

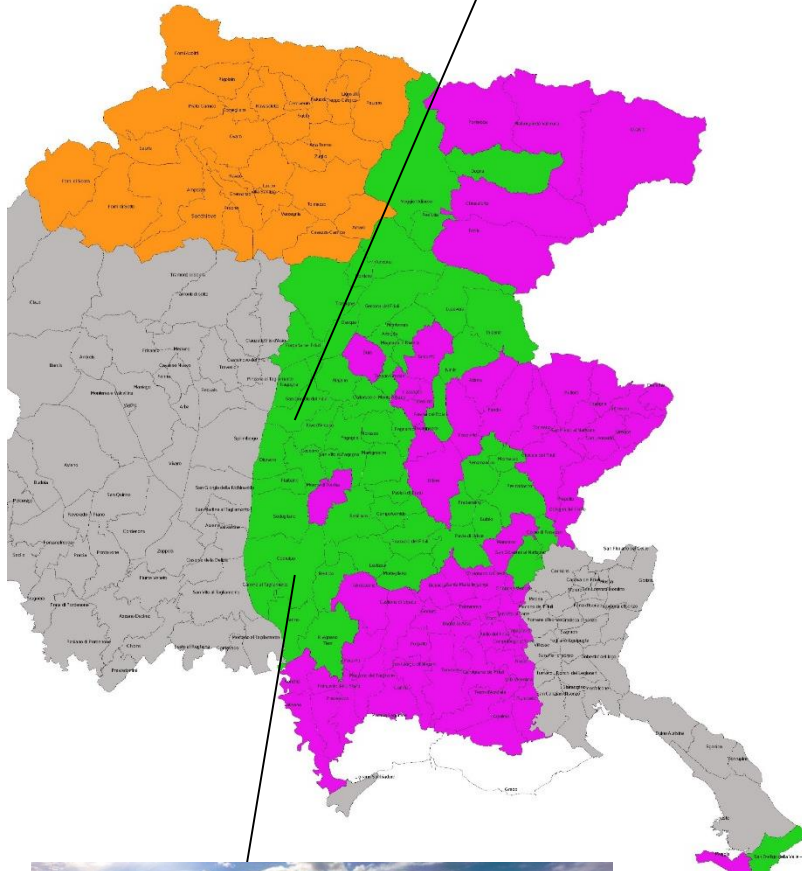


A&T 2000 SPA

DECISIVE H2020 - workshop

Staranzano, 03rd october 2018

Waste selection facility in Rive d'Arcano



Composting facility in Codroipo



*Since 1998, public waste collection service
in-house provider
(public company owned by municipalities)*

51 municipalities – 206.000 inhabitants

Controlled separate collection system

2 waste processing facilities

Innovation oriented – The Waste Director®

*Technical assistance in waste
management sector*

Innovation



Harmonising waste management compliance data through Pan-European Open data

Harmonising waste management compliance data through Pan-European Open Data

OPEN WASTE COMPLIANCE

INEA founded project

The Waste Director®

Management of municipal waste disposal center

Control of waste disposal and bags/bins distribution

Legal compliances

Online platform

Contractors and municipalities

Data exchange

Web-based

Administrative and waste transportation tasks



Controlled separate collection system



Pay-As-You-Throw system

No community dumpsters

Bags or user-specific bins

77,7% recycling rate (average on basin)

5.000.000 € from sale of secondary raw materials

Deep control of collected material

Continuous training of operators

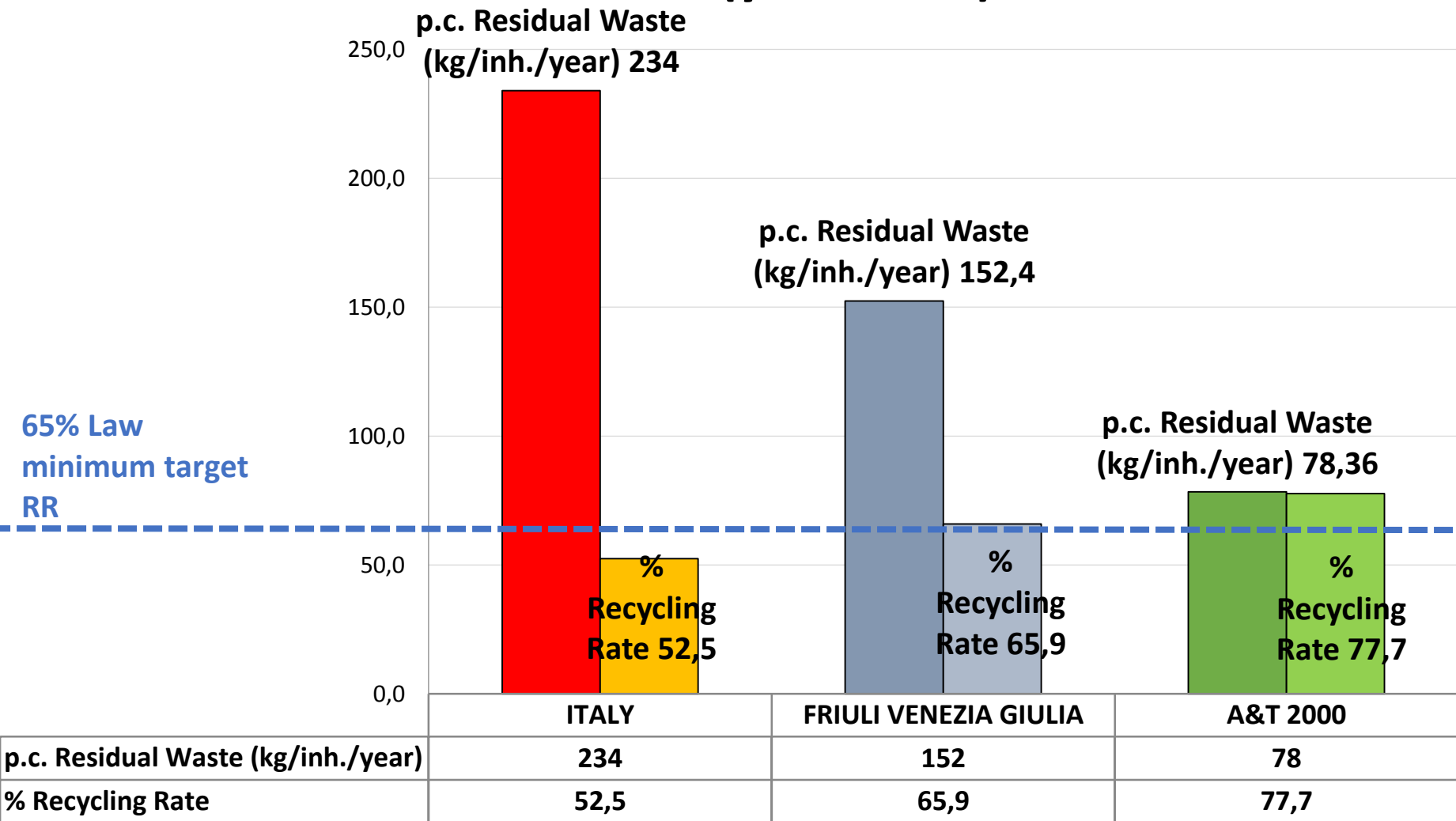
Informative campaigns for private users, schools,
municipalities

Specific collection services for events, abandoned
waste, industrial and agricultural waste

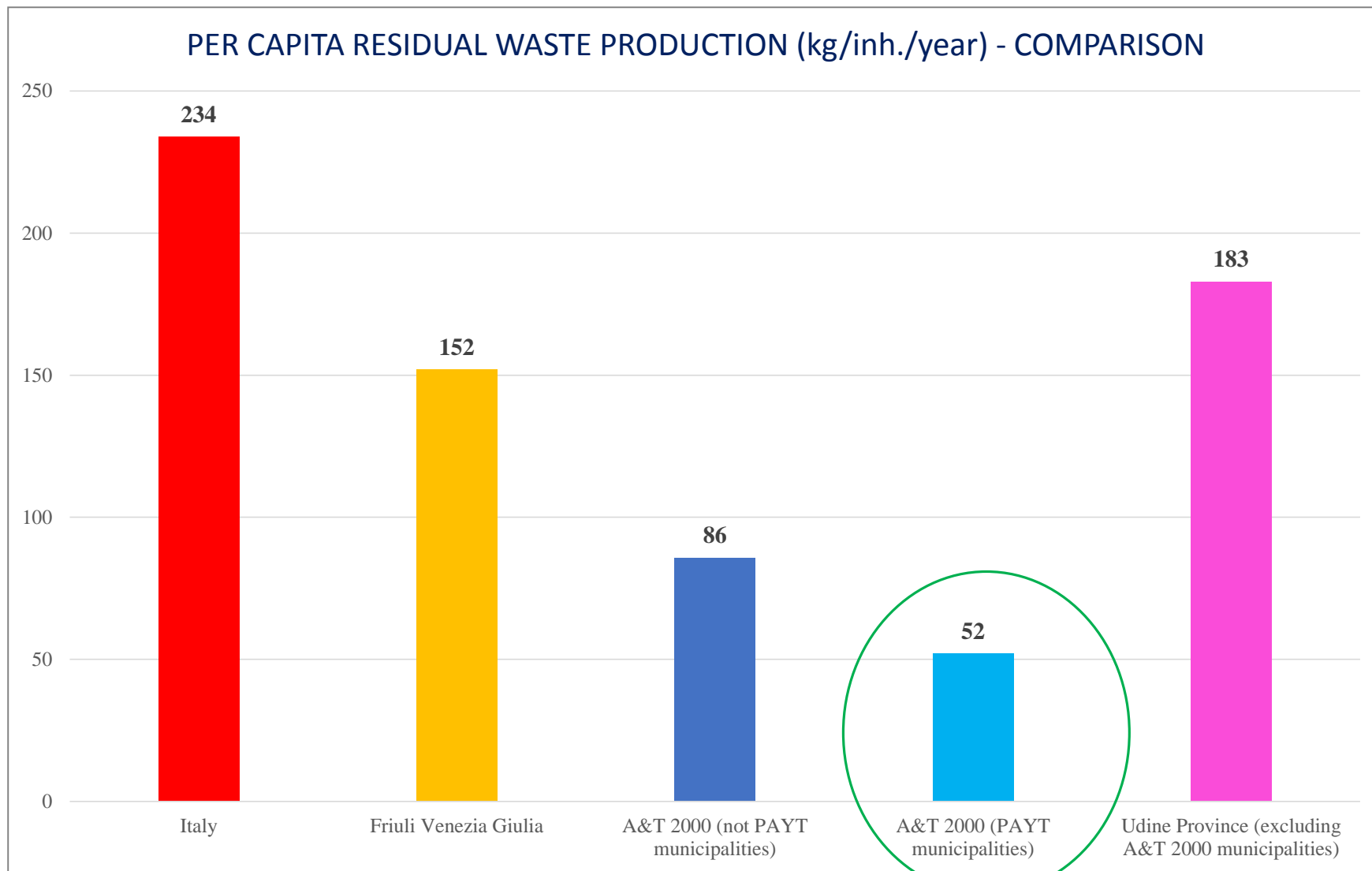


Controlled separate collection system - results

RECYCLING RATE vs PER CAPITA RESIDUAL WASTE (year 2016)



Controlled separate collection system - results



Year 2016 – data from Rapporto Rifiuti Urbani (ISPRA) and ARPA FVG

Controlled separate collection system - results

WASTE	A&T 2000 – AVERAGE OF TREATMENT SCRAP
ORGANIC	less than 1 %
PAPER	less than 1 %
GLASS	less than 1 %
PLASTIC PACKAGING AND CANS	circa 12 %

ORGANIC WASTE MANAGEMENT - COLLECTING

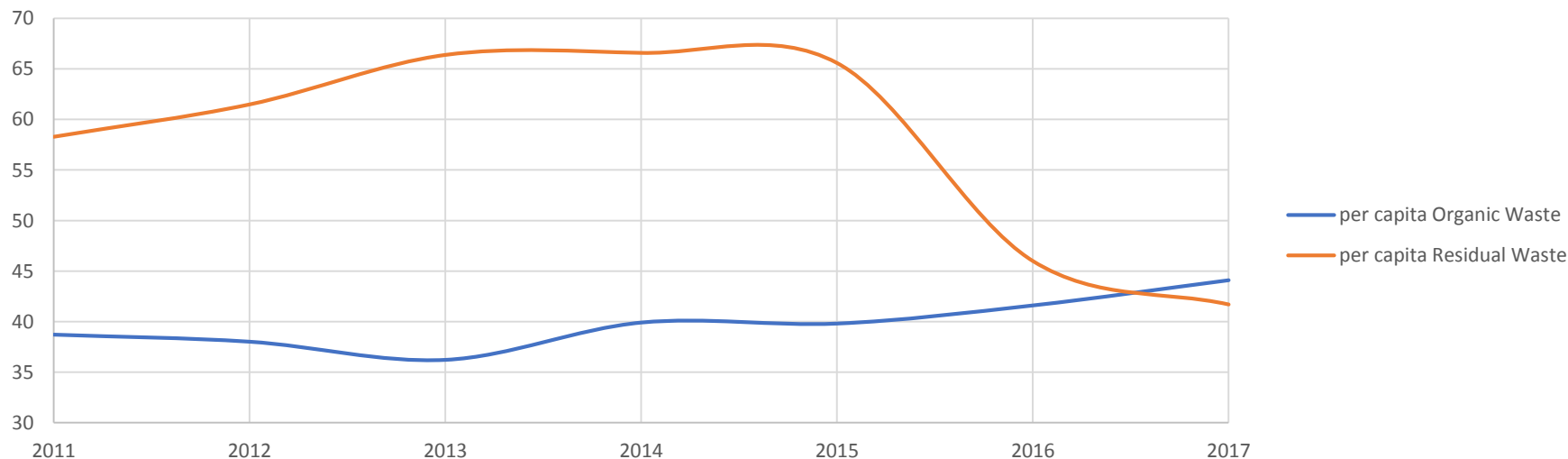
Controlled separate collection system

User-specific bins

Wide control of collected material

Informative campaigns for private users, schools, municipalities

Specific collection services for events



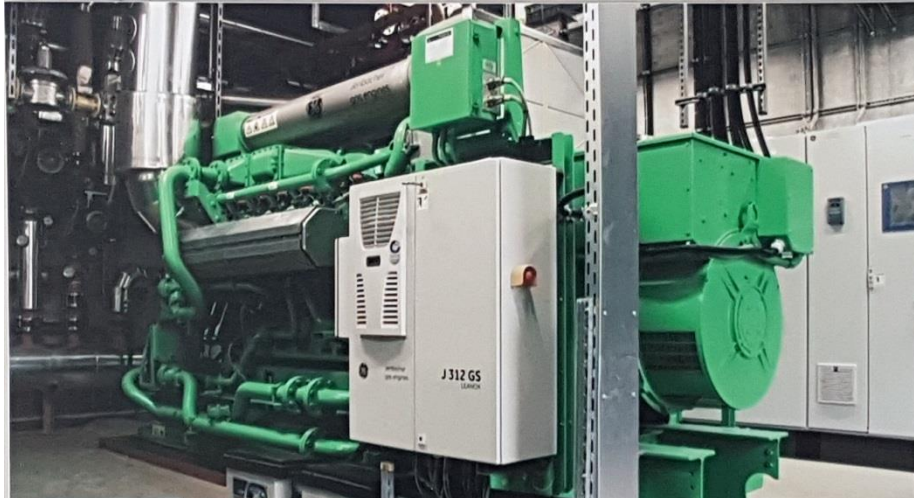
ORGANIC WASTE MANAGEMENT – TREATMENT FACILITY

COMPOSTING FACILITY WITH ENERGY RECOVERY - CODROIPO

ANNUAL POTENTIAL	31.000 tons (40.000 tons in the future)
ANAEROBIC PHASE	BIOCELL TECHNOLOGY – nr. 8 fermenters
BIOGAS PRODUCTION POTENTIAL	3.000.000 Nmc/year
AEROBIC PHASE	COMPOSTING TUNNELS – nr. 8 tunnels
MATURATION	nr. 8 aerated lanes



ORGANIC WASTE MANAGEMENT – TREATMENT FACILITY



ELECTRIC POWER 2 groups up to 499 KW each



COMPOST PRODUCTION 10.300 tons/year

ORGANIC WASTE MANAGEMENT

– CIRCULAR ECONOMY –

Different geographical, economical and social features of the basin need complementary solutions:

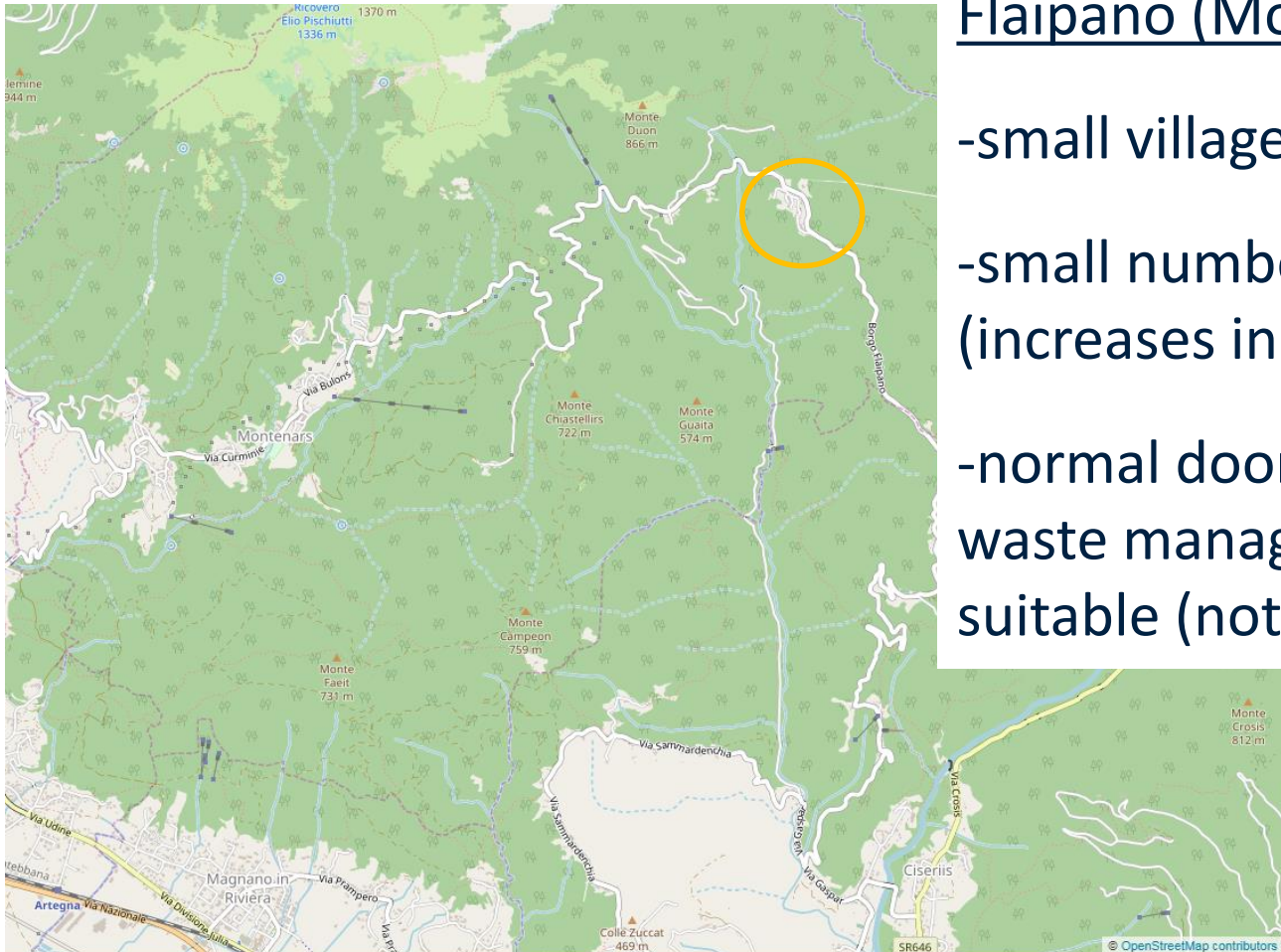
- isolated and/or low organic waste production areas require different organic waste management than what performed in urban and suburban areas (2 collections per week)
- not all municipalities need to bring organic waste to big facilities
- complementary and local solutions are suitable to reduce costs of collecting and to boost ecological sustainability and circular economy
- different technological requests for green waste

Need to **upgrade** the management system of organic waste

ORGANIC WASTE MANAGEMENT – CIRCULAR ECONOMY –

Flaipano (Montenars, UD)

- small village in the mountains
- small number of inhabitants
(increases in weekends/holidays)
- normal door-to-door organic
waste management system not
suitable (not cost-effective)



ORGANIC WASTE MANAGEMENT – CIRCULAR ECONOMY –

Flaipano (Montenars, UD)

Complementary solution:

- exclusion of the village from the collecting system
- development of community composting since 2012**
- distribution of compost among the village inhabitants and no ineffective collection costs

ORGANIC WASTE MANAGEMENT – CIRCULAR ECONOMY –

Green waste = mixture of biomass and small woods

No need for sophisticated treatment facilities (as for urban organic waste)

High green waste production in Region FVG

y. 2017	Tot. Prod. (tons)	p.c. Prod. (kg/inh./y.)
A&T 2000 SpA	10.300	50
F. Gorizia Province	9.742	69,9
Region FVG	71.084	58,5
ob. Dolina	81,38	14,14

ORGANIC WASTE MANAGEMENT – CIRCULAR ECONOMY –

Complementary solution:

- intercept the biomass and prevent its devaluation
- give services to small/medium farmers
- specific and dedicated facilities
- composting **and energy recovery**
- DM MiSE 23/06/2016: simplified facilities authorizations, biomass can be managed out of waste legislation

ORGANIC WASTE MANAGEMENT – CIRCULAR ECONOMY –

San Dorligo della Valle – Občina Dolina

- newest member of A&T 2000 SpA (2017) – province of Trieste
- door-to-door collecting system with unexpected and surprising results
- olive trees (and some vines) cultivation spread around the municipality
- receptive and proactive local community

ORGANIC WASTE MANAGEMENT – CIRCULAR ECONOMY –

San Dorligo della Valle – Občina Dolina

Biomass platform

-“Comunela” involvement

-olive trees and vines biomass collection

-acquiring management skills to replicate in social basin

-biomass selling -> future local treatment facilities -> **composting, biochar, energy recovery**



CONCLUSIONS/MILESTONES

- different social, geographic and economic areas need differentiation of organic waste management
- adequate management solutions bring to economies of scale and to sustainability boost (on the ecological and social side)
- local communities are the core for circular economy
- complementary facilities must be local, accepted by community and planned with a participation process -> community controlled
- complementary facilities are not THE solution and are not replicable as they are

Localisms=source of solutions

**Thanks for
Your attention!**