



A FRAMEWORK FOR ADVANCED AGRICULTURAL INSURANCE SCHEMES

Reinhard Kern | Member of the Board, Austrian Hail Insurance | Skopje, November 1st 2018

Agenda



- **General information**
- **Climate change**
- **Private public partnership**
- **Product portfolio**
- **Digitization and claims management**



GENERAL INFORMATION



Collaboration since 1946

Insurance industry and agriculture



Founded by Austrian Insurance
Industry in 1946

Agriculture

Supervisory Board

- President
- 8 Members

- ✓ Promotion of risk management in agricultural markets

Insurance industry

Supervisory Board

- Vice-President
- 8 Members

- ✓ Sales – Operating agreement
- ✓ Reinsurance

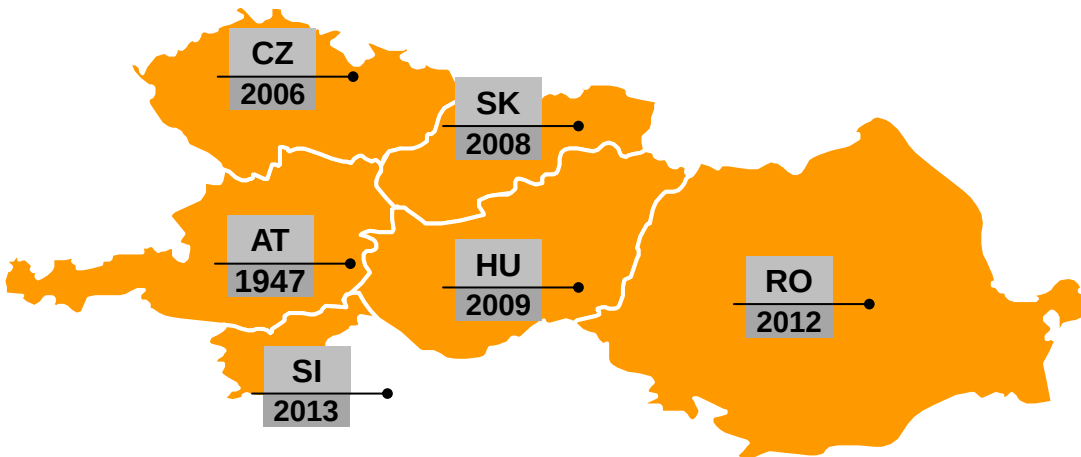


Facts and figures

We are a mutual insurance company.



Market Entries



Headcounts

127

Freelance consultants and loss adjuster

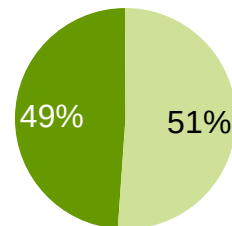
402

Salesforce of our founders and brokers

5.212

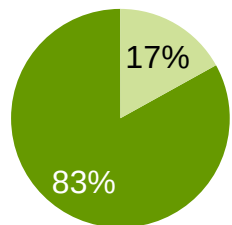
Acreage 2018e

Austria: 1.2 m ha
Markets: 1.3 m ha
Total: 2.5 m ha



Premium 2018e

Austria: € 130.0 m
Markets: € 26.6 m
Total: € 156,6 m

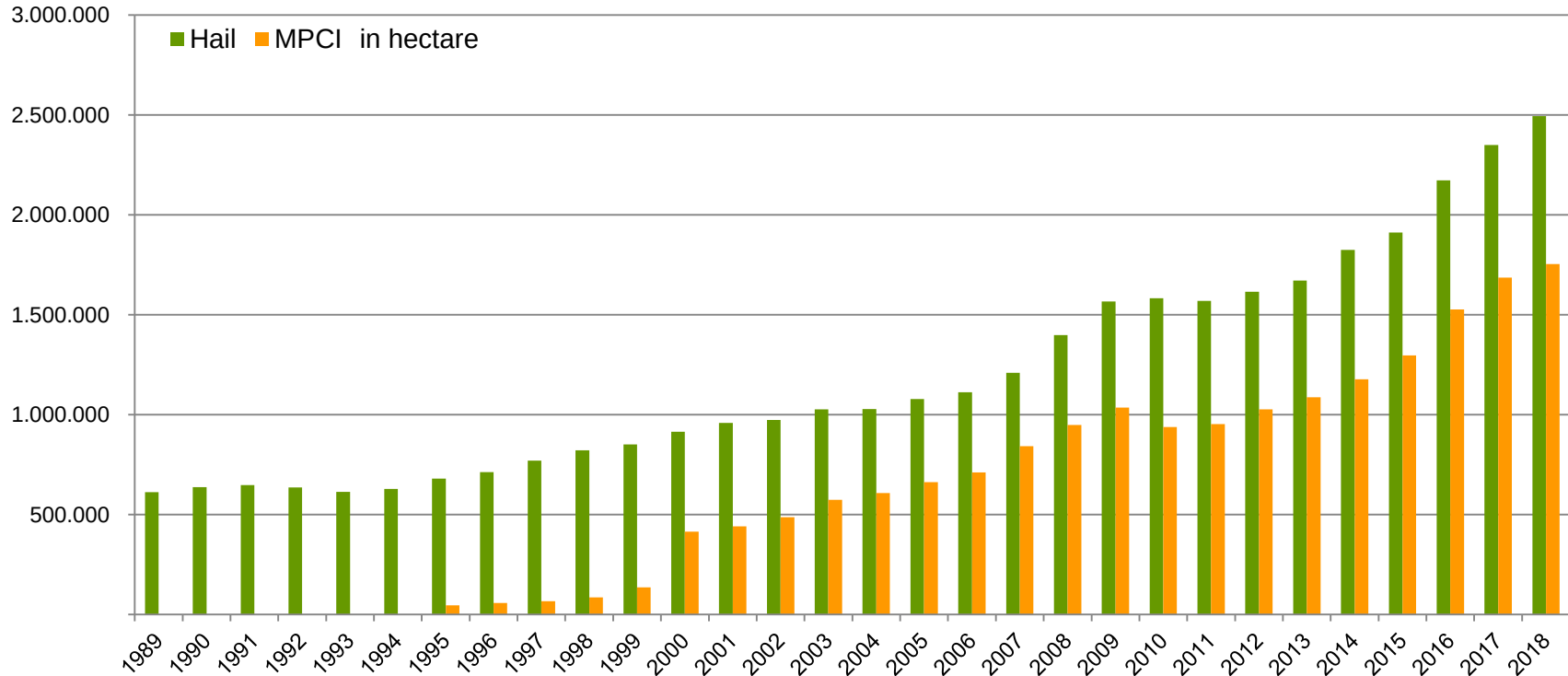


■ Austria ■ Markets



Development insured area

Growth due to MPCl





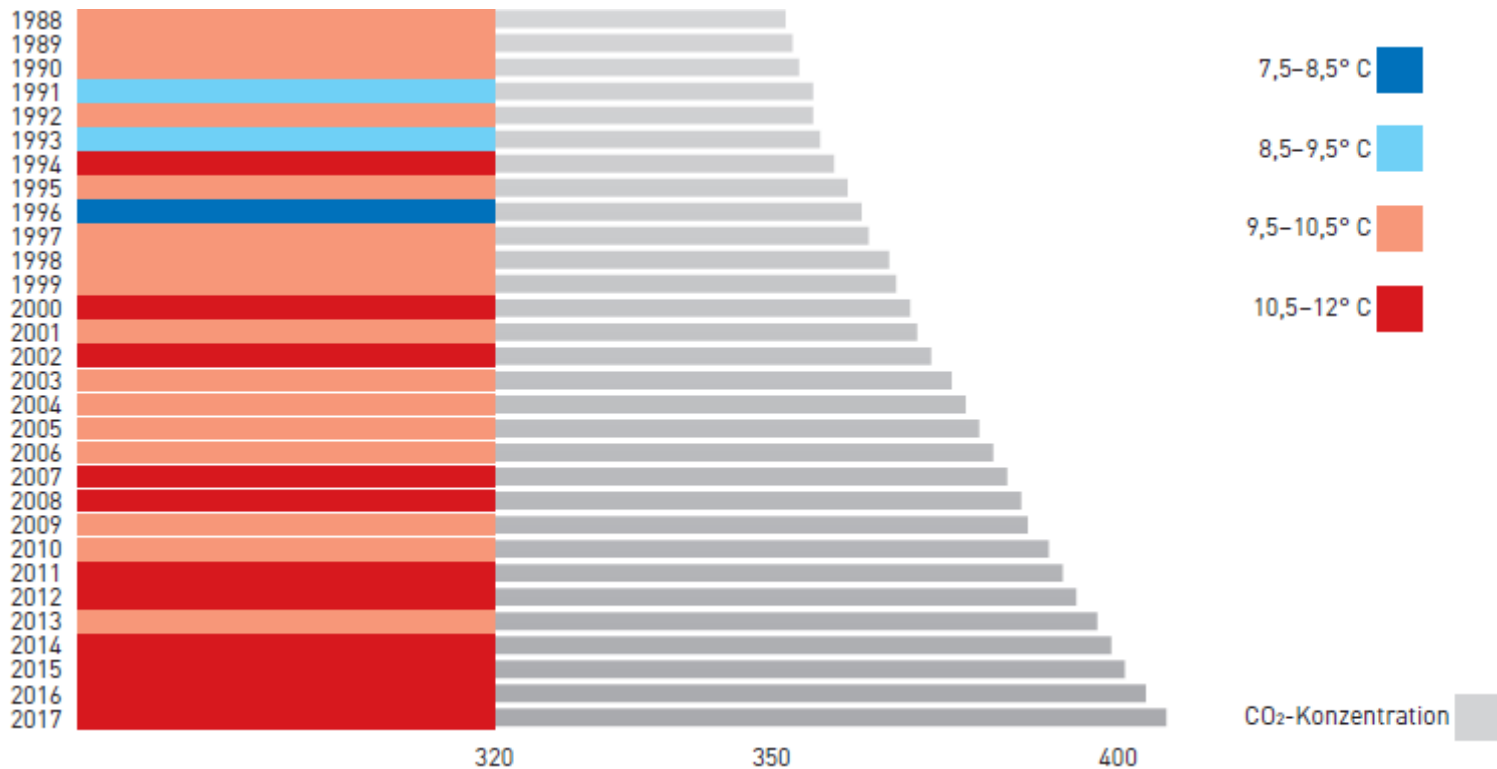
CLIMATE CHANGE



Cold Years, Hot Years

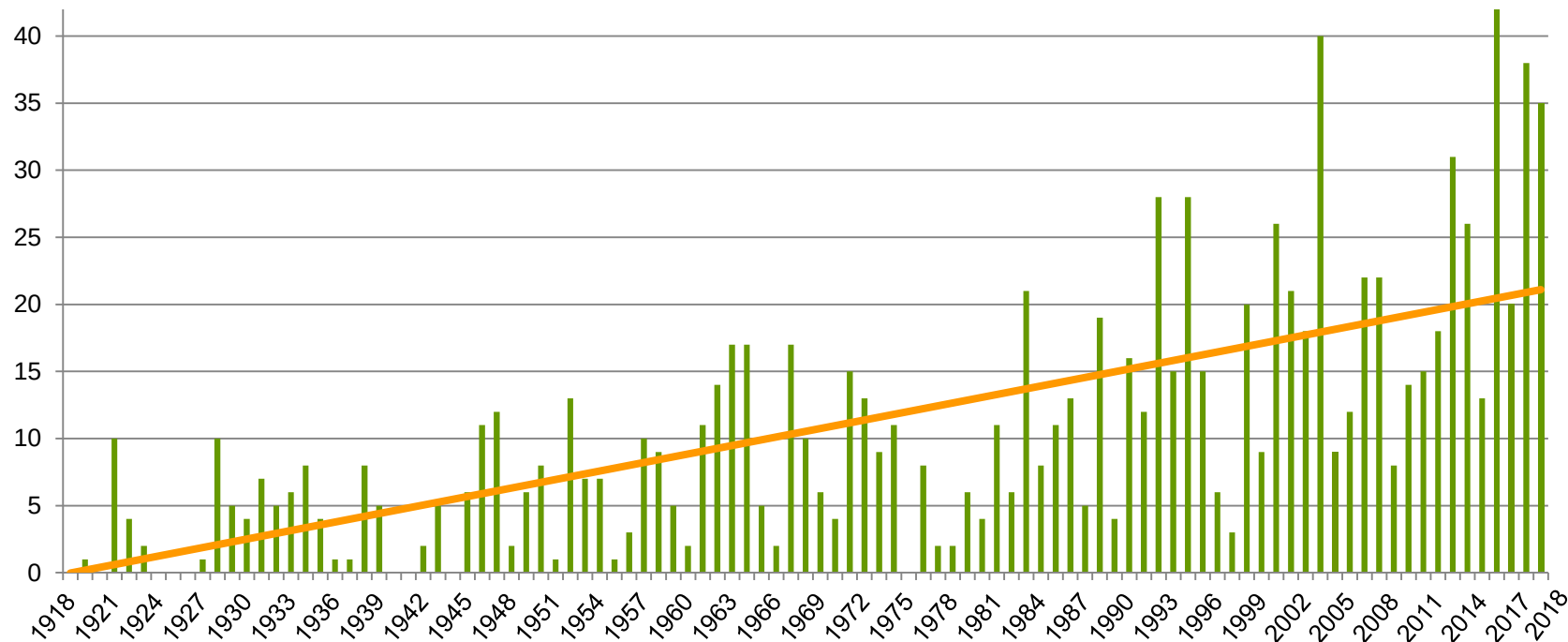


Average annual temperature and CO₂ concentration Austria



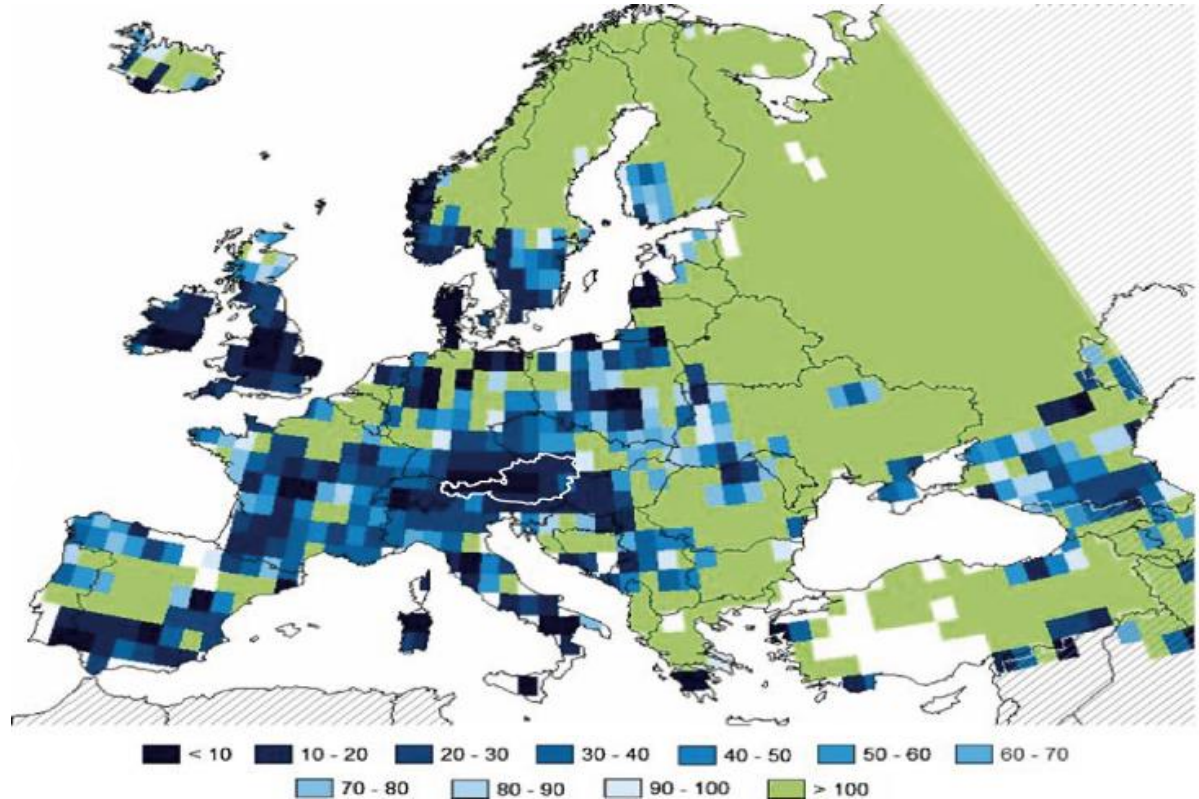
Heat days in comparison

Days over 30°C in Vienna



Floods accumulate

Expected return period of today's 100-year flood until 2100

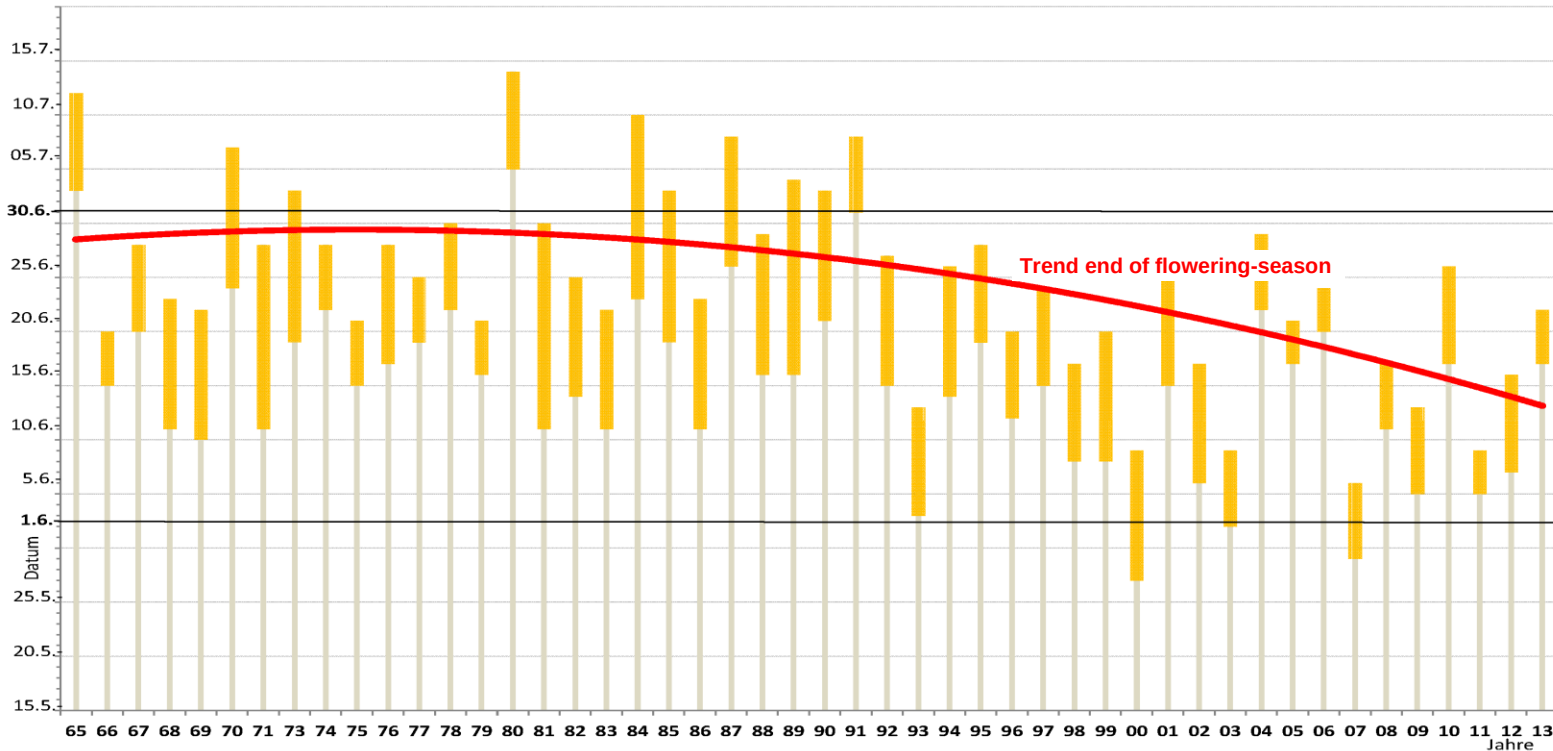


(Kundzewicz et al., 2010, Hirabayashi et al., 2008.)



Vegetation period since 1960: tends to be earlier

High losses due to spring-frost in 2016 & 2017



Risk management is important

Due to weather and climate conditions



- Agriculture faces weather extremes
- Austria and Slovenia are located in the epicentre of hail in Europe
- Drought periods become more frequent
- Risk of spring-frost & floods is rising





PRIVATE PUBLIC PARTNERSHIP



Private Public Partnership

Necessity of subsidies in crop insurance



Agriculture is the most sensitive economy concerning weather extremes

- ✓ The frequency of damages in agriculture is the highest in the economy

Farmer income more and more in danger due to causes of climate change

- ✓ Weather extremes can damage their entire harvest

Financing brings higher penetration and is in the long run cheaper for the state

- ✓ Legally, the state does not have to provide ad hoc payments after damages
- ✓ But: The state benefits from a stable agriculture sector with an insured agriculture (crucial for food supply)

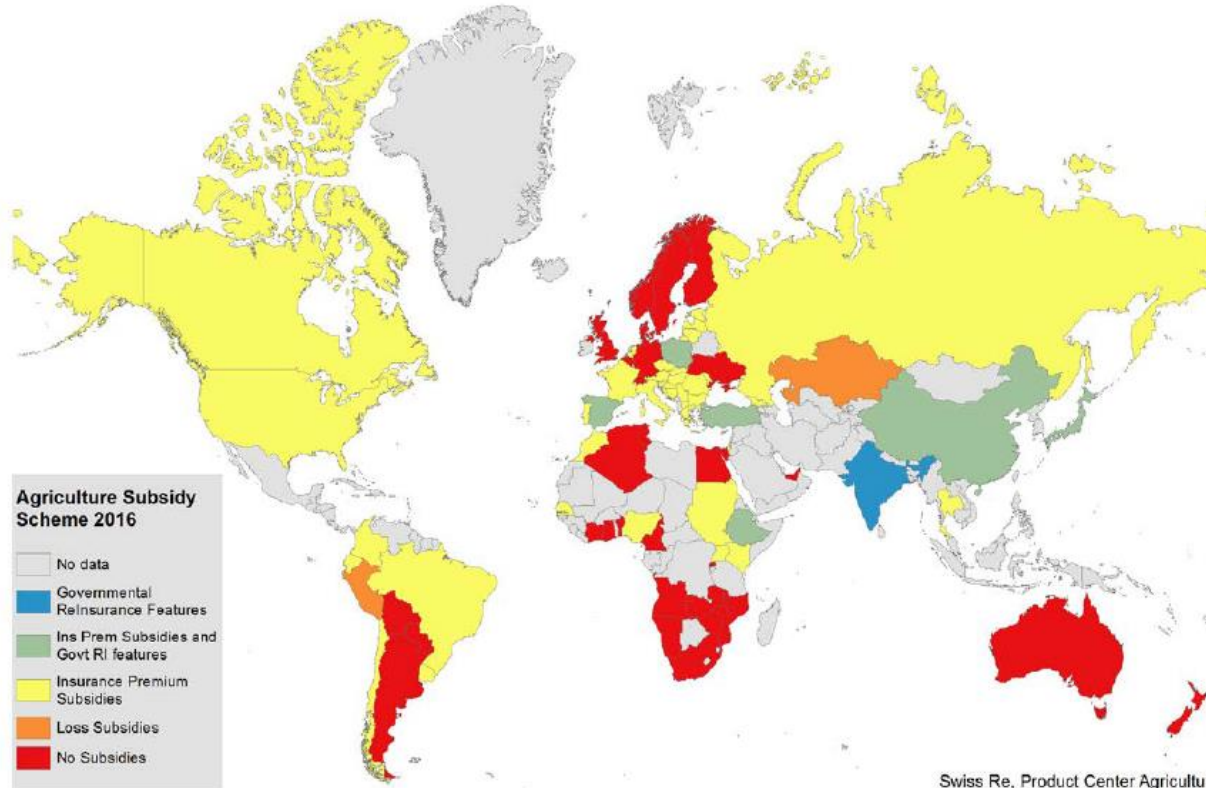
Mutual insurance company guarantees effective support

- ✓ Indemnities are coming quickly



Crop insurance worldwide

International trend towards more premium subsidies



Agriculture Subsidy Scheme 2016

- No data
- Governmental Reinsurance Features
- Ins Prem Subsidies and Govt RI features
- Insurance Premium Subsidies
- Loss Subsidies
- No Subsidies

Premium subsidies by state



China: 80%

USA: 65%



Russia: 50%

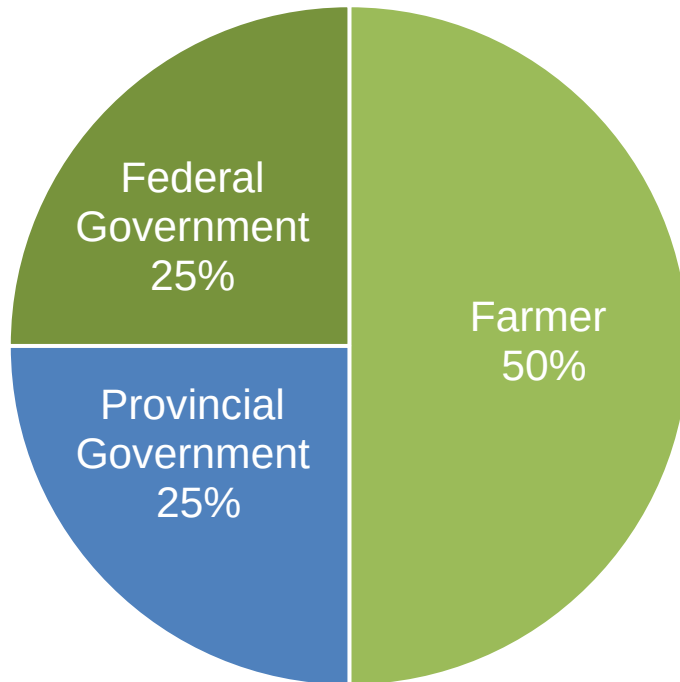
India: 50%

Swiss Re, Product Center Agriculture



Private Public Partnership in Austria

Hail insurance promotion act

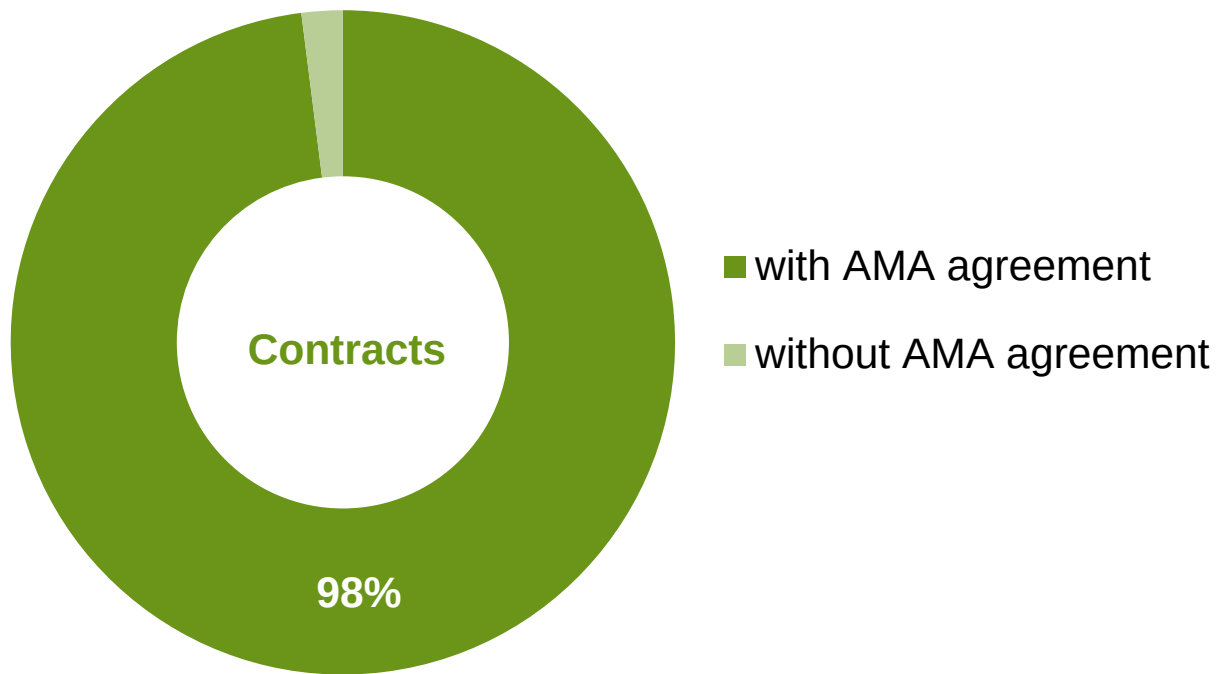


*...subsidies to farmers to
reduce insurance premium.*



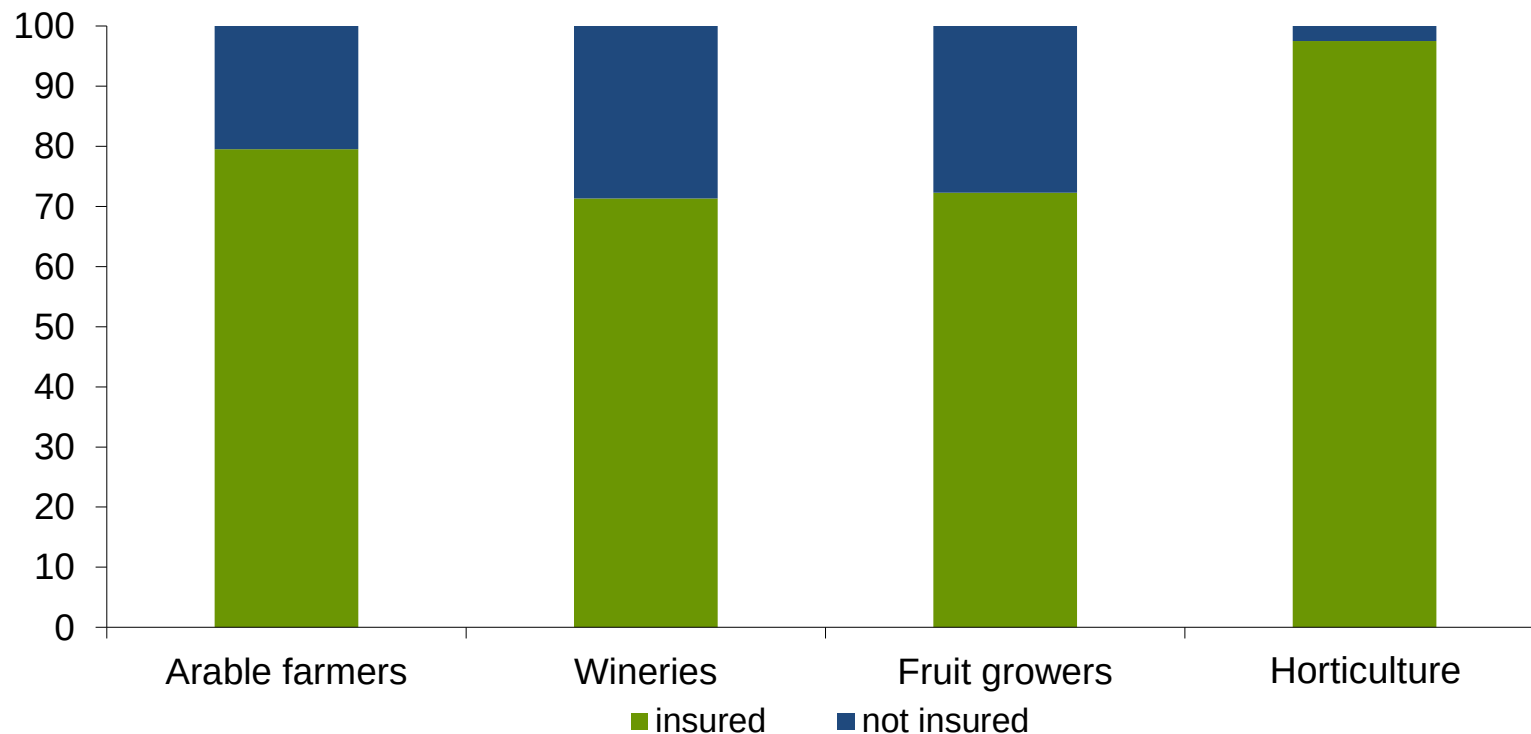
Private Public Partnership in Austria

Use of existing databases of the Government Promotion Company (AMA)



High market penetration in Austria

Very high figures in global comparison





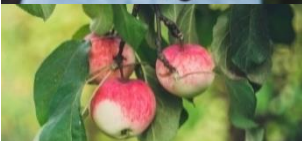
PRODUCT PORTFOLIO



Insured Risks

The widest range of products in Europe



	Market segment:	Risks:
	CROPS	▪ Hail ▪ Frost ▪ Drought ▪ Storm ▪ Drift ▪ Flood ▪ Aggradation ▪ Feeding damage ▪ Sprouting ▪ Fungal Infection ▪ Snow pressure
	VITICULTURE	▪ Hail ▪ Frost ▪ Additional effort
	FRUITGROWING	▪ Hail ▪ Storm ▪ Frost ▪ Drought
	HORTICULTURE	▪ Hail ▪ Storm ▪ Frost ▪ Spoilage ▪ Heavy rainfall ▪ Snow pressure ▪ Flood
	GRASSLAND & LIVESTOCK	▪ Hail ▪ Drought ▪ Flood ▪ Hail/storm foil ▪ Death ▪ Stillbirth ▪ Animal disease ▪ Ventilation failure



Drought Index Insurance since 2015 in Austria

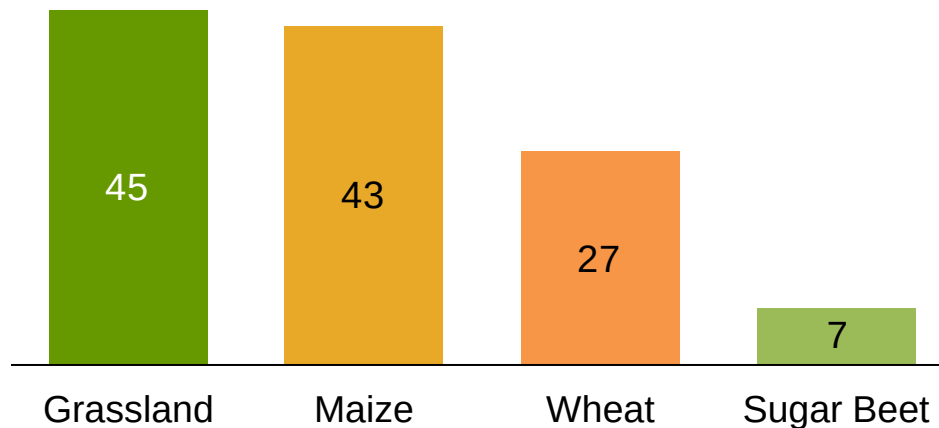


Multi-peril insurance

Insurable crops:

- Grassland
- Maize
- Wheat
- Sugar Beet

Index-Insurance-Penetration AT



Insured risks:

- Deficit of precipitation in comparison to average precipitation of last 10 years
- Hot days $\geq 30^{\circ}\text{C}$ (33°C for Corn)

→ Loss adjustment in the field not necessary



Index Insurance

Pros vs. cons



Pros

- No loss assessment
- Objective
- Simplified claim process
- Provides early payout
- Reduces administrative costs
- Competitive price

- “Basic risk”: when the actual loss does not correlate with the real loss
- Index-based insurance does not cover all sources of risk
- Sometimes the index structure is complex – so there is less confidence
- Huge volume of accurate data input required
- Data quality and availability

Cons



Stop-loss and Quota share treaties





DIGITIZATION AND CLAIMS MANAGEMENT



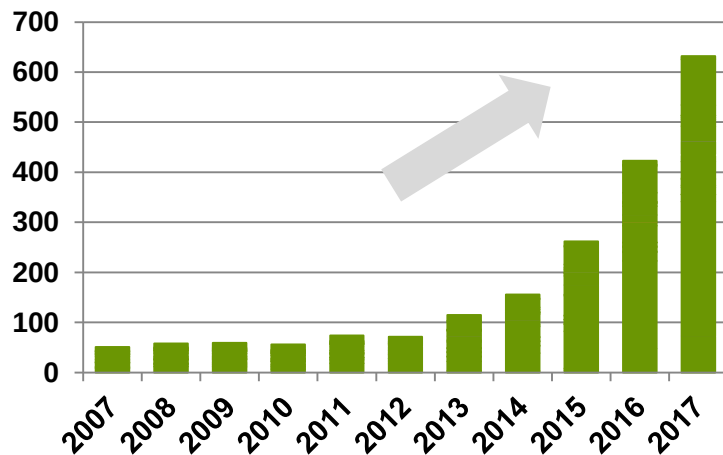
IT-System requirements

Constantly increasing complexity

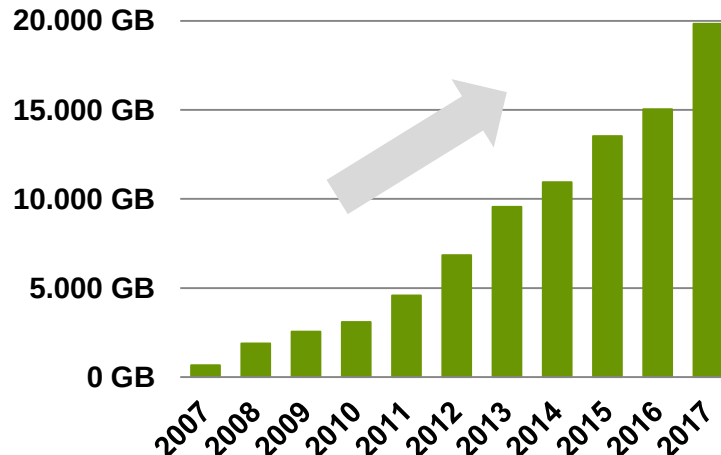


- The number of products as well as the data volume have increased exponentially, the complexity has risen.
- Considering the rapid growth and international engagement, sales- and claims management would not be manageable any if latest technology would be lacking.

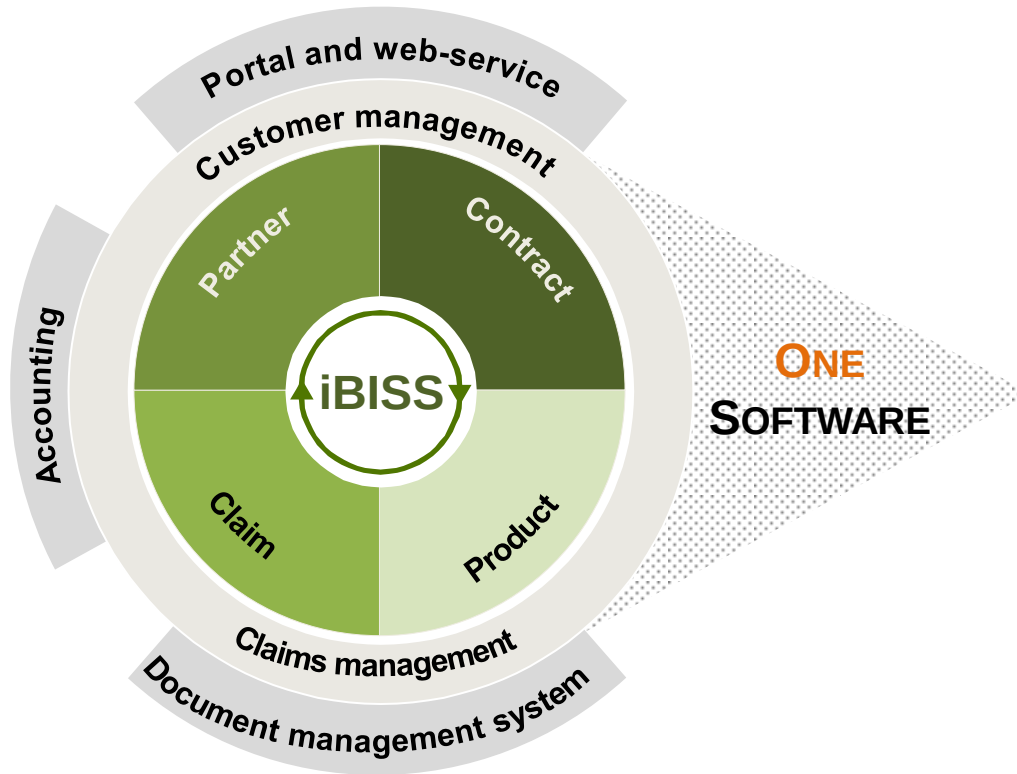
Products



Storage development over 10 years



Integrated customer and claims management system



ONE integrated customer and claims management system

- Latest and sustainable technologies
- Adaptable for multiple languages and currencies
- 500 Users
- 70,000 Costumers
- 1,100,000 Land pieces

6 Countries **6 Languages**
4 Currencies

Modern claims management

Paperless process, satellites and drones



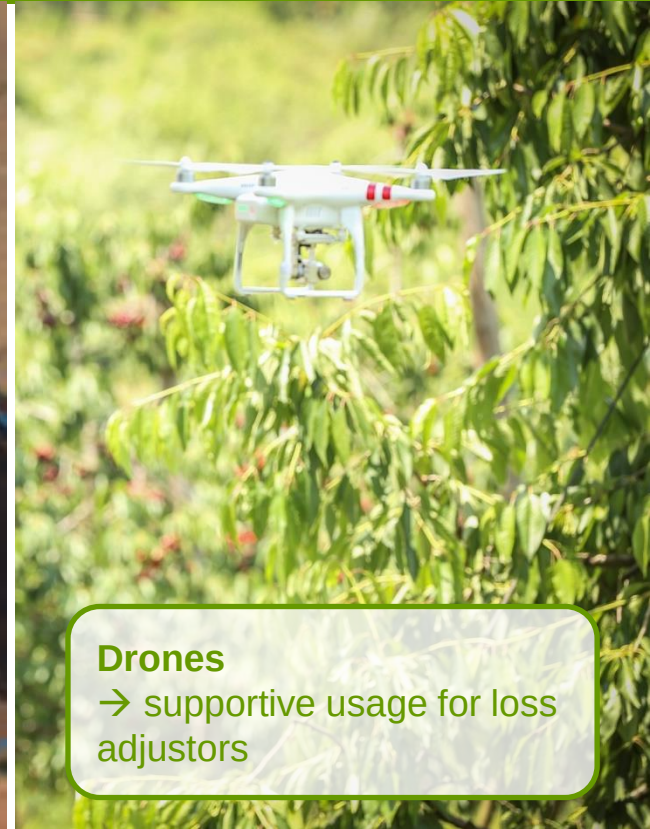
Paperless

→ customer and claims management in one software



Satellite Data

→ usage of free satellite images for loss adjustment



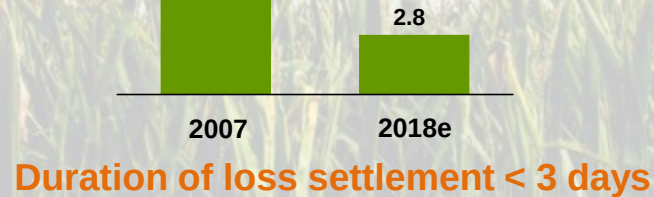
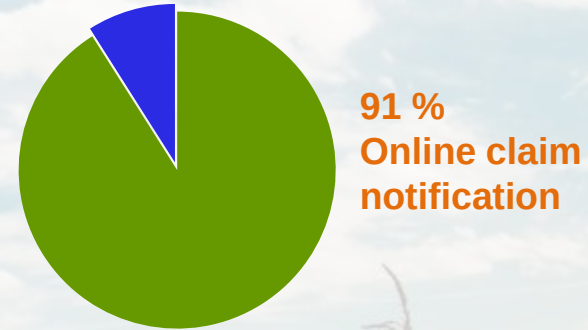
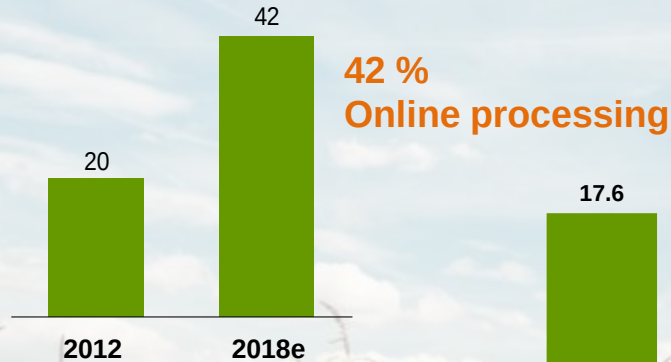
Drones

→ supportive usage for loss adjustors

What we have achieved so far..

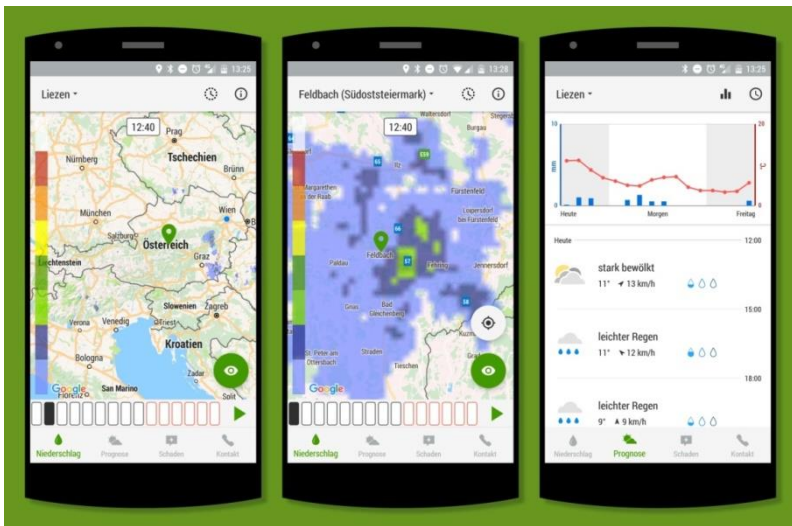


Focus on internal work-flows



Weather service

APP | online



Downloads 34.534

Wetterservice

Satellitenservice

Ortssuche

Meistbesuchte Orte:

- Braiten (Baden)
- Soof (Baden)
- Gleisdorf (Weiz)
- Thalgau (Salzburg-Umgebung)

Sonne und Mond

06:35 16:42

20:31 11:32

Abnehmender Mond

Krebs

Vegetationsfortschritt

Die Berechnung startet im Frühjahr wieder.

Prognose [letzte Aktualisierung: 29.10.2018 12:00 Uhr]

Katastralgemeinde: Soof (Baden, Niederösterreich)

Montag 29.10.				Dienstag 30.10.								Mittwoch 31.10.			
12 - 15	15 - 18	18 - 21	21 - 00	00 - 03	03 - 06	06 - 09	09 - 12	12 - 15	15 - 18	18 - 21	21 - 00	00 - 03	03 - 06	06 - 09	09 - 12
Niederschlagswahrscheinlichkeit															
5%	15%	10%	5%	38%	32%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%

Conclusion

Secrets to success



- 
- Four green chevrons pointing upwards, arranged vertically on the left side of the slide, each corresponding to one of the four list items.
- Diversification within product range
 - Private public partnership
 - Professional and modern claims management
 - Innovative and efficient work-flows



Thank you for your attention.

