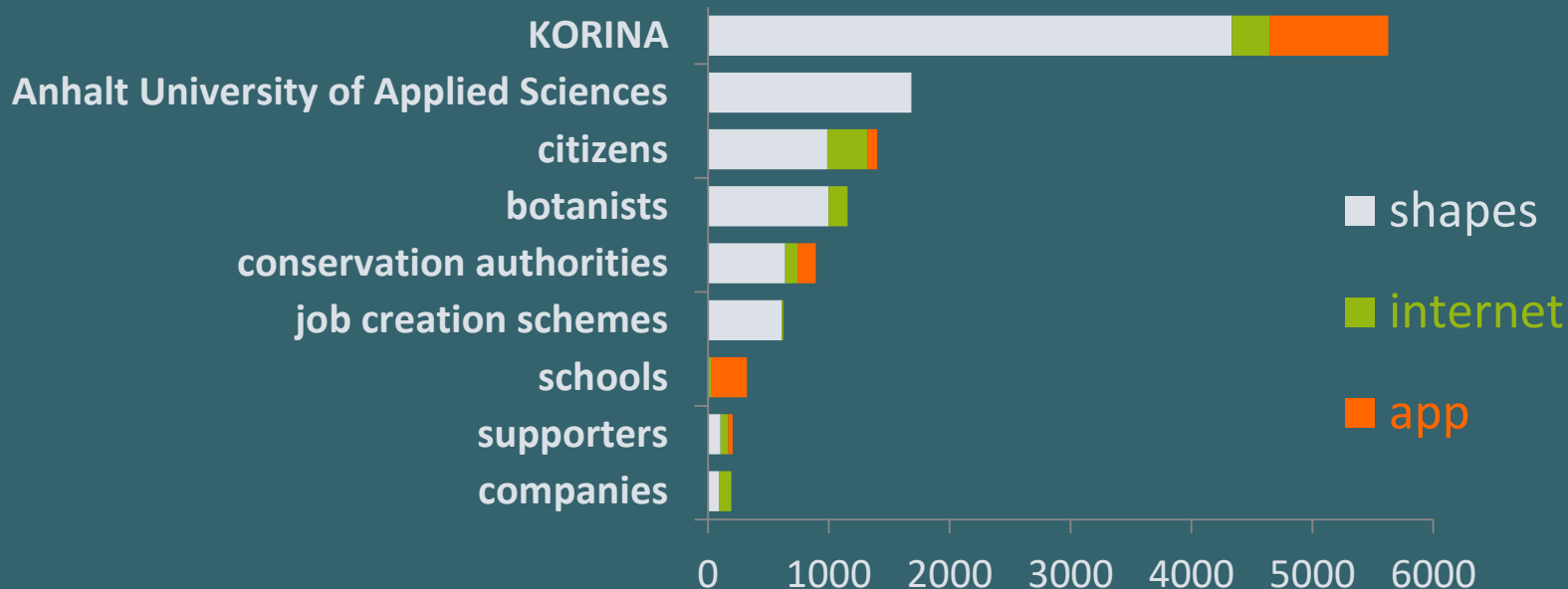
Number of recordings per group



9731 datasets were entered
by KORINA staff

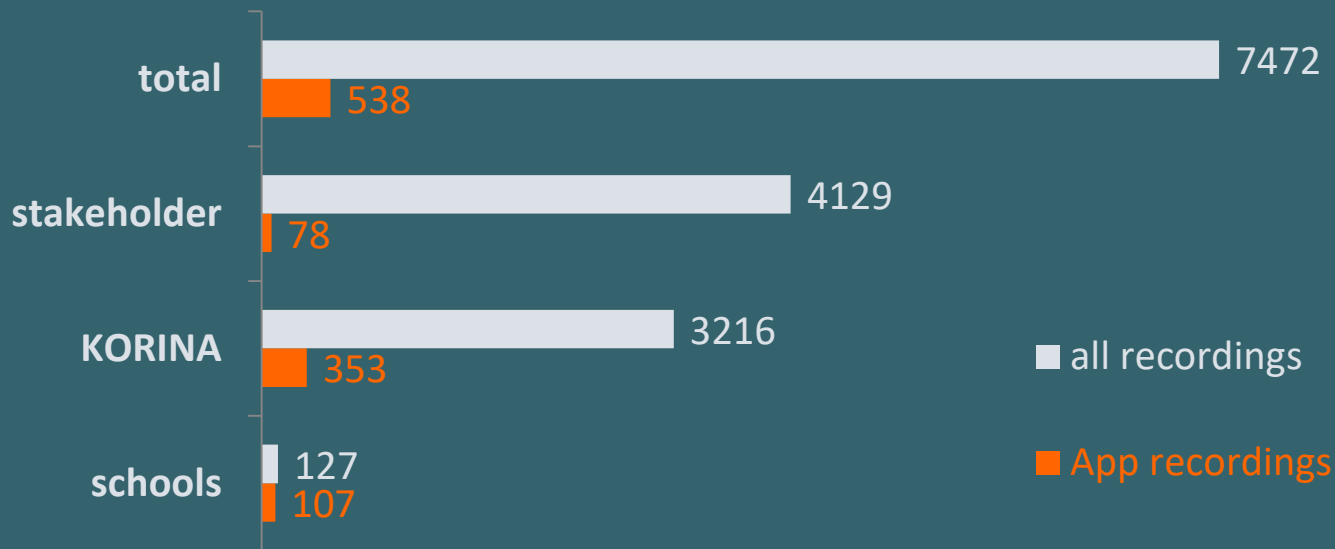
Recordings per recording device

Number of recordings per group and per recording device

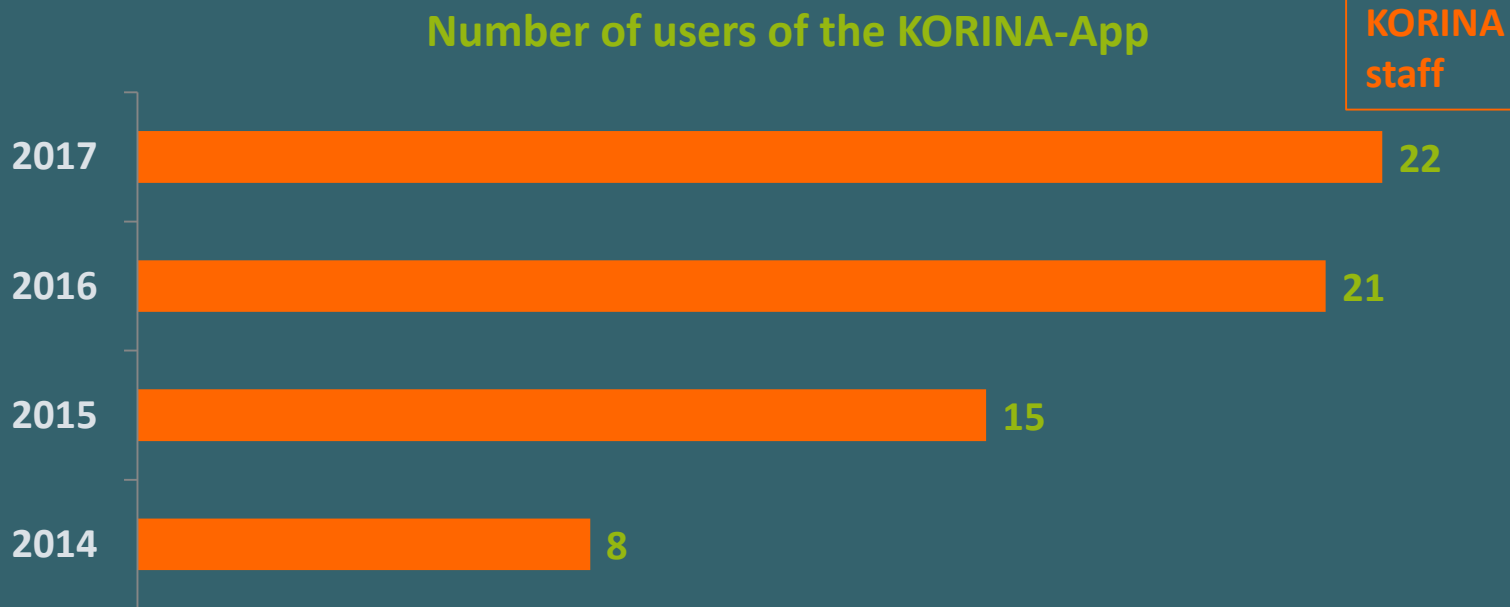


Target areas: Natura 2000 areas

Recordings in Natura2000 areas since 2010



Number of app users

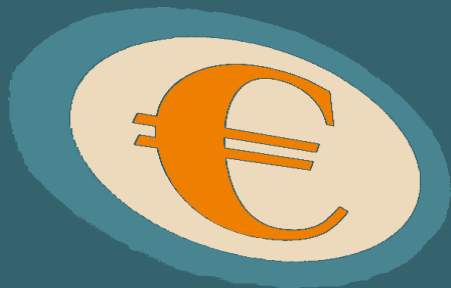


reasons for low number of app users

- Performance problems of the app
- many conservationists do not use smartphones
- Public is not very familiar with the problems caused by invasive alien plants
- Too many plant species and too little identification help
- small population in Saxony –Anhalt: 2,2 Mio = 109 inhabitants per km² (Germany 230/km², Belgium 370/km²), 7000 members of NABU, (Germany 575.000)
- public outreach of KORINA: users of newspapers, television, radio are mostly older than 50 and do not use apps

money needed for...

and time



1. staff

appconcept, **support for developers and recorders,**
training of recorders, evaluation of records, interpretation of records, public outreach,

2. developers

programmer, administrator, designer
software, hardware (phones, server)

3. targeted public relations activities during the whole project

flyer, poster, webpage,
events, excursions,
media related work
social media

4. compensation for expenses for recorders

conclusions

KORINA-App

- is useful tool for project staff, stakeholders and for education
- needs constant administration and development
- more public outreach needed to engage more users



Thank you very much!