

Fachhochschule Südwestfalen

We create momentum!

Western Balkans Urban Agriculture Initiative

BUGI Kick Off-Meeting

December 2017, Donja Gorica, Podgorica

Prof. Dr. Wolf Lorleberg, Bernd Pölling

Who we are

- South-Westphalia University of Applied Sciences (SWUAS)

WP 1: Needs Analysis

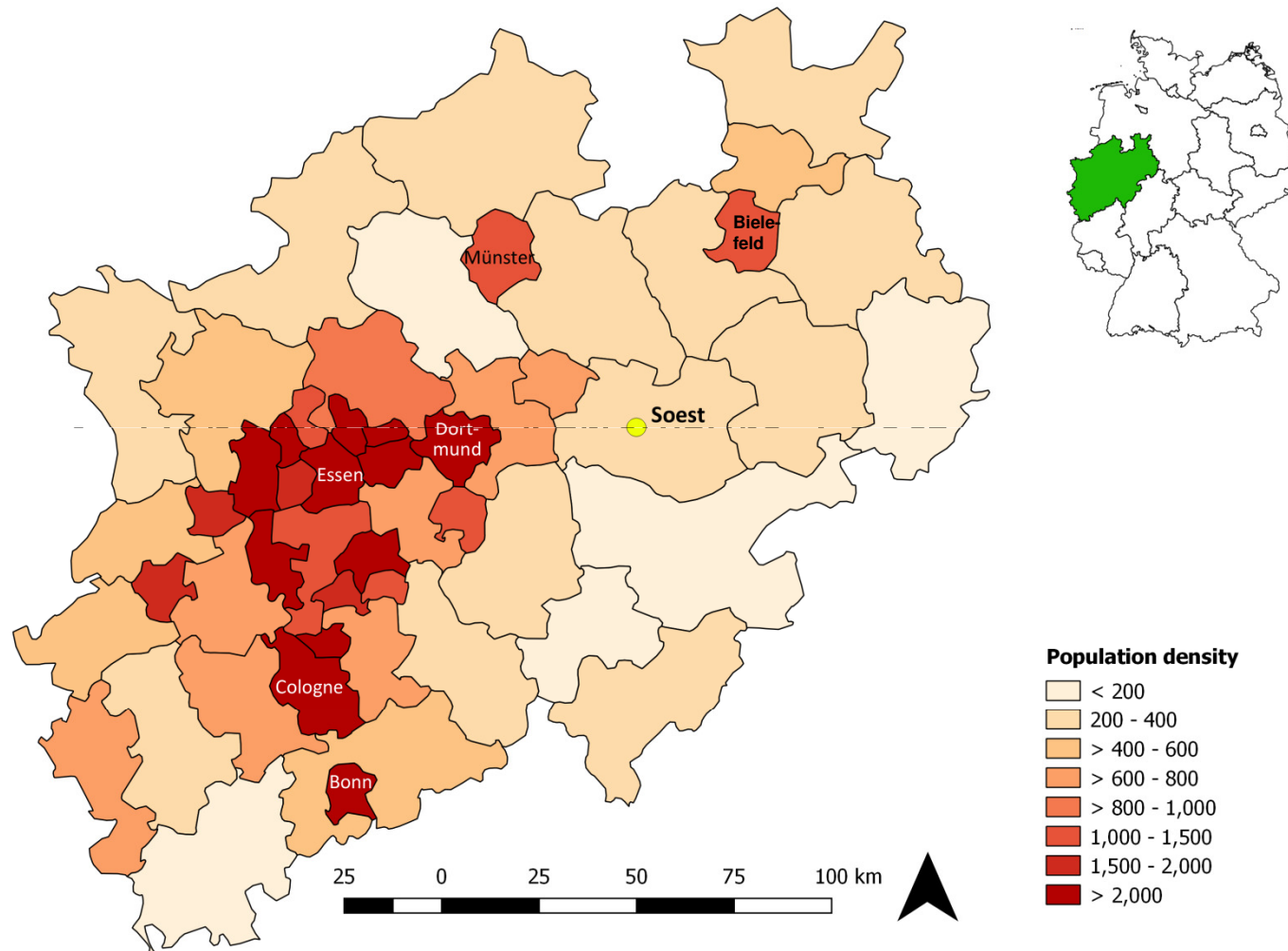
- Objectives
- Tasks / Deliverables
- Time frame

SWUAS

- South-Westphalia University of Applied Sciences
- Fachhochschule Südwestfalen
- Department of Agriculture, Soest
 - Bachelor and master course on agriculture
 - Ca. 60 technicians and scientists – incl. 12 professors
 - Winter semester 2017/2018: 140 new bachelor candidates

SWUAS

Who we are



SWUAS

Who we are



BUGI Kick Off, December 2017
Folie 5, Bernd Pölling – Fachhochschule Südwestfalen

SWUAS

Who we are



Urban agriculture's research foci:

- City-adjustment strategies and business models



Second International Conference on
AGRICULTURE IN AN URBANIZING SOCIETY
Reconnecting Agriculture and Food Chains to Societal Needs
14 - 17 SEPTEMBER 2015 | ROME | ITALY

1

Business models in Urban Agriculture - answering cost pressures and societal needs

Bernd Pölling¹, Wolf Lorleberg¹, Francesco Orsini², Francesca Magrefi³, Femke Hoekstra⁴,
Henk Renting⁴, Mattia Accorsi²

Abstract – Urban Agriculture has to adjust to the urban environments by using the existent opportunities, by dealing with urban disadvantages, and where possible by turning the urban location into market asset. Businesses, which ignore urban demands and conditions, struggle to maintain economically viable, give up or do not develop beyond the start-up phase. The conducted European survey, which follows a standardised questionnaire scheme, aims to detect characteristic business models, success factors and problems. The survey consists of in total 80 case studies revealing a variety of business models, which

high-value crop production and marketing apart from regular commodity markets are added by the provision of various services to diversify farm businesses (Gardner, 1994).

METHODOLOGY

The main aim of this empirical survey is to get a better idea of Urban Agriculture's economic strategies in general and characteristic patterns of UA business models. The survey on UA's business models is based on farm interviews in Europe. The ques-



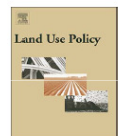
ELSEVIER

Land Use Policy 69 (2017) 372–385

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Success of urban farming's city-adjustments and business models—Findings from a survey among farmers in Ruhr Metropolis, Germany



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ARTICLE INFO

Keywords:
Urban farming
Urban agriculture
Web survey
Cluster analysis
City-adjustments
Business models

ABSTRACT

Economic data of urban farming are scarce, while the discourse on urban farming's business models is progressively emerging since few years. Data of a web survey among farm managers in polycentric Ruhr Metropolis, Germany, is used here to address the research question whether city-adjusted farms are more successful than non-city-adjusted farms. Farms' common city-adjustment strategies high-value production, direct marketing, participative concepts, and tourism services as well as the spatial self-assessment of the farm managers are applied to cluster and analyse them. The 180 farms are clustered via a Complete Linkage cluster analysis into five groups, whereof three are city-adjusted clusters and two are non-city-adjusted clusters. City-adjusted farms are

Urban agriculture's research foci:

- City-adjustment strategies and business models

Land Use Policy 58 (2016) 366–379



Professional urban agriculture and its characteristic business models in Metropolis Ruhr, Germany

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ARTICLE INFO

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Keywords:
Business models
'Low-cost specialization'
'Differentiation'
'Diversification'
Urban farming
Professional urban agriculture
Geo-statistical analysis

ABSTRACT

'Low-cost specialization', 'differentiation', and 'diversification' are three overarching business models of professional urban agriculture in developed countries. Manifold city-adjusted farm activities belong to these business models resulting in the characteristic farm heterogeneity of urban areas. This paper makes use of the business models as tool for a geo-statistical analysis to spatially investigate farming patterns in reference region Metropolis Ruhr, Germany. Additional farm interviews substantiate findings of the geo-statistical analysis by focusing on horticulture as a common farm activity towards 'low-cost specialization', direct marketing and participatory farming belonging to 'differentiation', and equestrian services as a representative of the 'diversification' business model. These farm activities and underlying business models concentrate and tend to spatially cluster in the metropolitan's center where population density is highest and farmland proportion is lowest. Agriculture plays a significant role in Metropolis Ruhr cultivating about one-third of the metropolitan area, but on-going loss of farmland and short-term lease of land affect farms considerably by complicating access to land. Most differentiated and diversified farms



Article

The Location Matters: Determinants for “Deepening” and “Broadening” Diversification Strategies in Ruhr Metropolis' Urban Farming

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Abstract: Consumer-oriented diversification activities, such as direct sale (“deepening”) as well as tourism services and care farming (“broadening”), are common business strategies of farms within urban areas. This empirical study investigates determinants of urban farming's diversification decisions by analyzing a dataset of 123 farmers in German Ruhr Metropolis. Binary logit models are

Urban agriculture's research foci:

- City-adjustment strategies and business models
- Aquaponics: demonstration , research, and teaching unit



Urban agriculture's research foci:

- City-adjustment strategies and business models
- Aquaponics: demonstration , research, and teaching unit
- Involved in several research and implementation projects
 - URBAN GREEN TRAIN
 - EU COST-Actions „Urban Agriculture Europe“ and „Aquaponics“
 - Co-Production in urban farming (CoProGrün, StadtFarm NRW)
 - „InnoAquapon“
 - NEWBIE (H2020)

SWUAS

Who we are

Dashboard ▸ Fachbereiche ▸ AW ▸ AW (BA) ▸ WiSe 17/18 ▸ UrbaneLW|AW-B|PS|WiSe17/18

Personen

Teilnehmer/innen

Navigation

Dashboard

■ Startseite

▸ Website

▼ Dieser Kurs

▼ **UrbaneLW|AW-B|PS|WiSe17/18**

▸ Teilnehmer/innen

▸ Auszeichnungen

▸ 1: Introduction to urban agriculture
concept and t...

▸ 2: Resource use from a challenge
perspective

▸ 3: Urban Agriculture types/production
systems and ...

▸ 4: Networking and Governance

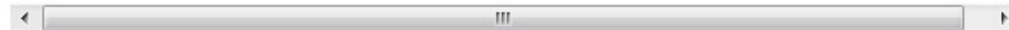
▸ Modules' summaries (pdfs)

▸ Presentations WS 2017/2018



International course on Entrepreneurship in Urban Agriculture within the project
ERASMUS+ URBAN GREEN TRAIN

www.urbangreentrain.eu



1: Introduction to urban agriculture concept and types



Who we are

- South-Westphalia University of Applied Sciences (SWUAS)

WP 1: Needs Analysis

- General description and objectives
- Deliverables
- Time frame

Needs Analysis

WP 1

WP lead

- South-Westphalia University of Applied Sciences (P7)
- University of Prishtina (P4)

WP contributors

- University of Sarajevo (P1)
- University „Dzemal Bijedic“ Mostar (P2)
- University of Donja Gorica (P3)
- University of Haxhi Zeka in Peja (P5)
- Alma Mater Studiorum Università di Bologna (P6)
- University of Ljubljana (P8)

General description and objectives

- **WP delivers important information** to design:
 - new curricula and LLL program modules, infrastructure development, and teachers training
- **Kick Off meeting: constitution of 3 expert working groups**
 - Business and networking (SWUAS, P7)
 - Agriculture and food processing (UniBo, P6)
 - Urban planning, ecology, energy efficiency (UL, P8)
 - Each partner county (B&H, MN, XK) represented in each expert WG

General description and objectives

- Data collection on different levels to define knowledge, skills, and competences needed for enterprising urban agriculture
- Surveys on:
 - Required workforce skills (farmers, employees)
 - Consumers' preferences
 - Food supply chains
 - Farms' business models

General description and objectives

- Comprehensive strategy for B&H, MN, and XK
 - Education: Defining skills, competences required to design teaching and learning process supporting UA entrepreneurship
 - Entrepreneurship: proposing UA business models, strategies for successful implementation, target groups, consumers' preferences, etc.
- Beyond the project: improve existing curricula at partners and regional HEIs and relationship between HEIs and entrepreneurial sector

Deliverables

- 1.1: Survey guide
- 1.2: Regional and EU action plans and strategies report
- 1.3 Farms' models in region
- 1.4 Food supply chains analysis
- 1.5 Consumers' preferences surveys
- 1.6 City-adjusted farm strategies in B&H, MN, and XK
- 1.7 Partners' HEI infrastructure and teachers' assessment

Needs Analysis

WP 1 – Deliverable 1.1

Survey guide

- Delivers for WP 1:
 - a methodological framework and instruments
 - Harmonized reporting in the expert groups
 - For Usage in Deliverables 1.2-1.7
- **Report**

Needs Analysis

WP 1 – Deliverable 1.2

Regional and EU action plans and strategies report

- Pre-work for curriculum and LLL program development
- Desktop research on business and labour needs/skills:
 - Documents (reports, action plans, and strategies)
 - Online information

→ Reports (12)

- 3 expert working groups: 3 national reports + 1 EU-wide

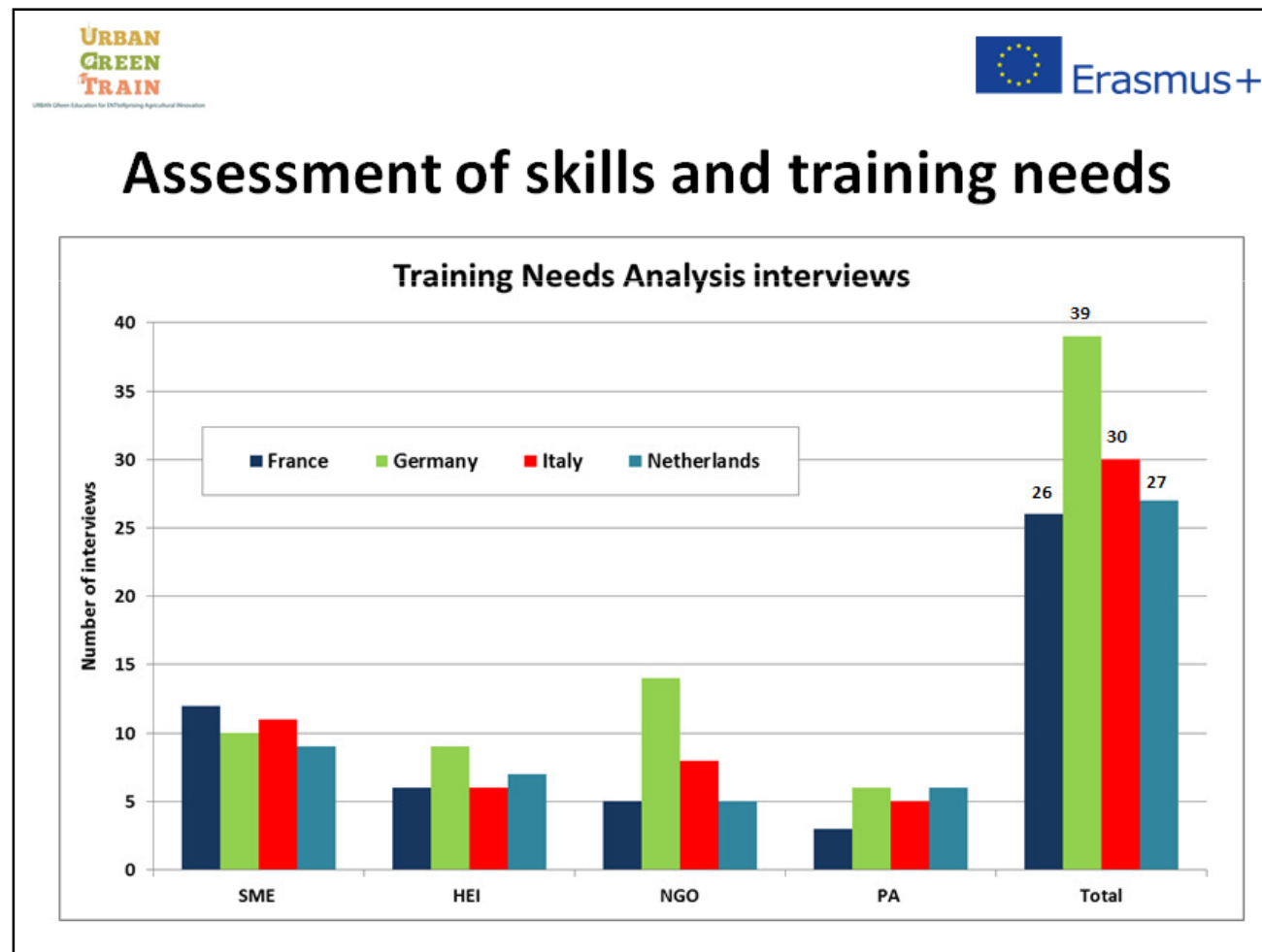
→ Synthesis regional report (1)

- Defines needed business and workforce skills

Needs Analysis

WP 1 – Deliverable 1.2

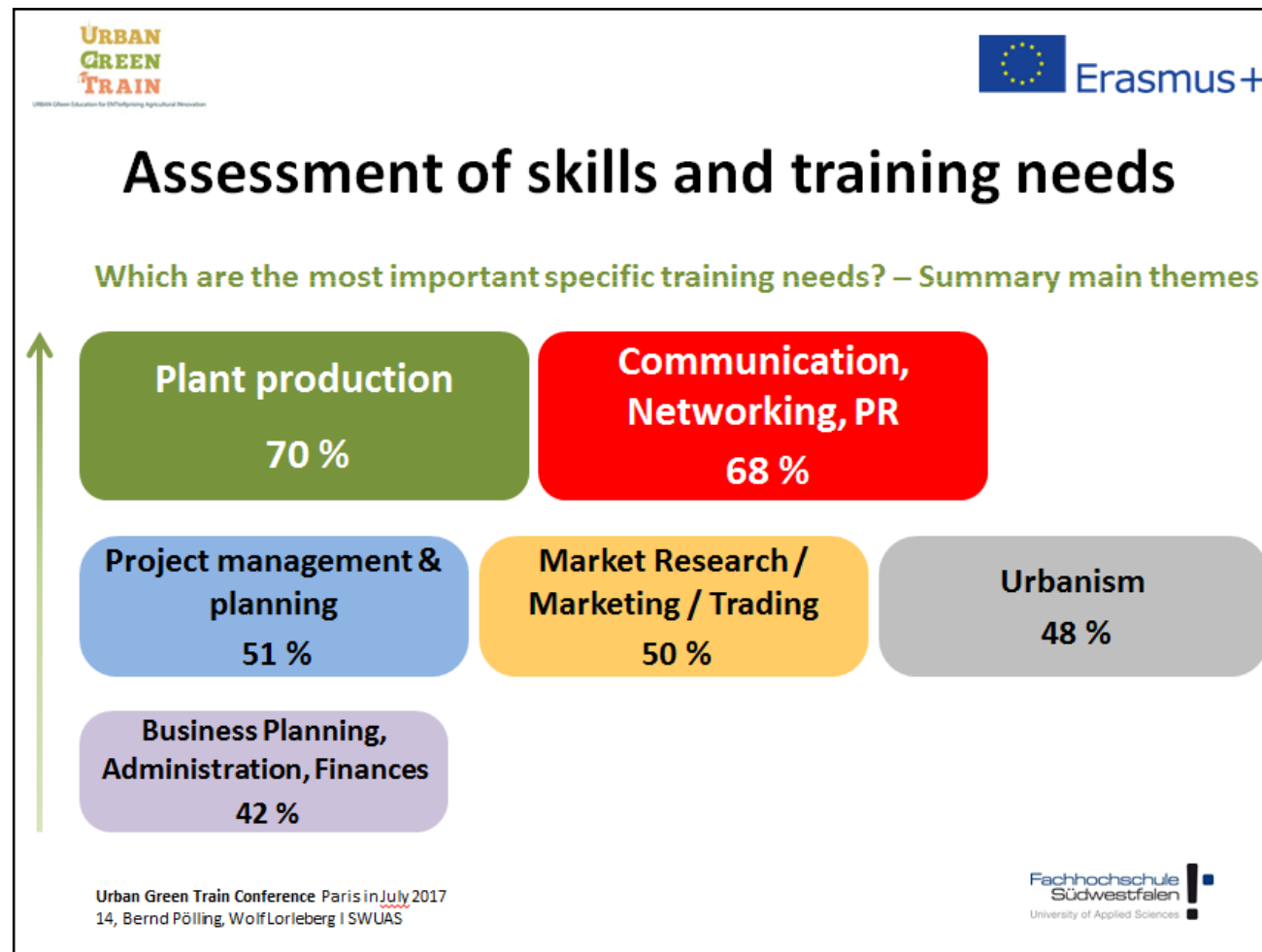
Excurs: Training Needs Analysis (Urban Green Train)



Needs Analysis

WP 1 – Deliverable 1.2

Excurs: Training Needs Analysis (Urban Green Train)




Needs Analysis

WP 1 – Deliverable 1.2

Excurs: Training Needs Analysis (Urban Green Train)

URBAN
GREEN
TRAIN

Urban Green Education for Enhancing Agricultural Production



Erasmus+

Assessment of skills and training needs

Which levels / kinds of education are most suitable?

		in total	University Bachelor	University Master	University PhD	University Appl. Sci. Bachelor	University Appl. Sci. Master	Apprenticeship / Technical, Vocational School	"Life-long learning"	Computer Supported Training	Exchange Visits
FR	Sum	26	10	10	4	4	1	14	10	2	9
	(%)		38	38	15	15	4	54	38	8	35
DE	Sum	39	13	14	7	17	16	22	21	12	17
	(%)		33	36	18	44	41	56	54	31	44
IT	Sum	30	10	15	7	7	6	12	21	5	10
	(%)		33	50	23	23	20	40	70	17	33
NL	Sum	27	4	6	3	5	3	14	19	9	15
	(%)		15	22	11	19	11	52	70	33	56
Total	Sum	122	37	45	21	33	26	62	71	28	51
	(%)		30	37	17	27	21	51	58	23	42

Urban Green Train Conference Paris in July 2017
10, Bernd Pölling, Wolf Lörleberg | SWUAS

Fachhochschule
Südwestfalen
University of Applied Sciences

Urban Green Train Conference Paris in July 2017
10, Bernd Pölling, Wolf Lorleberg | SWUAS

Fachhochschule
Südwestfalen
University of Applied Sciences

Fachhochschule
Südwestfalen
University of Applied Sciences

Needs Analysis

WP 1 – Deliverable 1.3

Farms' models in region

- Desktop research (reports, action plans, and strategies) and
- Relevant stakeholders' survey (in-depth interviews with farmers)
- Analysis of
 - present business models in partner countries and
 - their characteristics, success factors, and problems

→ Reports (4)

- 3 national reports + 1 synthesis

Needs Analysis

WP 1 – Deliverable 1.3

Urban farming business models

Low cost / specialization

Differentiation

Diversification

Share Economy

Experiences

Experimental



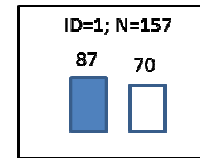
Farmers' self-assessed business situation (success 1)

- Number of farms with high success (≥ 58 points)*
- Number of farms with low success (< 58 points)*

*: Self-assessment of business situation:
0 (very bad) - 100 (very good)

AUC = 0.824

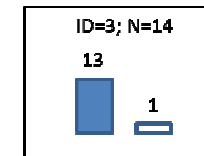
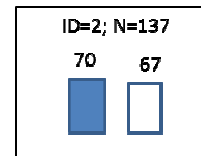
Business situation



Population density

$\leq 2,337$ pop./km²

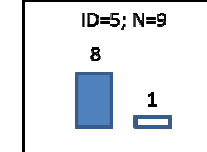
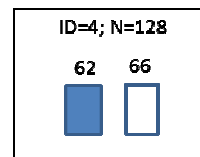
$> 2,337$ pop./km²



High-quality production

no

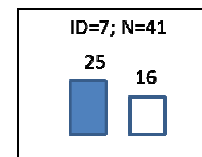
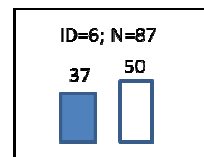
yes



Tourism services

no

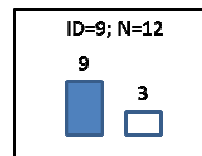
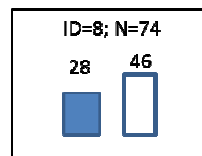
yes



Farm size

≤ 135 ha

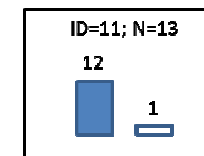
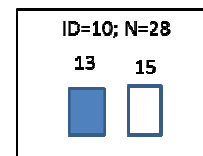
> 135 ha



Population density

$\leq 1,042$ pop./km²

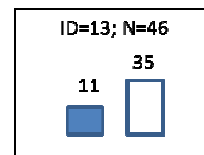
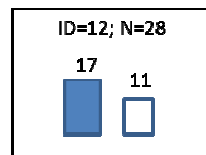
$> 1,042$ pop./km²



Population density

≤ 619 pop./km²

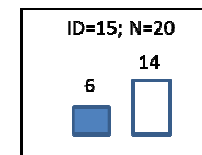
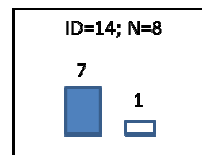
> 619 pop./km²



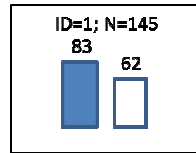
Population density

≤ 406 pop./km²

> 406 pop./km²

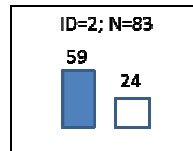


Farm prospect

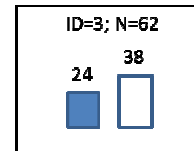


Full-time farmer

yes



no



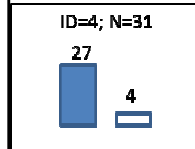
Farmers' self-assessed farm prospect (success 2)

■ Number of farms with positive prospect
□ Number of farms with negative prospect

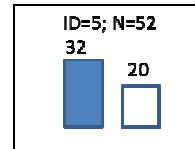
AUC = 0.820

Tourism services

yes

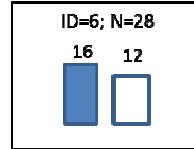


no

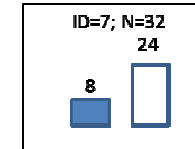


High education level

yes

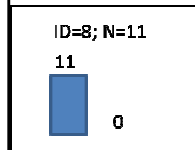


no

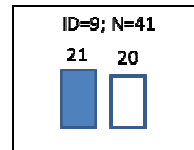


Public and private services

yes

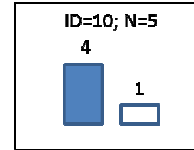


no

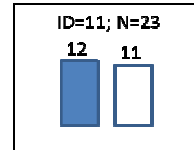


Food processing

yes

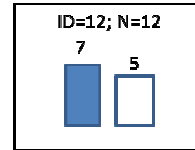


no

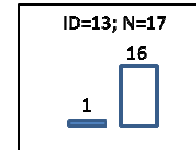


Farm location

<=55 pts.

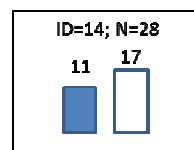


> 55 pts.

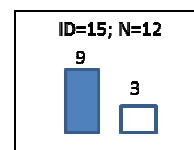


Farm size

<= 115 ha

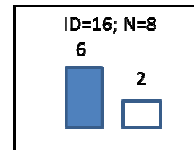


> 115 ha

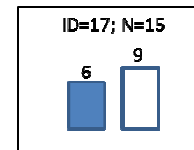


Farm location

<=61.5 pts.

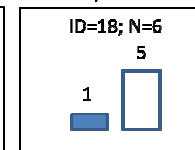


> 61.5 pts.

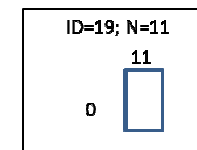


Tourism services

yes

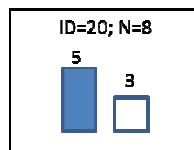


no

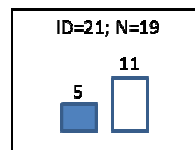


Farmer's age

<= 44 yrs



> 44 yrs



Needs Analysis

WP 1 – Deliverable 1.4

Food supply chains analysis

- Desktop research and
- Relevant stakeholders' survey (in-depth interviews with actors)
- Analysis of food supply chains in the reference region; focus on:
 - Short Supply Food Chains and
 - shared economy models (CSA, food assemblies, SPGs, ...)

→ Reports (4)

- 3 national reports + 1 synthesis

Needs Analysis

WP 1 – Deliverable 1.5

Consumers' preferences surveys

- Web-based surveys and personal interviews
- To analyze:
 - Consumer motives and preferences regarding price, attitudes, habits, distribution, production, and promotion
 - Specific urban questions should be included (s. Specht, Sanye-Mengual in their social acceptance studies in Berlin/Bologna)

→ Reports (4) + Event

- 3 national reports + 1 synthesis

City-adjusted farm strategies in B&H, MN, and XK

- Strategic document based on Deliverables 1.2 - 1.5
- Combining the 3 expert working groups' findings

→ Report (1)

- **Cornerstone of new curricula and LLL programs**
- Proposing different business models by exploring their advantages and disadvantages, adjustment strategies and consumer preferences

Partners' HEI infrastructure and teachers' assessment

- Preparatory activity to design and implement teachers' training

→ Reports (5)

- Based on WP3 guidelines
- Each partner HEI (in B&H, MN, XK) will deliver a report on
 - Infrastructure capacities (facilities, labs, etc.) and
 - Teachers' knowledge of specific UA topics

Needs Analysis

WP 1: Synthesis of deliverables, tasks, and to do's

1.1 Survey guide: Methodological frame [1.2-1.7]

1.2 Needed skills: Desktop research

1.3 Farm models: Desktop research

1.4 SSFC: Desktop research

1.5 Consumers:

1.6 Synthesis 1.2-1.5

1.7 HEI infrastructure: *[Dependent on WP3 input]*

Survey

Survey

Survey

Report
Reports
Reports
Reports
Reports
Report
Reports



Methods (1.1): Common guide

1 questionnaire

2: web and f2f

Template

Needs Analysis

WP 1: Time frame

Deliverables	Proposal time	New time? tbd
1.1 Survey guide:	15.11.2017	15.01.2018
1.2 Needed skills:	01.01.2018	01.03.2018
1.3 Farm models:	01.01.2018	01.03.2018
1.4 SSFCs:	01.01.2018	01.04.2018
1.5 Consumers:	01.01.2018	01.05.2018
1.6 Synthesis 1.2-1.5:	01.03.2018	01.06.2018
1.7 HEI infrastructure:	01.07.2018	01.07.2018