

# Progetto I-SEE

## Conferenza Finale

Firenze, 16 dicembre 2016

Chiesa di San Jacopo in Campo Corbolini  
Via Faenza, 43

La Conferenza finale del Progetto I-SEE si è tenuta nella splendida Chiesa di San Jacopo in Campo Corbolini in Firenze, grazie all'ospitalità di Fabrizio Guarducci,. All'evento hanno preso parte tutti i partner provenienti dalla Slovenia e dalla Croazia e circa 130 partecipanti. La conferenza è stata inaugurata dai saluti del Prof. Luigi Dei, Magnifico Rettore dell'Università degli Studi di Firenze, seguito dal Prof. Marco Bindi, Pro-Rettore alla Ricerca Scientifica, dal Dr Pierluigi Tucci, rappresentante dell'Ordine dei Medici di Firenze, dal Prof. Pierangelo Geppetti, Direttore del Dipartimento di Scienze della Salute e dalla Prof.ssa Elisabetta Bertol, Direttore dell'Unità di Tossicologia Forense e Coordinatrice del Progetto I-SEE. La Prof.ssa Donata Favretto è stata moderatrice dell'evento. La lettura di apertura, tenuta dal Dr Justice Tettey, United Nations Office on Drug and Crime (UNODC), era incentrata sul fenomeno delle Nuove Sostanze Psicoattive e della loro diffusione a livello globale. Successivamente, i partner hanno esposto le attività svolte ed i risultati ottenuti come indicato nel programma in allegato. I contenuti dei contributi sono riportati di seguito.

La tavola Rotonda ha visto la partecipazione della Prof.ssa Bertol, del Dr Justice Tettey, del Prof. Thomas Keller e, soprattutto, del Sig. Zeljko Petkovic, Croatian Office for Combating Drug Abuse e della Sig.ra Marjeta Ferlan Istinic, Slovenian Ministry of Labour, Family, Social Affairs and Equal Opportunities.

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Coordinator



Beneficiary partners



## Coordinator



Department of Health Sciences

## Beneficiary Partners



National Forensic Laboratory and  
Criminal Police Directorate - Slovenia



**Preiscrizione obbligatoria  
via email:  
[project.isee@dss.unifi.it](mailto:project.isee@dss.unifi.it)  
[alessia.fioravanti@unifi.it](mailto:alessia.fioravanti@unifi.it)**

### Segreteria scientifica

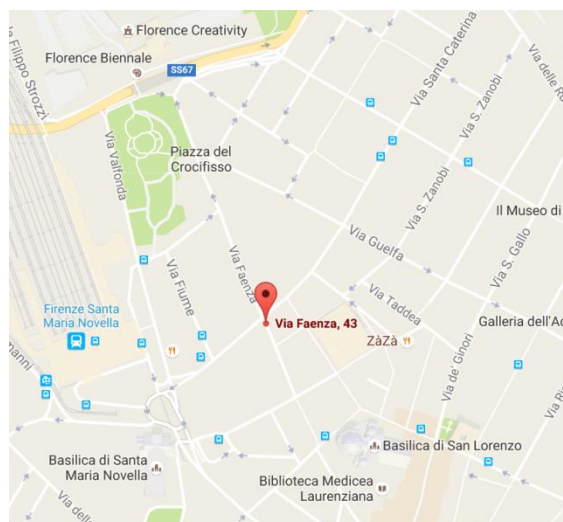
Fabio Vaiano Tel. 328 4217120

Valeria Catalani Tel. 320 0629459

Diego Palumbo Tel. 366 3301549

### Segreteria organizzativa:

Alessia Fioravanti Tel. 340 6369370



Co-funded by the Prevention of and fight against  
Crime Programme of the European Union  
JUST/2013/ISEC/DRUGS/AG/6426



**New Psychoactive Substances  
I-SEE Project  
Final Conference**

**Florence, December 16<sup>th</sup> 2016**

**Church of San Jacopo in Campo Corbolini,  
Via Faenza 43**

**by courtesy of Fabrizio Guarducci**



**URITON  
Unità di Ricerca  
dedicata a Tindari Baglione**

# Program

Chair: **Donata Favretto**

9.15 – 9.45

## Welcome and introduction

L. Dei	Rector University of Florence
M. Bindi	Pro-Rector Scientific Research
P. Bechi	Pro-Rector Medical-Health Area
M. Calamai	General Director AOU Careggi
M. T. Mechi	Tuscany Region
A. Panti	Quality of Services Office
	President of Medical College of Florence
P. Geppetti	Director of Department of Health Sciences
E. Bertol	Director of Forensic Toxicology Unit - I-SEE Project Coordinator

9.45 – 10.15

## The NPS phenomenon at global level

J. Tettey	United Nations Office on Drugs and Crime - UNODC
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10.15 – 10.45

## EU strategies to tackle the NPS phenomenon

A. Kosnikowski	European Commission Anti-Drugs Policy Unit
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10.45 – 11.05

## Two years of I-SEE project: from the beginning to the end

E. Bertol	University of Florence, Italy
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11.05 – 11.25

## The enlargement of the Slovenian EWS network and the collaboration among health sector, law enforcement and NGOs

A. Hočevar	National Institute of Health, Slovenia
Gromm	

11.25 – 11.45

## Implementation of NPS sample collecting procedure in NGO focal points in Slovenia

S. Šabič	Association DrogArt, Slovenia
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11.45 – 12.05

## Chemical characterizations of collected samples in NFL – analytical background

S. Šavelj	Ministry of Interior Police, Slovenia
S. Klemenc	National Forensic Laboratory, Slovenia

12.05 – 12.25

## Clinical-toxicological network on NPS in Croatian EWS

M. Definis-Gojanović	University of Split – School of Medicine Croatia
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12.25 – 13.00

## Tools for information exchange and NPS analysis, dissemination and evaluation

F. Vaiano	Forensic Toxicology, DSS, UNIFI
V. Catalani	Forensic Toxicology, DSS, UNIFI
C. Rimondo	NPS EWS system

13.00 – 14.00

## Light Lunch

14.00 – 15.00

## Round Table and Conclusions

## “Project value, future applicability and development”

Chair: **Donata Favretto**

E. Bertol	Forensic Toxicology, DSS, UNIFI
J. Tettey	United Nations Office on Drugs and Crime - UNODC
A. Kosnikowski	European Commission Anti-Drugs Policy Unit
J. Hren	Slovenian Ministry of Health
T. Keller	TIAFT Member Representative for Austria
Ž. Petković	Croatian Office for Combating Drug Abuse
M. Ferlan Istinič	Slovenian Ministry of Labour, Family, Social Affairs and Equal Opportunities

15.00 – 16.00

## Press Conference

All Partners



# UNODC

United Nations Office on Drugs and Crime

## New Psychoactive Substances *A Global Update*

Dr. Justice Tettey  
Chief, Laboratory & Scientific Section

*I-SEE European Project on NPS  
University of Florence, Italy  
16 December 2016*

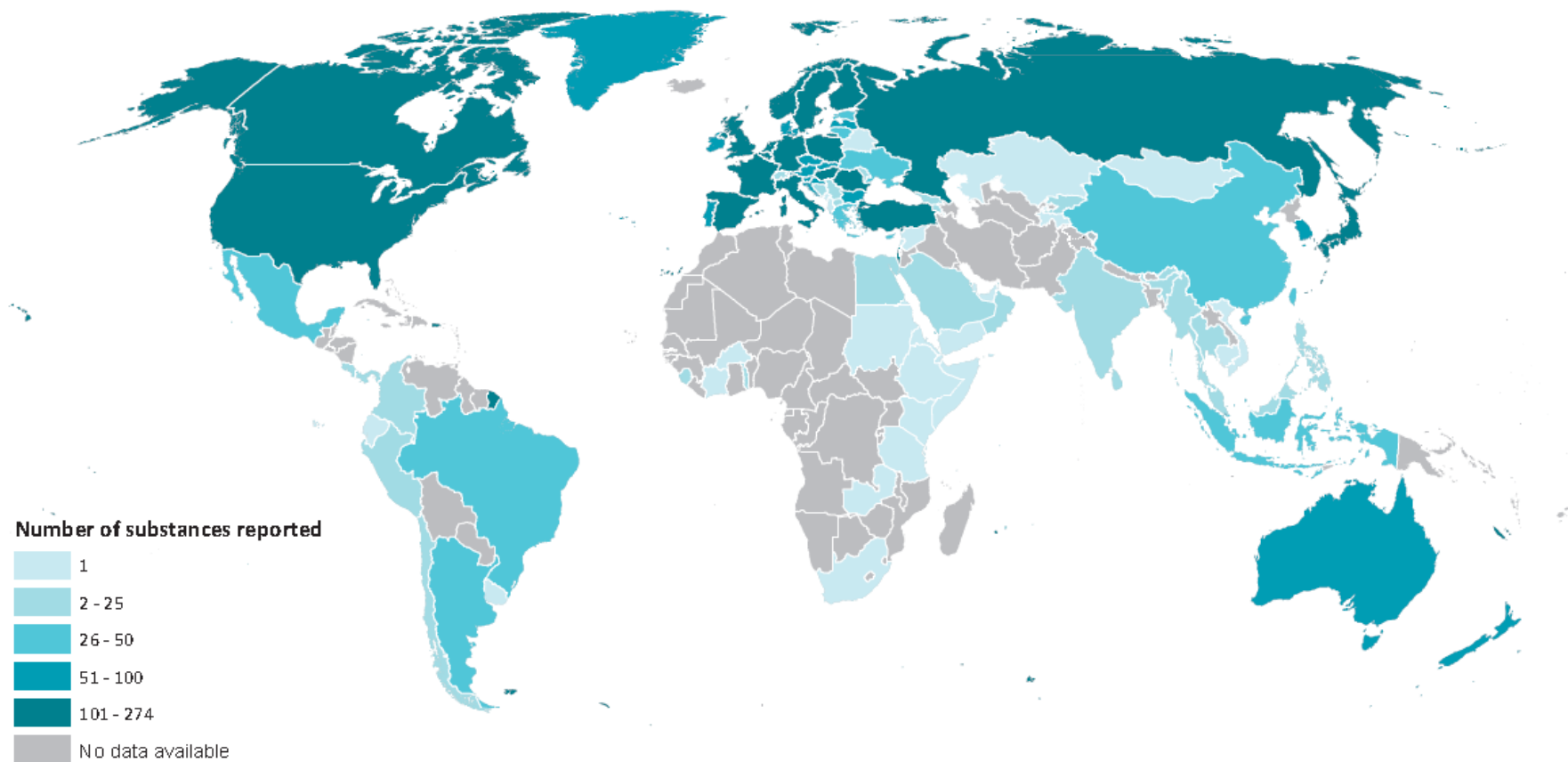




# UNODC

United Nations Office on Drugs and Crime

## Scope of the NPS problem

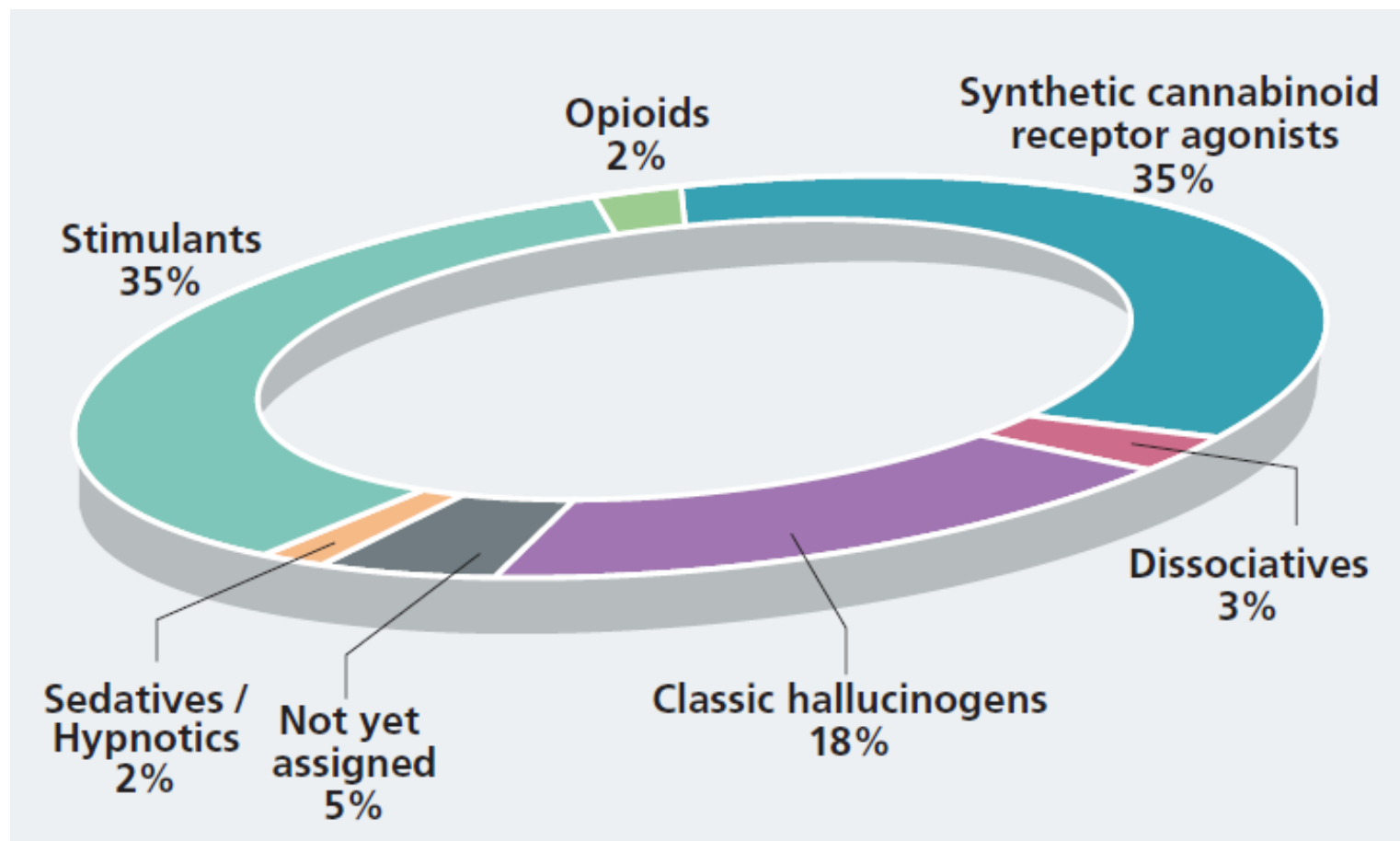




# UNODC

United Nations Office on Drugs and Crime

## NPS - by 'effect'





**UNODC**

United Nations Office on Drugs and Crime

## Notable Recent Trends – 2015/6

- **Synthetic Opioids – Fentanyl analogues** ↑
  - 14 Fentanyls since 2008
  - 9 Fentanyls since start of 2015
- **Sedative/Hypnotics – Benzodiazepines** ↑
  - 17 Benzodiazepines since 2008
  - 10 Benzodiazepines in the past year
- **Modified Pharmaceuticals – Methylphenidate (7 derivatives)**
  - Methylphenidate derivatives (7)
  - Phenmetrazine derivatives (7)
- **Implementation of the scheduling decisions**

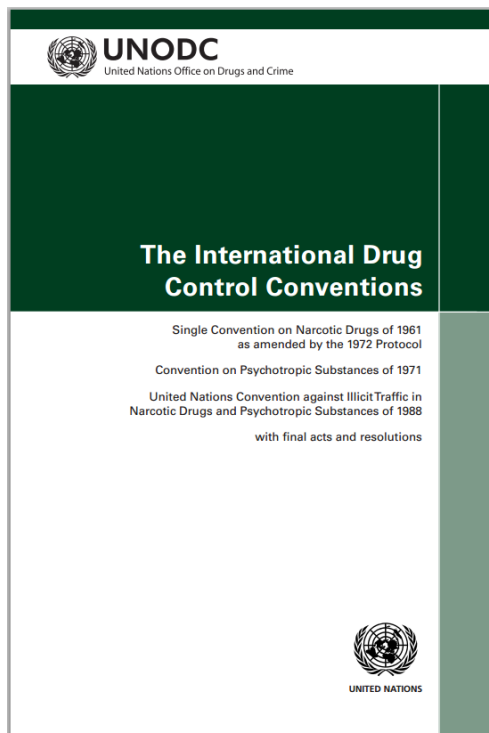


# UNODC

United Nations Office on Drugs and Crime

## UNODC and the International Drug Control Conventions

*Protect health and welfare of mankind*



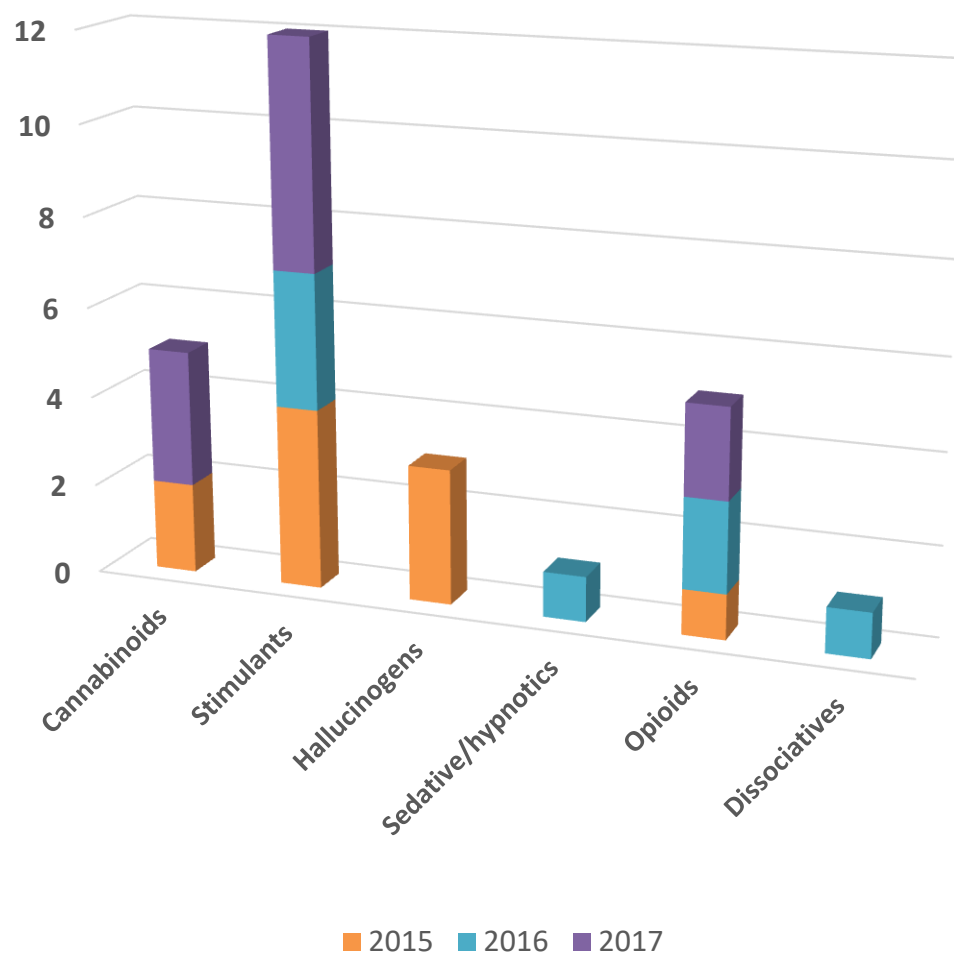
- Single Convention on Narcotic Drugs of 1961, as amended by the 1972 Protocol (1961 Convention)
- Convention on Psychotropic Substances of 1971 (1971 Convention)
- UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 (1988 Convention)



**UNODC**

United Nations Office on Drugs and Crime

## International Scheduling Decisions/Recommendations 2015 – 2017



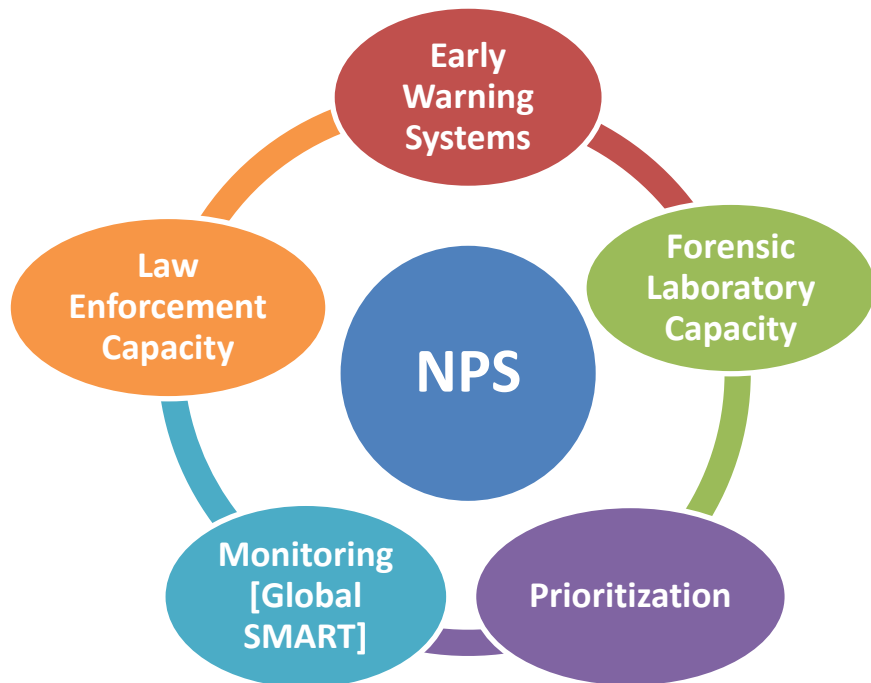


# UNODC

United Nations Office on Drugs and Crime

## United Nations General Assembly Special Session on Drugs [April 2016]

*Our joint commitment to effectively addressing and countering the world drug problem*



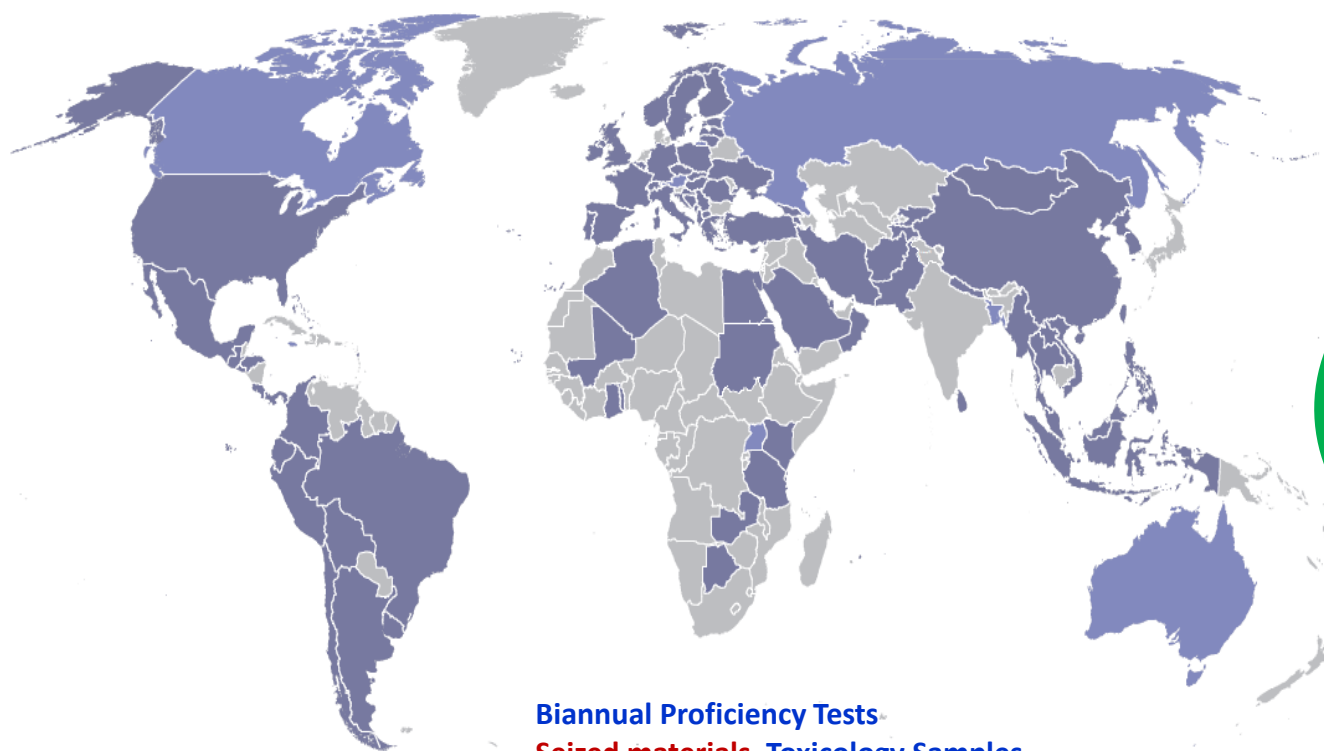




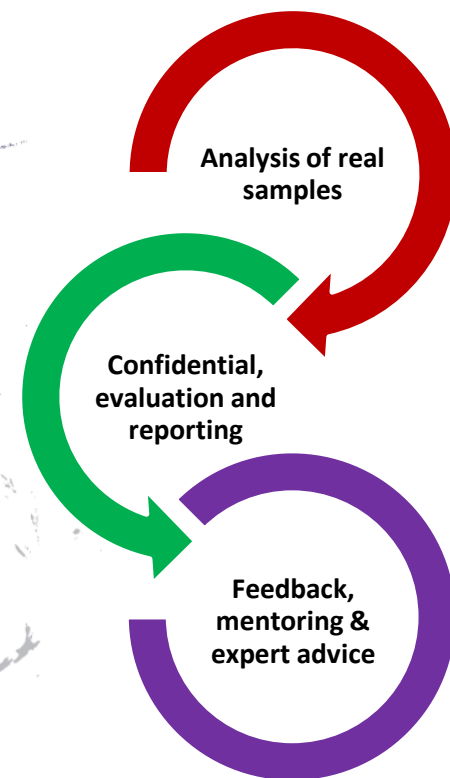
# UNODC

United Nations Office on Drugs and Crime

## Enhancing National Forensic Laboratory Capacity: The UNODC International Collaborative Exercises



Biannual Proficiency Tests  
Seized materials, Toxicology Samples  
Chemical Reference Standards

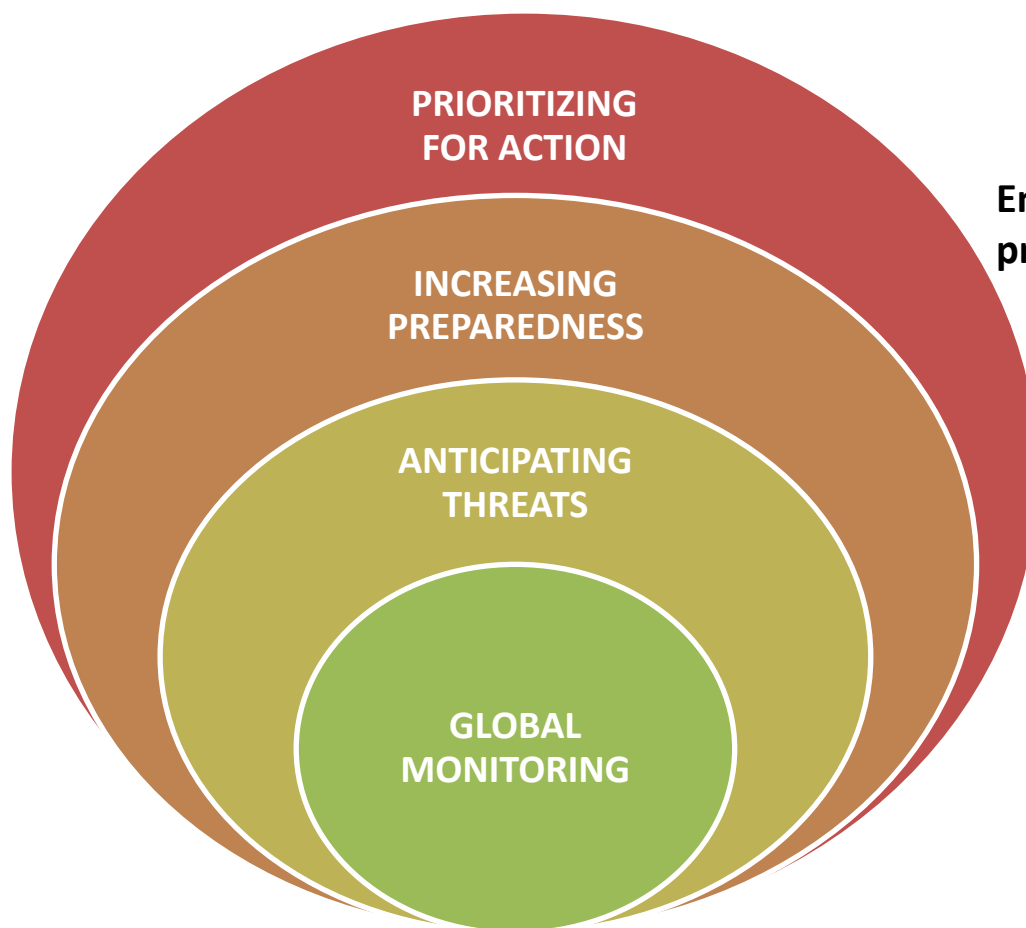




# UNODC

United Nations Office on Drugs and Crime

## UNODC Early Warning Advisory



**Ensure healthy lives and  
promote well-being for all**





# UNODC

United Nations Office on Drugs and Crime





# UNODC

United Nations Office on Drugs and Crime

## Pilot Project for data collection on harm related to the use of NPS

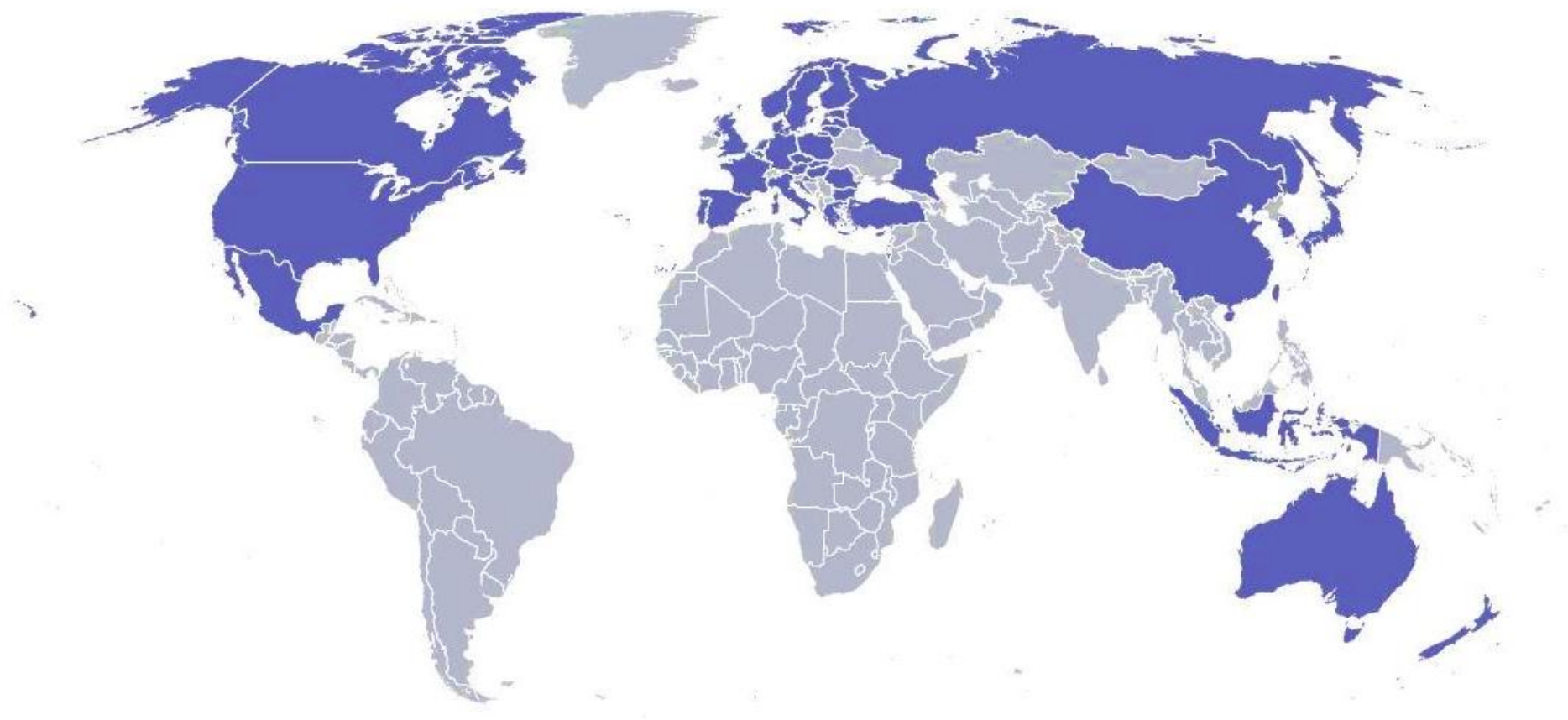
- **UNODC Expert Consultation on Forensic Toxicology and Drug Control**
  - 30 internationally recognised scientists
  - Including international organisations (EMCDDA, INCB)
- **Innovative TIAFT-UNODC collaboration**
- **Pilot**
  - July to August 2016
  - Defined indicators
  - Data on harm



**UNODC**

United Nations Office on Drugs and Crime

## Reports of 4-MEC from the UNODC Early Warning Advisory (2009-2014)

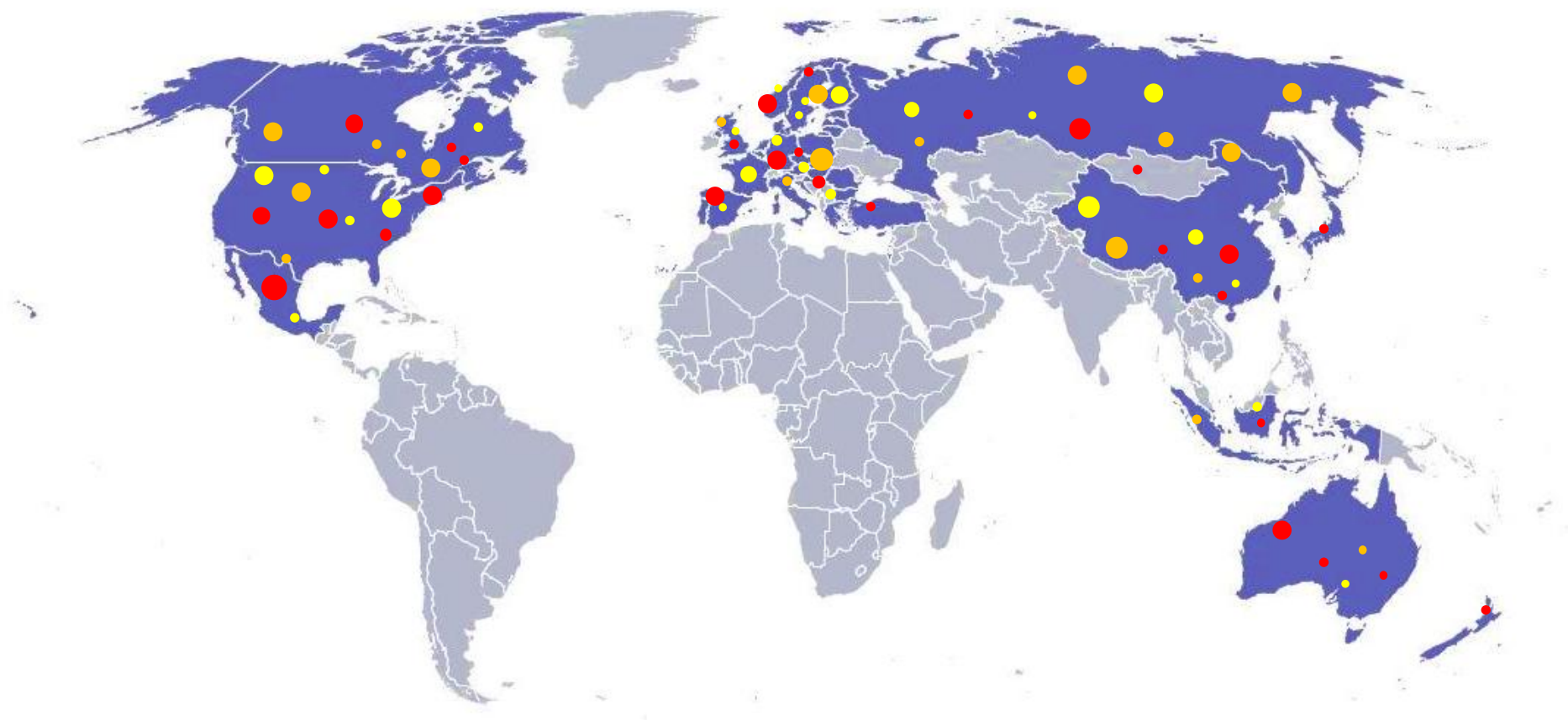




**UNODC**

United Nations Office on Drugs and Crime

## Early Warning Advisory







**UNODC**

United Nations Office on Drugs and Crime

## **NPS – Current and Future Challenges**

- **Identification and detection of substances**
- **International Cooperation in data collection and sharing**
- **Reporting by Member States**
- **Implementation of the scheduling decisions**



***UNODC - Making the world safer from drugs, crime and terrorism***

# Two years of I-SEE project: from the beginning to the end

## Coordination of the project

**Elisabetta Bertol, Project coordinator**

Coordinator



Department of Health Science

Beneficiary partners



National Forensic Laboratory and  
Criminal Police Directorate



# WHEN IT ALL BEGAN...

During two previous meetings, the partners began to speak about the NPS issue.



Zagreb (Croatia), 27-28 May 2013



Ljubljana (Slovenia), 15-16 Jan. 2014

# THE SITUATION AT THAT TIME



- University of Florence, DSS – TF as member of the Italian EWS.
- Long experience in NPS detection.
- Availability of NPS database.
- Collaboration with health professionals and law enforcement.
- Need to boost info exchange with neighbouring countries.

This project was based on a collaboration with two important partners as Slovenia and Croatia which needed to improve their knowledge about NPS.

In particular:



for Slovenia, to enlarge health professionals and LEA network involving also NGOs to establish information exchange mechanism and to create a national NPS database



for Croatia, to improve their EWS, clinical network, labs skills for NPS detection in biological samples and, of course, to strengthen information flows and procedures

# SUBMISSION OF THE PROJECT TO THE EUROPEAN COMMISSION

JUST/2013/ACTION GRANTS – DG Migration and Home Affairs (ex DG Justice)



# I-SEE

Project for strengthening information exchange  
between **Italy** and **South East Europe** neighbouring  
countries on New Psychoactive Substances

Coordinator



Department of Health Science

Beneficiary partners



National Forensic Laboratory and  
Criminal Police Directorate





# THE APPROVAL

September 2014:  
formal approval  
by the EC



January 2015:  
beginning of  
project activities

# KICK OFF MEETING

- Brussels, 10<sup>th</sup> February 2015
- Organized by the DG Migration and Home Affairs, EC



# KICK OFF MEETING



- To learn:
  - Best practices for project management
  - Financial issues and reporting requirements
- Report to partners (.ppt presentations shared with partners)

# TECHNICAL MEETINGS

- 20<sup>nd</sup> February 2015 – web Conference
- 25<sup>th</sup> January 2016 – Ljubljana (SLO)
- 15<sup>th</sup> September 2016 – Split (CRO)



# PARTNERSHIP AGREEMENT

- After the signature of the Grant Agreement between University of Florence and EU, the Agreement with all partners was also signed.
- Main contents:
  - Role and obligations of the coordinator and of each beneficiary
  - Money transfer from coordinator to partners
  - Confidentiality issues
  - Ownership and exploitation of results
  - Reporting



# TWO PRESS CONFERENCES

1<sup>st</sup> April 2015  
Split (CRO)



22<sup>nd</sup> February 2016  
Ljubljana (SLO)





# ORGANIZATION OF A STUDY VISIT TO ITALY

14-18 December 2015

- Florence:

University of Florence

- Forensic Toxicology Unit
- Medical Toxicology Unit

- Pavia:

- Poison Control Center
- S. Matteo Hospital Lab

- Roma:

- Carabinieri Research Investigation Unit
- Central Directorate for Antidrug Services



# REPORTING

- The Co-beneficiaries sent financial and activity reports:
  - 20/07/2015 (05/01/2015 – 05/07/2015)
  - 15/12/2015 **Mid-term** (06/07/2015 – 30/11/2015)
  - 20/07/2016 (01/12/2015 – 05/07/2016)



Still one report to go

- 20/01/2017 **Final**  
(5/07/2016 – 04/01/2017)

**Submission to EC within  
03/03/2017**

# BUDGET REVISION AFTER 1<sup>o</sup> YEAR

- After 1 year the budget was revised
- The new budget was approved by EC
- The revised budget was forwarded to all the partners



# OTHER GENERAL ACTIVITIES PERFORMED

Keeping contacts with the European Commission:

- About bureaucratic issues
- With periodical reports
- Asking about extra-activities



Managing project funding:

- Keeping track of project expenditures
- Periodical meetings with the administrative person, who we thank for her patience

# WS0: ACTIVITIES TO GO

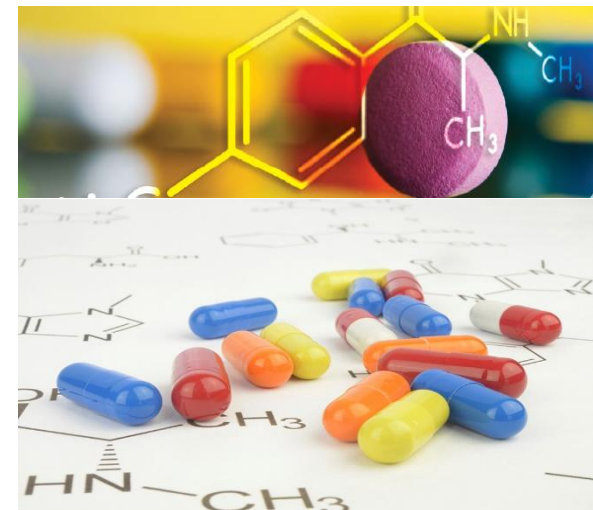
- Dissemination of project results at national and EU level – December 2016/January 2017
- Production of final activity and financial report for the EC – March 2017



# I-SEE PROJECT MAIN OUTCOMES

According to the European Pact against Synthetic Drugs (EPDS), the I-SEE project:

1. Contributed to a more **coordinated and effective operational response to NPS phenomenon**;
2. **Developed evidences** which can be used to identify transnational criminal networks;
3. Allowed the **creation of transnational networks** where health professionals, toxicologists, LEA, NGOs may benefit from information gathered by each other;
4. **Reinforced coordination and information sharing** and enhanced regional cooperation;





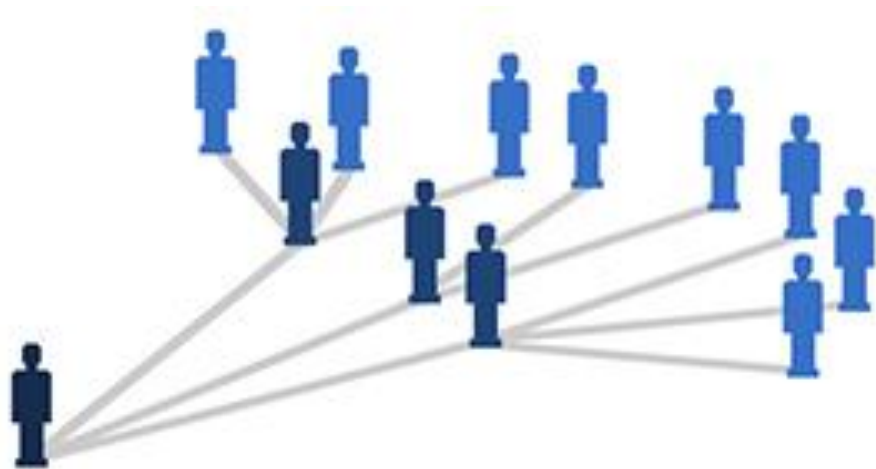
# I-SEE PROJECT MAIN OUTCOMES

5. Enabled participating countries **to boost the circulation of information about NPS** among national professionals, national authorities, EC and EMCDDA;
6. Established a **fruitful cooperation** between Italy, Slovenia and Croatia that we intend to maintain to carry on scientific research and to increase our reciprocal knowledge and experience on NPS.

# UNFORESEEN ACTIVITIES

The EC authorized the participation in the frame of the I-SEE project to two international meetings.

EC recognized these dissemination activities as an added value for the I-SEE project.



May 10<sup>th</sup> - 11<sup>th</sup> 2016, Bled,  
Slovenia



ENFSI DRUGS WORKING GROUP  
**22<sup>nd</sup> ENFSI-DWG  
Meeting**



Hosted by the Slovenian National Forensic Laboratory



Dr Sonja Klemenc  
(host)



## 5<sup>th</sup> Croatian Congress of Toxicology with International Participation

Organized by the Croatian Society of Toxicology

A very important product of the I-SEE project was the establishment of a

**“Unit of Research and Innovation  
in Forensic Toxicology and Neuroscience of Addiction”  
(U.R.I.To.N.)**

**U.R.I.To.N.  
Research Unit  
Dedicated to Tindari Baglione**



**U.R.I.To.N.** was founded in July 22<sup>nd</sup> 2015

**It is the first highly specialized Unit, in Italy and in Europe, entirely focused on all aspects of drugs of abuse (especially NPS) by means of a multidisciplinary approach.**

In this Unit, groups from three different University Departments are involved :

- Health Sciences (DSS);
- Neurosciences, Psychology, Drug Research;
- Chemistry “Ugo Schiff”



**New Drugs**



Last April an important Symposium was held in Florence on:

**“Addiction” and Identification  
of New Psychoactive Substances**

with a great presence of representatives from

- **Law Enforcement Agencies**
- **Universities**
- **Students.**

# The enlargement of the Slovenian EWS network and the collaboration among health sector, law enforcement and NGOs

## National Institute of Public Health Project Outcomes



**Ada Hočevar Grom**

Coordinator



Department of Health Science

Beneficiary partners



National Forensic Laboratory and Criminal Police Directorate

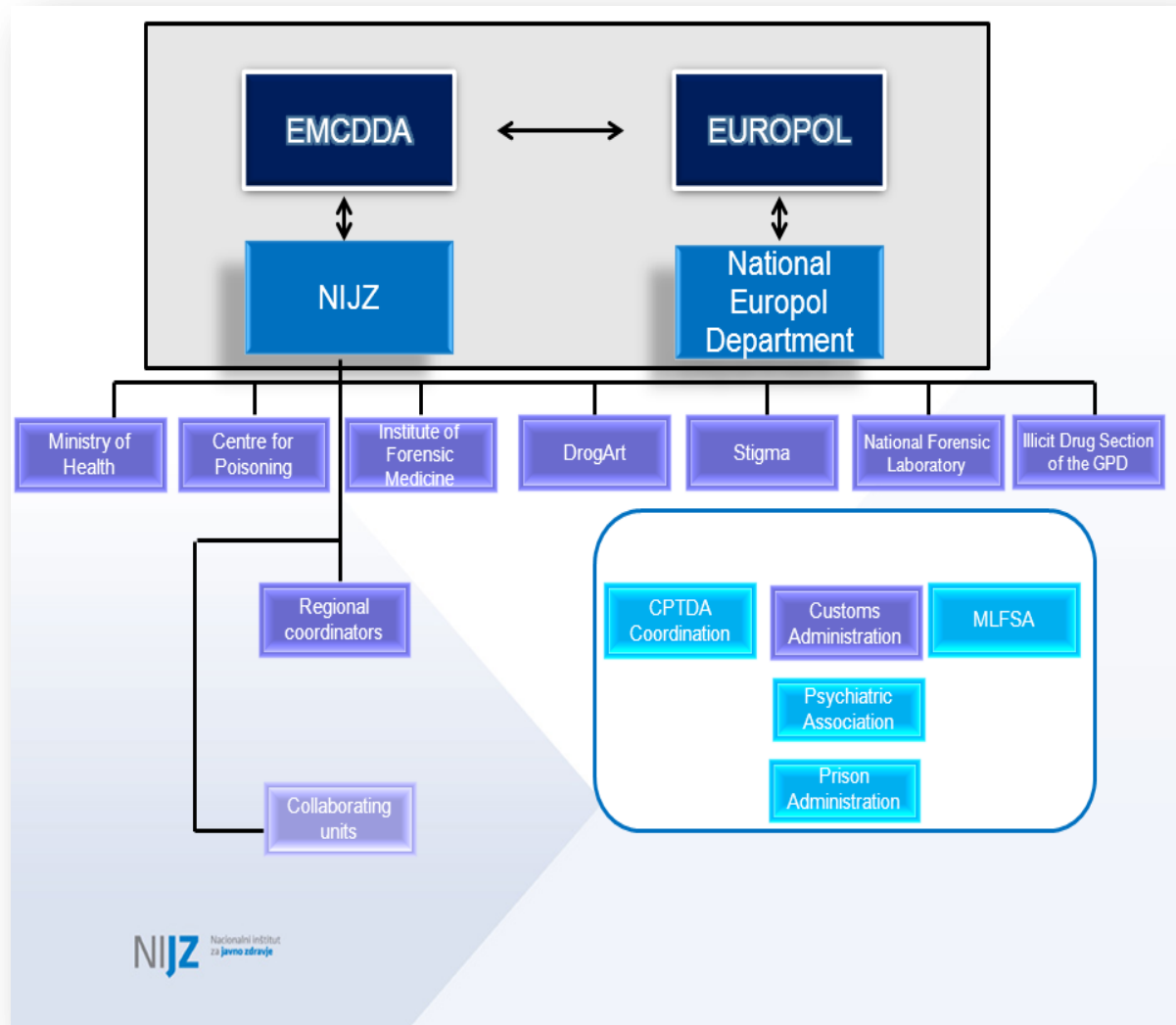


# Slovenian Early Warning System on NPS

- 2005 - first model of Slovenian EWS established, upgraded later.



- 2007 - the EWS is adopted at national level by the Ministry of Health. Coordination of NEWS under NIPH.
- 2014 - plans for development of regional EWS networks



# I-SEE Slovenia: What we wanted to achieve?



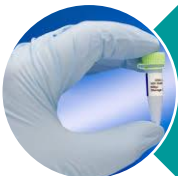
to build up regional networks involving law enforcement, NGO's and public health professionals



to detect NPS in an early phase of their appearance and in individual regions



to enable anonymous collection of NPS samples in regions



to speed up the procedure of anonymous collection of NPS samples and their analysis



to speed up the response in terms of informing the users and take adequate measures to tackle the problem

# NIPH: What was done in 2015?

## 4 trainings: 115 professionals

### 17. April 2015 1st national meeting

- tasks to be done in the project & timeline
- dates, places and content of trainings for public health, NGO & police professionals
- participants agenda



# NIPH: What was done in 2015-2016?



8 regional coordinators of EWS were appointed

**task:** to establish and coordinate regional EWS network

8 regional early warning systems started to operate





## NIPH: Regional EWS networks & NPS collecting points



# NIPH: What was done in 2016?

**16. June 2016**

**2nd national meeting**

**17 members of newly established regional EWS networks**

- overview of the work done in the project
- guidance for anonymous NPS samples collecting
- issues regarding collecting procedure
- informing on dangerous NPS
- monthly reporting
- work plan for 2017



# NIPH: What was done in 2016

development of **national NPS base**

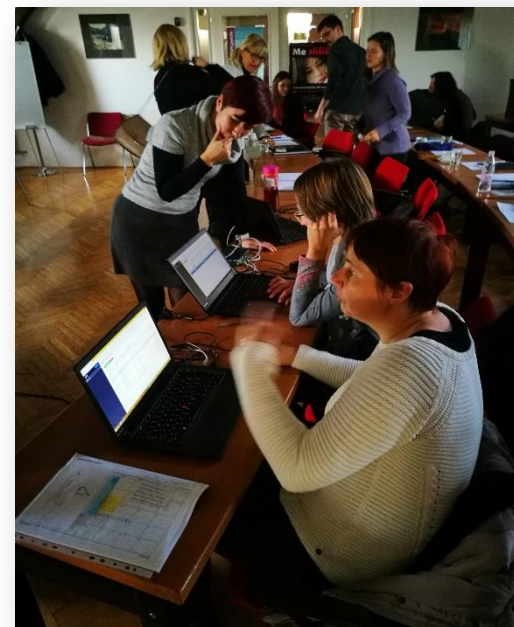


**2. December 2016**

**3rd national meeting**

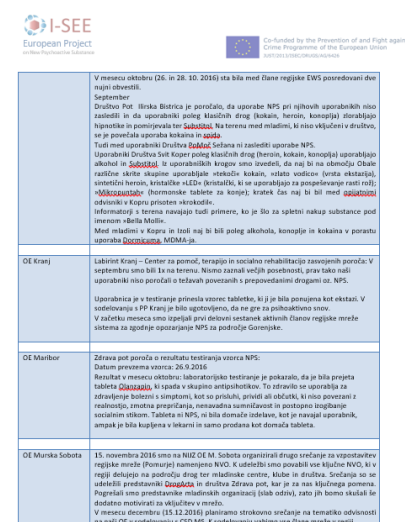
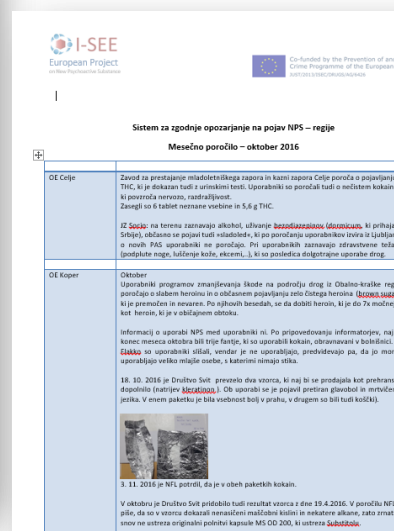
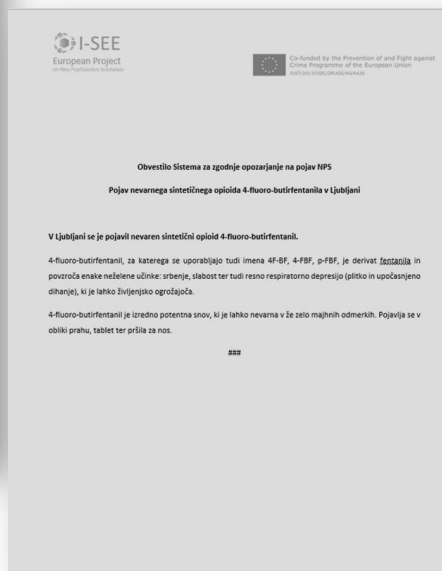
**25 members of regional EWS networks**

- presenting and testing the national NPS base



# NIPH: What was done in 2016

- **6 alerts** on dangerous NPS
- **10 monthly reports** of regional EWS networks





# Slovenia



# Implementation of NPS sample collecting procedure in NGO focal points in Slovenia

I-SEE, press conference, Florence, 16. 12. 2016

**Simona Šabić, Association DrogArt**

Coordinator



Department of Health Science

Beneficiary partners



National Forensic Laboratory and  
Criminal Police Directorate





# The role of NGO in SI-EWS

- Connection between the users and the system.  
**Quality contact with users and the system is essential.**
- Providing to the EWS information about detected drug emergence, changed patterns of drug use, users' needs → **planning effective responses.**
- Providing to the users EWS information and alerts.

**I-SEE project: implementing this role on regional levels.**

# Drug checking as a harm reduction activity

- Unknown content in the illicit drugs, new psychoactive substances with unknown affects and risks, high purity of drugs → **preventing risks, overdoses and deaths.**
- Opportunity to make quality contact with users, providing them **information and counselling.**
- **Reaching hidden population** of drug users (NPS specifically).
- Encouraging **responsible and less risky decisions** amog users.

## Warnung: XTC mit verschiedensten Inhaltsstoffen

**Datum: April 2015**



Name	<b>Smiley</b>
Gewicht	293.8 mg
Durchmesser	9.0 mm
Dicke	3.7 mm
Bruchrille	Ja, Kreuz
Farbe	rot
Inhaltsstoff	<b>Amphetamin*HCL: 35.4 mg Coffein: 22.7 mg MDMA*HCL: 5.0 mg Ketamin: 3.5 mg 4-Methylamphetamin 0.6 mg Biamphetamin 1-Benzyl-3-methylnaphthalan</b>
Getestet in	<b>Zürich, April 2015</b>

**DrogArt**

Posted by Simona Šabić (?) · 10 February ·

V Angliji opozarjajo na ekstazije z zelo visoko vsebnostjo MDMA. Gre za rumene tabletko v obliki ščita z logotipom UPS. Zaradi uporabe je bilo šest ljudi hospitaliziranih.



### Tabletke s tremi zvezdicami vsebujejo EAPB in MAPB

4.9.2014

Tabletka se prodaja kot ekstazi s tremi zvezdicami, premerom 10 mm in debelino 2 mm (glej slike). Laboratorijska analiza je pokazala, da vsebuje EAPB in MAPB.



## We Could Have Prevented Those PMMA Deaths In The UK With Drug Checking

## 'Superman' pill deaths spark calls for dangerous-drugs alert system

The Netherlands issued early warnings about lethal pills believed to have subsequently killed four in UK over the festive break



📷 Dancers at a rave, which is typically associated with the taking of the 'feel-good' drug ecstasy. Photograph: Franck Prevel/AP

Five days before the first of four people in Britain died of a drug overdose, researchers at a Dutch laboratory organised a nationwide alert over the "Superman" pills that are now believed to have killed those who thought they were taking ecstasy.

# Drug testing - monitoring drug use

- Insight in NPS phenomena and emergence in different local environments.
- Insight in the drug use patterns (local environments and hidden populations).

# Drug testing procedure

- Samples are **anonymously** collected from users in the NGO.

**Anonymity and confidentiality are essential.**

- Providing information and counselling to users.
- Cooperation with the police.
- Sample analysis in National Forensic Laboratory (NFL).
- Communicating results back to users.

**I-SEE project: implementing drug testing procedure  
in NGOs in other regions.**



# Main project achievements

- **4** trainings for NGOs from all Slovenian regions
- **6** newly established NGO focal points
- Until november 2016 NFL analyzed **122** anonymously collected samples in NGO, in **48** samples NPS was detected
- Development of **guidelines** for NPS sample collecting procedure
- Improved cooperation, information and good practis exchange between organizations, institutions and proffesionals on regional and national level
- Connecting important stakeholders on the topic of NPS and drug testing

# CHEMICAL CHARACTERIZATIONS OF ANONYMOUSLY COLLECTED SAMPLES IN NFL - ANALYTICAL BACKGROUND

**Dr Sonja Klemenc**  
[sonja.klemenc@policija.si](mailto:sonja.klemenc@policija.si)

RS Ministry of the Interior - Police, General Police Directorate,  
National forensic laboratory (NFL)



NACIONALNI FORENZIČNI LABORATORIJ  
NATIONAL FORENSIC LABORATORY

Presented by  
**Dr Fabio Vaiano**

Forensic Toxicology Division, Department of Health Science, University of Florence, Italy

Coordinator



Department of Health Science

Beneficiary partners



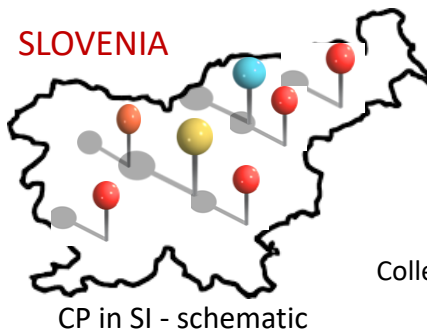
Ministry of Interior  
Republic of Slovenia



# COLLECTION AND ANALYSES OF SAMPLES (overview)

## 1. SI EWS collection points (CP)

established at different SI regions (anonymously collected samples)



Collected samples: powders, tablets, liquids, blotters, plant materials

## 2. Law enforcement units (LE) -Police

Collected samples are seized at the (CP) and shall be protected (inline with the instructions of the NFL document CFP-017, version 1.7, 2012) in evidence protection bags (provided by NFL) and afterwards samples are delivered to NFL.



Law enforcement officers



Evidence protection bags



reporting

## 3. Forensic chemists

National Forensic Laboratory (NFL)

- a) Chemical characterizations and reporting.
- b) Further manipulation of samples – send them to storage or if samples are spend during analyses this shall be written in the report.



To the request sender (LE)



To other stakeholders

# CHEMICAL CHARACTERIZATIONS (BACKGROUND)

NFL task WS1: Characterization of anonymously collected samples by the *routine* laboratory methods:

## 1. GC-MS – retention time locked method ISO- 17025 accredited in flexible scope (from 2010):

- > **450 compounds** (*certified reference materials and NMR confirmed compounds from other sources*) with the known **retention time** and corresponding **mass spectrum** and **detection limit defined** are currently included in the NFL internal GC-MS data repository. Some numbers:
  - **NPS\*** (synthetic cannabinoids (>110), cathinones (77), phenethylamines including classical (84), benzodiazepines (26), tryptamines (17), opioids (13), arylalkylamines (15), aminoindsnes (5), Arylcyclohexylamines (9)...etc.)
  - Classical drugs and many common adulterants are covered by the method as well
- Commercial MS spectral libraries as well as ENFSI, SWGDRUG and Cayman MS libs are the complementary tools applied for identifications (based on MS spectrum only, if applicable).

---

\* **I-SEE project** reference materials : (26 out of 37 delivered were new for NFL) kindly provided by University of Florence and additional 28 acquired and purchased from the I-SEE project budget by NFL have been implemented into GC-MS data repository and solid samples to NFLs FTIR spectral database as well.

# CHEMICAL CHARACTERIZATIONS II (BACKGROUND)

## 2. FTIR-ATR

- > 350 NPS are included in the NFL internal data repository
- search against libraries from other providers is possible as well

## 3. Other methods *were implemented for identifications of active ingredients for few collected*

*samples (those analyses were covered in the frame of a complementary project (RESPONSE) from the same call - coordinated by the National Forensic Laboratory. So far three joined reports (RESPONSE + I-SEE ) have been issued .*

- HPLC-TOF (determination of exact monoisotopic and suggested empirical formula) in NFL
- NMR ( $^1\text{H}$ ,  $^{13}\text{C}$ ,  $^1\text{H}$ – $^1\text{H}$  gs-COSY,  $^1\text{H}$ – $^{13}\text{C}$  gs-HSQC,  $^1\text{H}$ – $^{13}\text{C}$  gs-HMBC,  $^1\text{H}$ – $^{15}\text{N}$  gs-HMBC), analyses and interpretations are done in Faculty of Chemistry and Chemical Technology (FKKT), University Ljubljana in the frame of the [RESPONSE project](#).

(Simple case example: mass spectra and RT data of both compounds were already available in NFL spectra repository)

sample authority:	type/collecting	Collected/ NGO Infopeka
Date of seizure:		05/09/2016
place:		Maribor
seized by:		Police (LE unit in Maribor)
evidence bag No.		A 38046
No of samples		4
Other info:		Blotters purchased through the website from China (5€/blotter).
<b>NFL Case ID</b>		<b>233-3768/2016</b>
<b>received in NFL:</b>		<b>13. 9. 2016</b>
<b>NFL report issued</b>		<b>16.09. 2016</b>

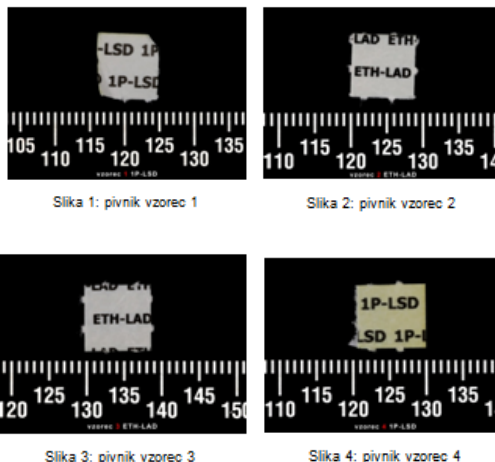


Foto: National forensic lab.

Extraction of each blotter: in MeOH

Methods applied: GC- MS and HPLC - TOF



## Results upon analyses (identification based on internal NFL databases)

Samples 1 and 4: 1P-LSD  
Samples 2 and 3: ETH-LAD

## Report to the customer (LE)

## Reports to EMCDDA and SI EWS (NIJZ contact point)



REPUBLIKA SLOVENIJA  
MINISTRSTVO ZA NOTRANJE ZADEVE  
POLICIJA

Generalna policijska uprava  
Nacionalni forenzični laboratorij

XXXXXXXXXX 95. 000 Ljubljane



Co-funded by the Prevention of and Fight against  
Crime Programme of the European Union  
JUSTICE/2015/COFIN/ANONIMNA

---

**Policijska uprava Maribor**  
**3F331**

**Številka:** 233-3768/2016/2 (2F502-14) **T:** 01 428 44 93  
**F:** 01 428 49 96  
**E:** info@policijs.si

**Datum:** 16. 9. 2016

**POROČILO O PREISKAVI "ANONIMNI VZORCI"**

**ZVEZA:** Zaposilo št. 2312-196/2016-1 (3F331-06) z dne 6. 9. 2016

<b>Naročnik preiskave:</b>	PU Maribor
<b>Datum zaseda:</b>	5. 9. 2016
<b>Datum prejema v NFL:</b>	13. 9. 2016
<b>Kontrolna št. vrečke (ZM):</b>	A 38046

Vzorce neznane snovi je dne 5. 9. 2016 predstavniku SKP PU Maribor izročila odgovorna oseba zavoda info@peka v Mariboru. Na podlagi delovanja mednarodne delovne skupine Sistema za zgodnje opazovanje na pojav novih psihoaktivnih snovi sta vzorca vključena v projekt I-SEE.

**REZULTAT PREISKAVE**

uporabljene metode: PT ☒, GC-MS ☒, FTIR ☒, HPLC-TOF ☒, NMR ☐ drugo: GC-MS-FTIR



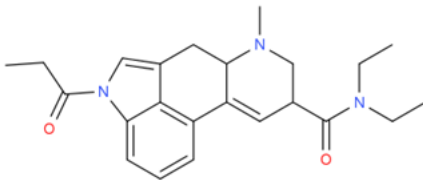
oznaka vzorca	količina	vrsta	opis snovi	PD	NPS	ostalo
1	1	kom.	pivnik (Slika 1)	/	1P-LSD ( <span style="color: red;">dietilamid 1-propionil izerske kisline</span> )	/
2	1	kom.	pivnik (Slika 2)	/	ETH-LAD (5- <span style="color: red;">etil</span> -6 nor-dietilamid izerske kisline)	/
3	1	kom.	pivnik (Slika 3)	/	ETH-LAD (5- <span style="color: red;">etil</span> -6 nor-dietilamid izerske kisline)	/
4	1	kom.	pivnik (Slika 4)	/	1P-LSD ( <span style="color: red;">dietilamid 1-propionil izerske kisline</span> )	/

Rezultat preiskave se nanaša na vzorec, kot je bil prejet v laboratorij. Dokument se sme distribuirati samo med člani EWSB.

Stran 1 od 2

Figure: NFL -REPORT (special template was designed for reporting I-SEE project result; page 1 of the report is shown)

# NFL filled EUROPOL/EMCDDA reporting form and sent it to EMCDDA and SI EWS

 <b>REPORTING FORM ON NEW PSYCHOACTIVE DRUG</b> 	
In accordance with Council Decision 2005/387/JHA of 10 May 2005 on information exchange, risk assessment and control of new psychoactive substances.	
This section should be filled in by Europol or EMCDDA Transmitted by Europol <input type="checkbox"/> Transmitted by EMCDDA <input checked="" type="checkbox"/> Ref. n°: OEDT (16) 10502 Date of transmission: 22/09/2016	
The following sections should be filled by the Europol National Units (ENU) or REITOX National Focal Points (NFP) based on the information available and their respective competences	
1. Member State:  Ref. n°: 325-24/2009/233 NFL case no. 233-3768/2016 Samples No. 1 and 4  Date: 21.09.2016	Reporting authority:  ENU <input type="checkbox"/> REITOX <input checked="" type="checkbox"/>
2. Chemical name: N,N-diethyl-7-methyl-4-propanoyl-6,6a,8,9-tetrahydroindolo[4,3-fg]quinoline-9-carboxamide    Mw (g/mol): 379.50 Formula: C <sub>23</sub> H <sub>29</sub> N <sub>3</sub> O <sub>2</sub>  Other name(s): Street name(s):	
3. Source of information (fill one or more as appropriate)  Seizure(s) <input type="checkbox"/> Specify amount (weight, number of tablets, etc.):  Seizing authority:  Date: Biological sample(s) <sup>1</sup> <input type="checkbox"/> Place: Specify type:	
<sup>1</sup> Biological (human) samples e.g. body fluids (urine, blood), tissues, hair, etc.	
Identifying authority:  Date: Place:  Collected sample(s) <sup>2</sup> <input checked="" type="checkbox"/> Specify amount (weight, number of tablets, etc): 2 blotters  Collecting authority: NGO (Infopeka) / Police  Date: 5.9.2016 Place: Maribor, Slovenia  The samples possessed drug addict and purchased through the website from China.  Samples were collected for anonymous testing in the frame of EU-cofunded project I-SEE (JUST/2013/SEC/DRUGS/AG/6426).  Other substances present (if more than one case, specify for which one):  Psychoactive ingredients:  Other ingredients:	
4. Physical description (in case of seizure/collection)  Form: powder <input type="checkbox"/> tablet <input type="checkbox"/> capsule <input type="checkbox"/> liquid <input type="checkbox"/> other (specify): blotters  Colour: one blotter white with printed text '1P-LSD and another blotter yellow printed text '1P-LSD  For dosage unit: weight: diameter: shape: logo/markings:	
5. Circumstances: production <input type="checkbox"/> trafficking <input type="checkbox"/> distribution <input type="checkbox"/> use <input checked="" type="checkbox"/>	
6. Price: retail (per dosage unit): 5€/blotter wholesale:	
7. Chemical precursors:	
8. Patterns of use:	
9. Other possible uses <sup>3</sup> :	
10. Effects in man  Objectively observed:  Subjective (described by users):	
11. Context of use  User group(s):	
<sup>2</sup> Actively collected by drug monitoring systems for monitoring or research purposes <sup>3</sup> For example, for medical, industrial, ritual, cosmetic, etc., purposes	

Beside the test purchased sample of 1P-LSD performed by National forensic laboratory (2015 in the frame of the RESPONSE project), this was the first identification of 1P-LSD in Slovenia. Therefore, the report was sent to EMCDDA and SI EWS in cc. The second substance ETH-LAD was processed on the same manner. Reporting form for ETH-LAD is not shown.

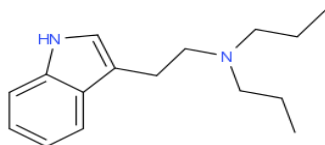


## EXAMPLE 2: Identification of 2-(1H-indol-3-yl)-N,N-dipropylacetamide (Complex case)

### Administrative data (NGO/LE unit/NFL)

sample type/collecting authority:	Collected/NGO DrogArt
Date of seizure:	6.1.2016
place:	Ljubljana
seized by:	SKP LJ
evidence bag No.	027954
No of samples	5
Other info:	Sample 30 (off white powder) was purchased via internet as <b>DPT</b>
NFL Case ID	233-108/2016
received in NFL:	8. 1. 2016
NFL report issued	29.1.2016

### Expected compound **DPT** (tryptamines class)

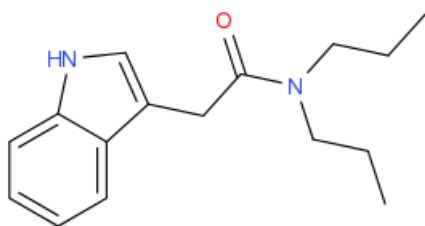


C<sub>16</sub>H<sub>24</sub>N<sub>2</sub>  
Mw=244,38 g/mol  
Exact mass: 244.19395

[2-(1H-indol-3-yl)ethyl]dipropylamine



### Identified compound: 2-(1H-indol-3-yl)-N,N-dipropylacetamide (tryptamines class)



C<sub>16</sub>H<sub>22</sub>N<sub>2</sub>O  
Mw: 258.36 g/mol  
Exact mass: 258.1732



### Chemical characterizations in NFL:

Methods applied: GC- MS and HPLC – TOF, FTIR-ATR



Results upon analyses

#### GC-MS:

- no hits in spectral libraries,
- MS fragmentation pattern is **NOT** consistent by **DPT** structure)

#### FTIR-ATR:

- no hits in libraries, clear indication of carbonyl group (**-C=O**) present which is **NOT** consistent by **DPT** structure)

#### HPLC-TOF:

- no hits in NFL library
- exact mass: 258.1732 (does **NOT** correspond to **DPT**)
- Empirical formula: C<sub>16</sub>H<sub>22</sub>N<sub>2</sub>O (does **NOT** correspond



to **DPT**)

### Structure elucidation by NMR at FKKT, University Ljubljana

Structure elucidation was based on **1D and 2D NMR experiments**: <sup>1</sup>H, <sup>13</sup>C, <sup>1</sup>H–<sup>1</sup>H gs-COSY, <sup>1</sup>H–<sup>13</sup>C gs-HSQC, <sup>1</sup>H–<sup>13</sup>C gs-HMBC, <sup>1</sup>H–<sup>15</sup>N gs-HMBC.

Result



REPORTING

Three types of reports were issued: for the customer, for EMCDDA and SI EWS, for NPS database (open to public)

Fig.1: Report for the customer –  
Only page one is shown

Fig.2: Report for EMCDDA and SI EWS, only first two pages are shown

Fig.3: Joined report I-SEE + RESPONSE published at WEB (full characterization data (MS, FTIR, NMR spectra) are included in this report – only page 1 one is shown here.

## Collected samples - some preliminary statistical data

Number of requests received so far (87 + 8 partially processed within the scope of another project, where non routine methods had been applied for characterizations).

Number of the reports to the customer issued (note: some reports contains information for more than one sample): 95

Total number of samples processed (multiple analytical methods have been applied on each sample): 141

- samples where at least one NPS was detected (65; from this number 3 NPS were novel\*)
- samples where only classical drugs (like cocaine, amphetamine, MDMA, cannabis etc..) were identified and in limited number of samples quantified as well (59)
- samples without any active ingredients (17)

Number of reports related to I-SEE project to EMCDDA and SI EWS (only when the compound is detected for the first time in Slovenia): 5 + few pending

\*For 3 collected samples it was not possible to confirm the structure of active ingredient in the NFL (reference materials were not available). Samples were sent to NMR in the frame of the RESPONSE project. Joined reports of the “RESPONSE + I-SEE” projects were issued and chemical characterization data (spectra) have been published here

[http://www.policija.si/apps/nfl\\_response\\_web/seznam.php](http://www.policija.si/apps/nfl_response_web/seznam.php) : ([Mexedrone](#) , [N-ethylhexedrone](#) and [2-\(1H-indol-3-yl\)-N,N-dipropylacetamide](#)).

## Collected samples – NPS identified (examples)

2-MAPB, 3-Meo-PCP, ketamin, clonazolam, nifoxipam, FUB-AMB + 4MeO-PV9, 3-MMC, alpha-PVP, Etylone and Etylone in combination with 4-MeO-PV9 and SDB-005, mexedrone, 1P-LSD, 2-(1H-indol-3-yl)-N,N-dipropylacetamide, DMT, 4F-BF, 3F-fenmetrazine, ETH-LAD, LSD, fluoroamphetamine, ethylphenidate...



2-MAPB



3-Meo-PCP



Nifoxipam



FUB-AMB + 4MeO-PV9



Etylone + 4-MeO-PV9  
+ SDB-005



Etylone

Pictures of some collected tablets (Foto NFL)

## Conclusions

There is no doubt that the results presented here will rise understanding on NPS situation among users in Slovenia and on the other hand also rise the awareness when dangerous samples are detected in the field. So far several alerts have been issued.

Sharing of information has already strengthened the cooperation between three countries.

Dissemination of results “outside the project geographical borders” will contribute to general understanding of NPS phenomena also globally.

# **I-SEE PROJECT FINAL CONFERENCE**

Florence, December 16<sup>th</sup>, 2016

## **Clinical-toxicological network on NPS in Croatian EWS**

**University of Split/School of Medicine, Croatia**

**Marija Definis-Gojanović**

Coordinator



Department of Health Science

Beneficiary partners



National Forensic Laboratory and  
Criminal Police Directorate



# I-SEE Croatia: What did we want to achieve?



To evaluate of current situation on identifying NPS



To increase knowledge, competences and skills



To create effective monitoring system of NPS



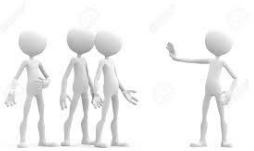
To improve the efficiency of EWS network



# I-SEE Croatia: How did we plan to achieve it?



to launch of a pilot project on identifying NPS in biological samples in Split-Dalmatia County



to raise warning campaign among medical professionals (and medicine students) on NPS effects, harm and dependence



to develop a national model of monitoring health consequences of NPS use



to set up a Clinical network of the national EWS on NPS in formal and operational sense



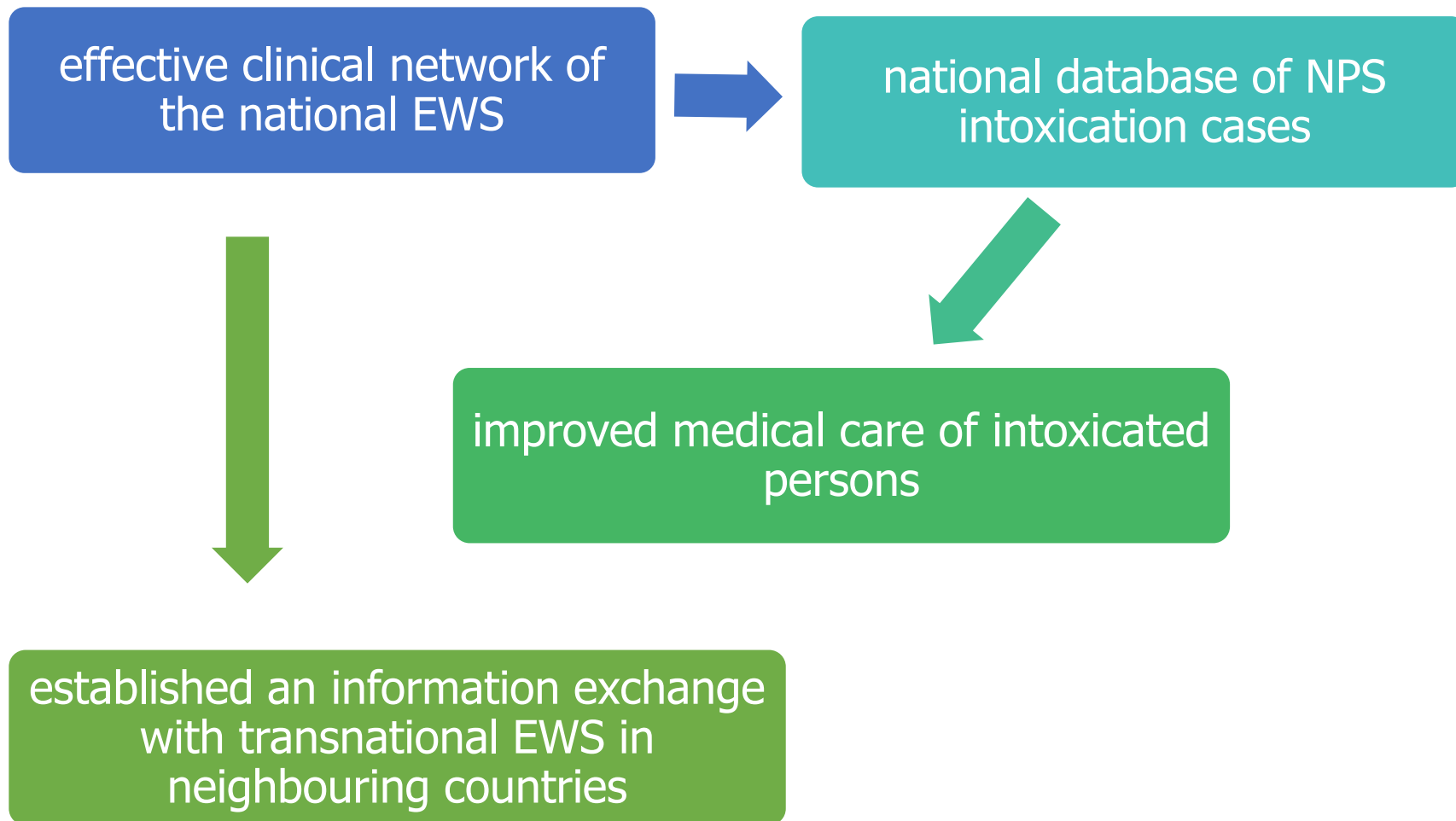
to establish a reference centre of the national EWS Clinical network (e.g. Split University School of Medicine)



to set up a national base of NPS



# I-SEE Croatia: Expected results



# Done!

**1st Press Conference  
Split, April 1, 2015**

**Study visit of Slovenian delegation  
Split, September 13-14, 2016**

**2st technical meeting  
Split, September 15, 2016**

## SPLIT

Objavljeno 01.04.2015. u 20:44

U SPLITU PREDSTAVLJEN PROJEKT

**Teror "dizajnerskih droga": ima ih sve više, legalno se nabavljaju i probao ih je svaki četvrti mladić u zemlji**

 Like {0}  Tweet {0}  +1 {0}



Prema izvješću Europskog centra za nadzor droga i ovisnosti o drogama, u zadnjih pet godina dogodio se dosad neviđen porast u broju, tipu i dostupnosti novih psihoaktivnih droga u Europi. Tijekom prošle godine u europskim zemljama otkrivena je 101 takva tvar, dok ih je u našoj zemlji otkriveno 18.

Prema istraživanjima provedenim u Hrvatskoj, svaki je četvrti mladić i svaka deseta djevojka srednjoškolske dobi probao je neku od novih supstancija.

Najpopularnije sredstvo je "galaxy", koje su kozumirali čak i učenici viših razreda osnovnih škola, i to oko dva posto dječaka i jedan posto djevojčica. Nove droge u pravilu se nabavljaju u "smart shopovima", kojih u Hrvatskoj ima 15-ak, smještenih uglavnom na lokacijama gdje se okupljaju mladi.



- 1. National education on NPS  
Split School of Medicine  
Split, May 20, 2015**
- 2. National education on NPS  
City library “Juraj Šižgorić”  
Šibenik, November 28, 2015**
- 3. National education on NPS  
Split School of Medicine  
Split, July 02, 2016**



**KLINIČKI BOLNIČKI CENTAR SPLIT**  
**TEMELJNE INFORMACIJE O PACIJENTIMA INTOKSICIRANIMA S NOVIM PSIHOAKTIVNIM**  
**TVARIMA (NPT) - FORMULAR**

<b>1. Osnovni demografski podaci: šifra pacijenta</b>				
spol:	<b>M</b>	<b>Ž</b>	Datum prijema:	
dob:			Potpis osobe na prijemu:	
dolazi iz:	<b>Zemlja</b>		<b>Grad</b>	

**2. Klinička slika kod intoksikacije NPT** (popunjava liječnik)

**1. Stanje svijesti**

- ☐ Smetenost
- ☐ Pospanost
- ☐ Somnolencija
- ☐ Delirij
- ☐ Koma

**2. Neurološka s**

- ☐ Vrtoglavica
- ☐ Glavobolja
- ☐ Dezorijentiranost
- ☐ Amnezija
- ☐ Gubitak koordinacije
- ☐ Nesiguran hod
- ☐ Hiperrefleksija
- ☐ Hiporefleksija
- ☐ Tremor
- ☐ Povremeni gubitak svijesti

**3. Oftalmološka s**

- ☐ Zamagljen vid
- ☐ Midrijaza
- ☐ Mioza
- ☐ Nistagmus

**4. ORL s**

- ☐ Suha usta
- ☐ Metalni okus u ustima
- ☐ Hiperaktivacija
- ☐ Ukočenost jezika
- ☐ Škripanje zubima
- ☐ Trizmus
- ☐ Bol, svrbež nosa
- ☐ Epistaksa
- ☐ Šumovi, zujanje u ušima

**5. Kardiovaskularna s**

- ☐ Bol u prsima
- ☐ Palpitacije
- ☐ Aritmije

**6. Respiratorna s**

- ☐ Nepravilno disanje
- ☐ Kratkoća daha
- ☐ Dispneja

**7. GIT s**

- ☐ Bol u trbuhu
- ☐ Gubitak apetita
- ☐ Mučnina
- ☐ Povraćanje
- ☐ Proljev

**8. Genitourinarna s**

- ☐ Anorgazmija
- ☐ Erektalna disfunkcija
- ☐ Povišeni libido
- ☐ Dizurija

**9. Muskuloskeletna s**

- ☐ Bol u leđima, mišićima, zglobovima
- ☐ Mišićna napetost
- ☐ Ukočenost
- ☐ Hladnoća udova
- ☐ Drhtavica
- ☐ Grčevi

**10. Psihološka s**

- ☐ Konfuzija
- ☐ Nemir
- ☐ Euforija
- ☐ Logoreja
- ☐ Povećanje energije
- ☐ Empatija
- ☐ Ubrzanje misli
- ☐ Ljutnja
- ☐ Agresija
- ☐ Strah
- ☐ Paranoja
- ☐ Napadaji panike
- ☐ Sklonost ozljeđivanju
- ☐ Nesanica
- ☐ Noćne more
- ☐ Suicidalne misli
- ☐ Vremenska iskrivljenost
- ☐ Slušne i vidne halucinacije
- ☐ Poremećaj pažnje
- ☐ Poremećaj pamćenja
- ☐ Poremećaj govora
- ☐ Opsesivno ponašanje
- ☐ Bizarne reakcije
- ☐ Flash back-ovi
- ☐ Depersonalizacija
- ☐ Psihoza
- ☐ Relaksacija
- ☐ Sedacija
- ☐ Umor
- ☐ Disforija
- ☐ Depresija
- ☐ Blok misli
- ☐ Analgezija
- ☐ Smanjen osjećaj gladi i žeđi
- ☐ Autistično ponašanje

**11. Koža**

- ☐ Promjena boje

(\_\_\_\_\_)

- ☐ Suha
- ☐ Vlažna
- ☐ Svrbež
- ☐ Osip
- ☐ Piloerekcija

**12. Vidljive sluznice**

- ☐ Promjena boje

(\_\_\_\_\_)

- ☐ Suha
- ☐ Vlažna

**13. Ostalo**

\_\_\_\_\_

\_\_\_\_\_

**14. Ozljede**

- ☐ Ima

(\_\_\_\_\_)

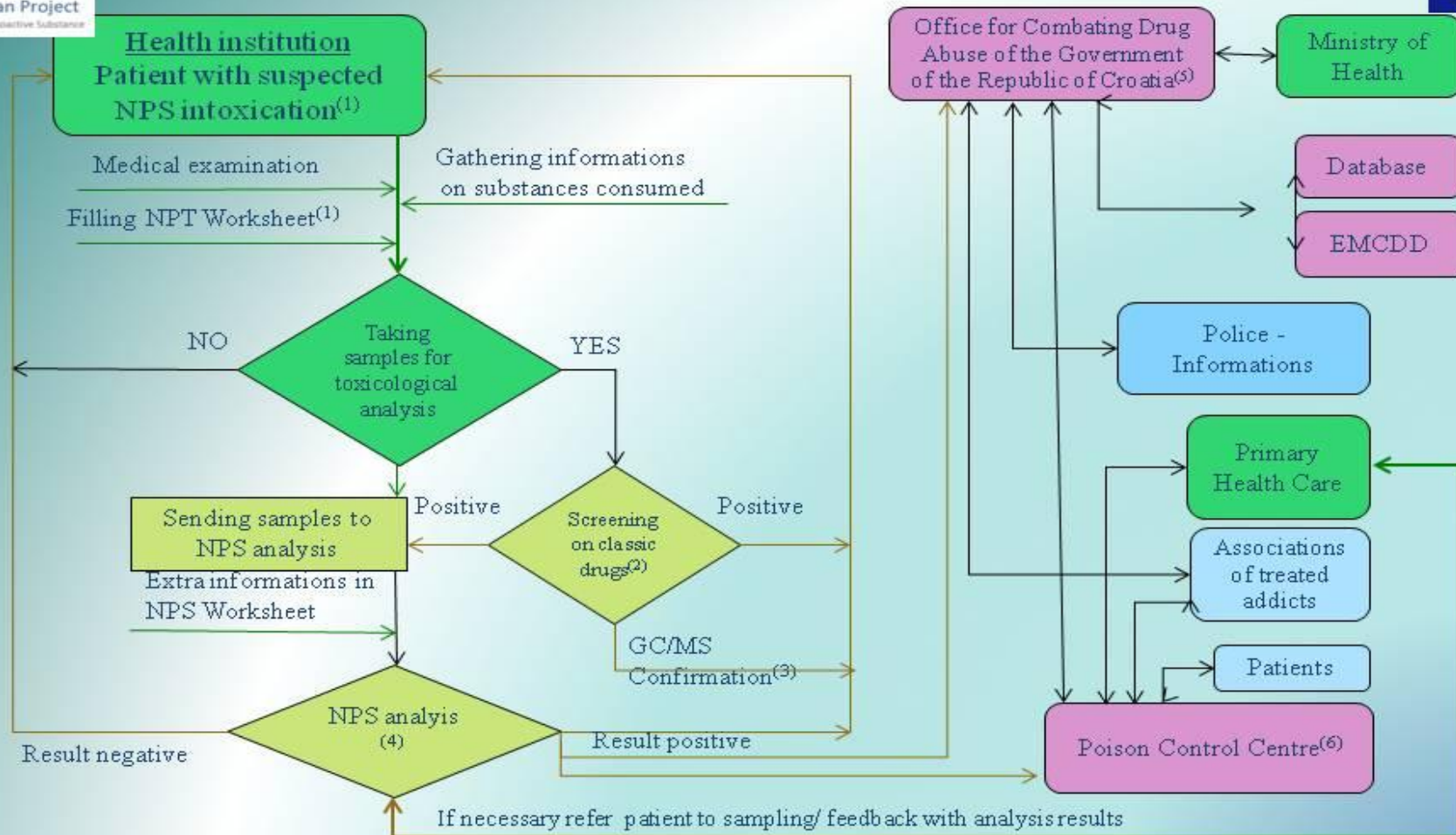
- ☐ Nema

*Uzorak krvi izuzeti u biokemijsku epruvetu (crveni čep, bez konzervansa), a uzorak urina u klasični kontejner za urin.  
Uzorke što prije dostaviti u laboratorij. Do analize ili slanja u laboratorij, čuvati ih u hladnjaku na 4°C.  
Formular uputiti uz pacijenta, odnosno izuzete uzorke.*

1/2



## ALGORITHM- CASE OF EVENTS FOLLOWING NPT INTOXICATIONS



### Agenda:

- 1) Fulfilled by doctors who request further analysis
- 2) Laboratories of General Hospitals, Clinical Hospitals and Clinical Hospital Centers or other laboratories who do drug screening methods (regardless of the method used).
- 3) Osijek: CHC Osijek- 051/511647; Zagreb: CHC Zagreb (01/2367328), IMI - Institute for medical research and work medicine 01/4682531, Split: CHCSplit—Toxicology laboratory 021/556 777; 556 717/
- 4) Laboratory for NPS analysis: during project period 2016. g. CHC Split—Toxicology laboratory 021/556 777; 556 717/
- 5) Office for combating drug abuse of the Government of the Republic of Croatia 01/ 4878 127/
- 6) Poison Control Centre 01/2348 342/



## **In the process....**

**Guidelines for proceeding  
with biological samples  
in clinical network in EWS  
on NPS**

**Manual for proceeding with  
persons under the suspicion  
on NPS intoxication**

# Participation in

**STUDY VISIT TO ITALY**  
**December 14-18, 2015**



**1st technical  
meeting**  
Ljubljana,  
January 25, 2016

**2<sup>nd</sup> Press  
Conference**  
Ljubljana,  
February 22,  
2016,



- **Receiving and analysis of standards; forming the data base**

reference materials - from the University of Florence, Italy, in January/February 2016,  
instrumental analyses of all standards done

March/April 2016, the data base – library of mass spectrums for analyzed NPS formed

- **Receiving and analysis of biological samples, 2014-2016**

- **Split-Dalmatian County:** Education on NPS for sanitary inspectors; Split, June 29, 2015

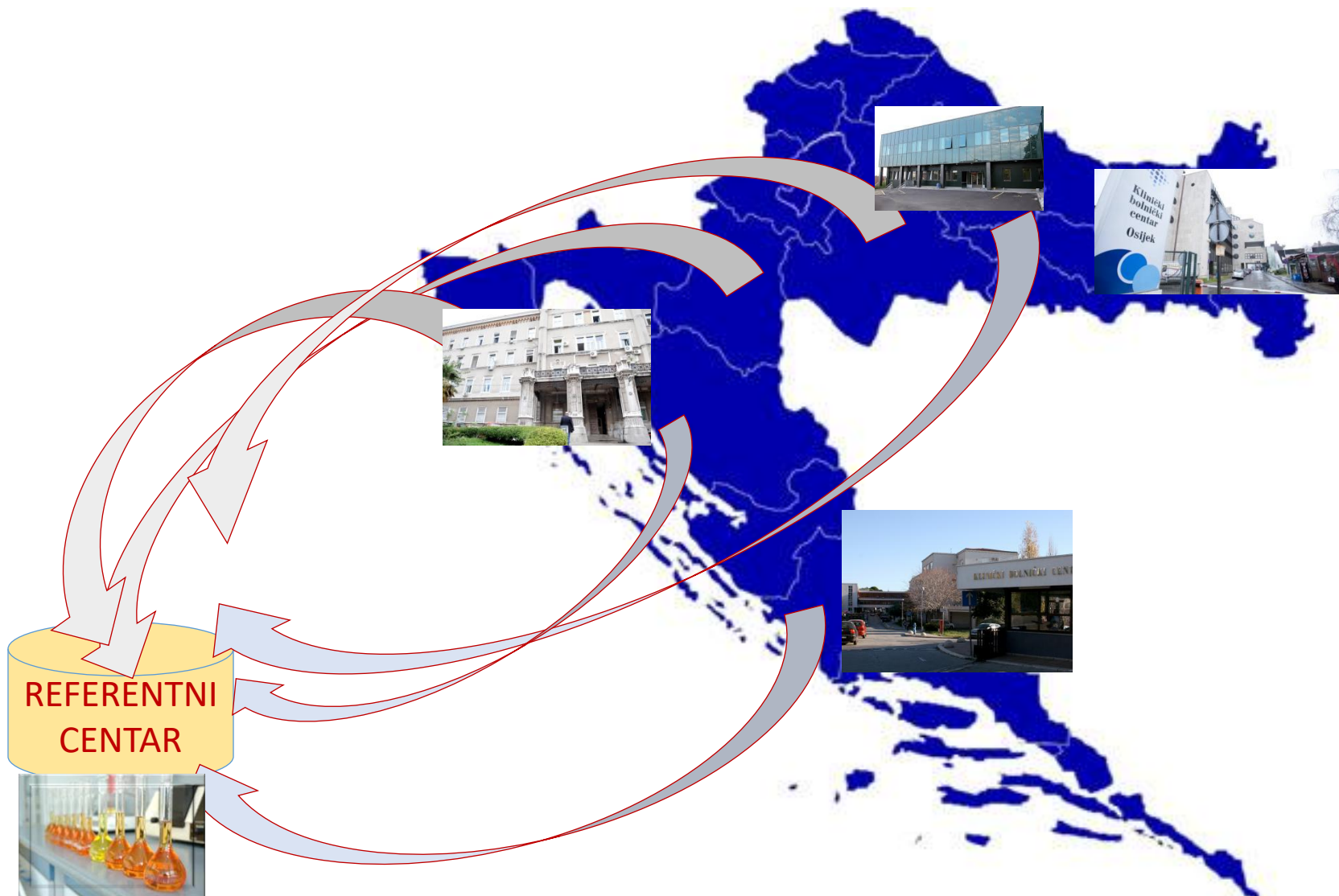
- **Government of Republic of Croatia, Office for combating drug abuse:** Round table – Intoxications with NPS; Marija Bistrica, October 2015, November 2016

- **Participation at conferences to strenght the impact of the project**

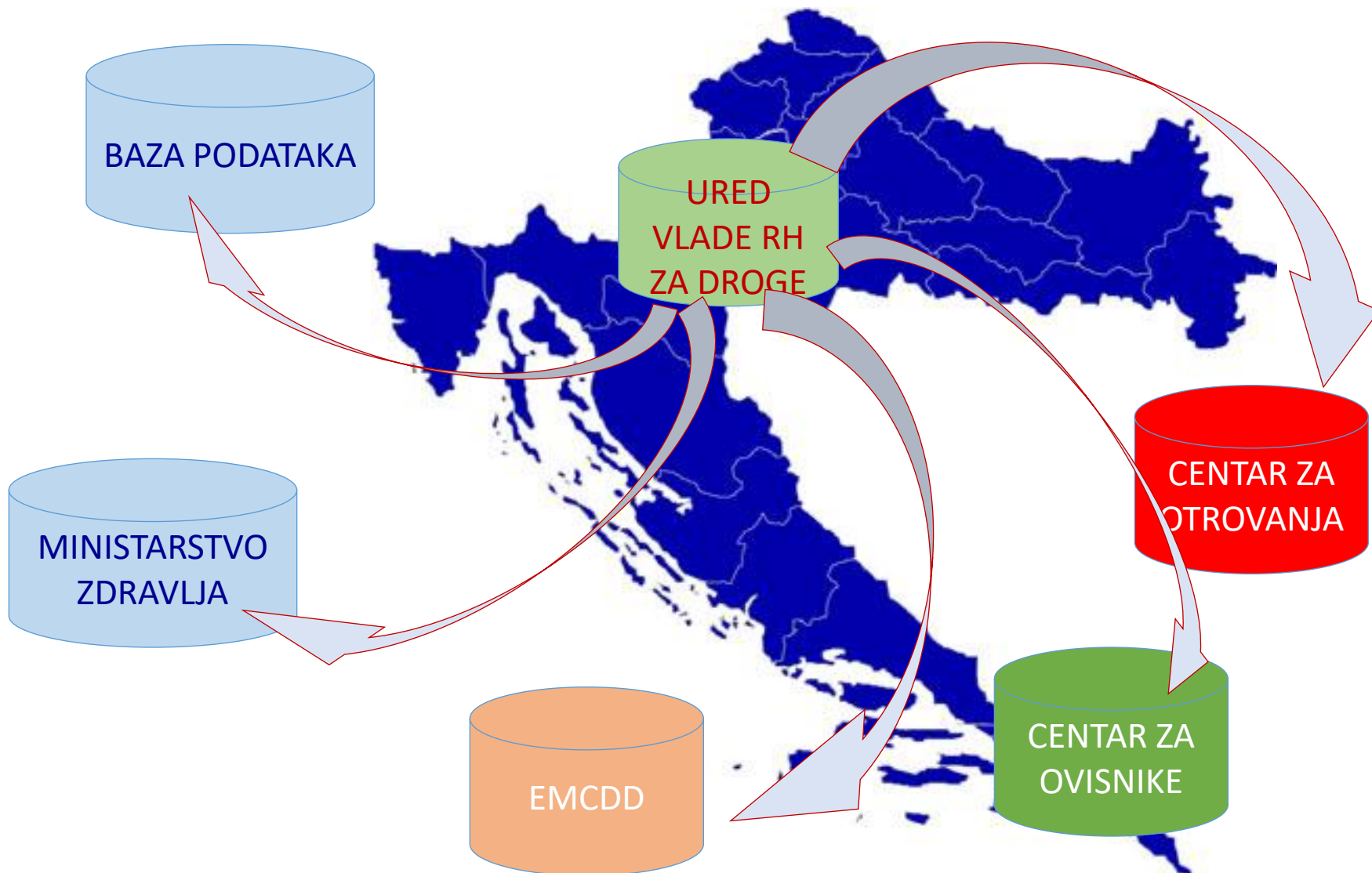
Lecture on NPS for secondary school students

Annual meeting of Working group for EWS

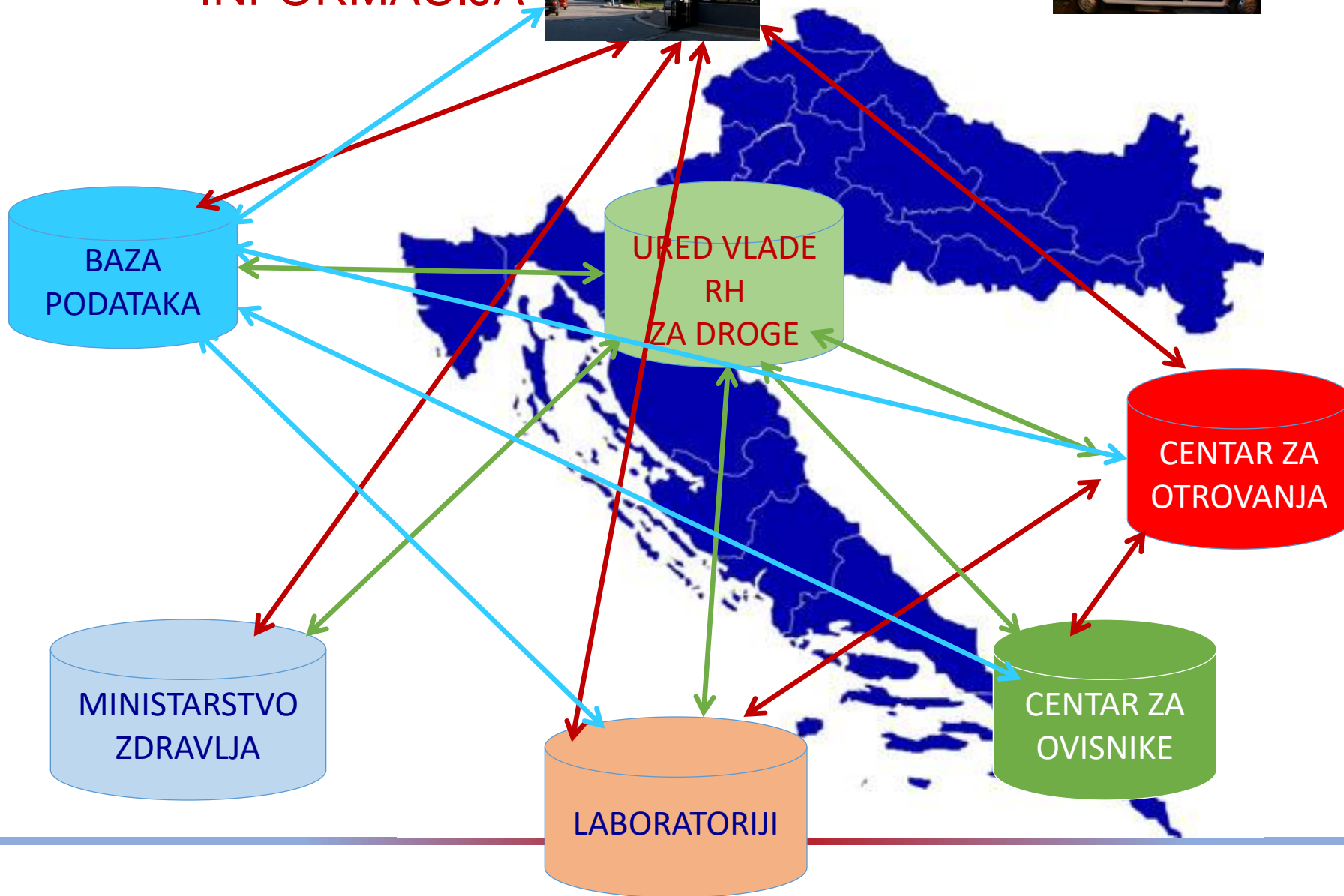
Students' final theses











# I-SEE Project Final Conference

## Developing tools for strengthening NPS information exchange and identification

University of Florence

**Fabio Vaiano, Valeria Catalani, Claudia Rimondo**

Coordinator



Department of Health Science

Beneficiary partners



National Forensic Laboratory and  
Criminal Police Directorate



# Acquisition of reference material

- Forensic Toxicology Unit (Director Prof Elisabetta Bertol) took care about choosing and delivering NPS reference materials
- Acquisition of **51 certified analytical standards** for NPS identification – August/September 2015
- List of RM acquired:
  - 23 synthetic Cannabinoids
  - 13 synthetic Cathinones
  - 4 phenetilamines
  - 3 indanes
  - 2 piperazines
  - 2 phencyclidines
  - 2 tryptamines
  - Ketamine analogues



# Selection criteria for reference material

- The chemical and pharmacological features: all compounds belonging to the most prevalent classes of NPS
- The consumption rank (actual or/and estimated) and the number of seizures in EU, and in the countries of interest
- Legal status: all compounds scheduled as “controlled substances” in at least one of the National Legislations of Italy, Croatia and Slovenia (5F-AKB48, 3-methoxy-PCP and 4-methoxy follow the criterium n°2)
- The availability as reference materials in the catalogues of the main producing Companies (LGC, Cerillant and Sigma-Aldrich)

# Distribution of reference material

In order to provide Slovenian and Croatian colleagues the material, the University of Florence required them the following documents:

- the authorization/permission certificate, provided by national competent authority (usually Ministry of Health)
- a declaration stating that this certificate sent was in compliance with national legislation acquisition
- the license for possession and use of scheduled substances

Reference materials arrived to the partner in December 2015  
(Slovenian National Forensic Laboratory, University of Split-School of Medicine-Croatia)



# Use of reference material

Used to:

- increase the analytical capacity of UNIFI laboratory
- reduce the time to identify NPS in analyzed samples
- provide faster responses to Law Enforcement, regarding the composition of seized material
- provide information to health professionals to facilitate diagnosis for patients intoxicated by NPS

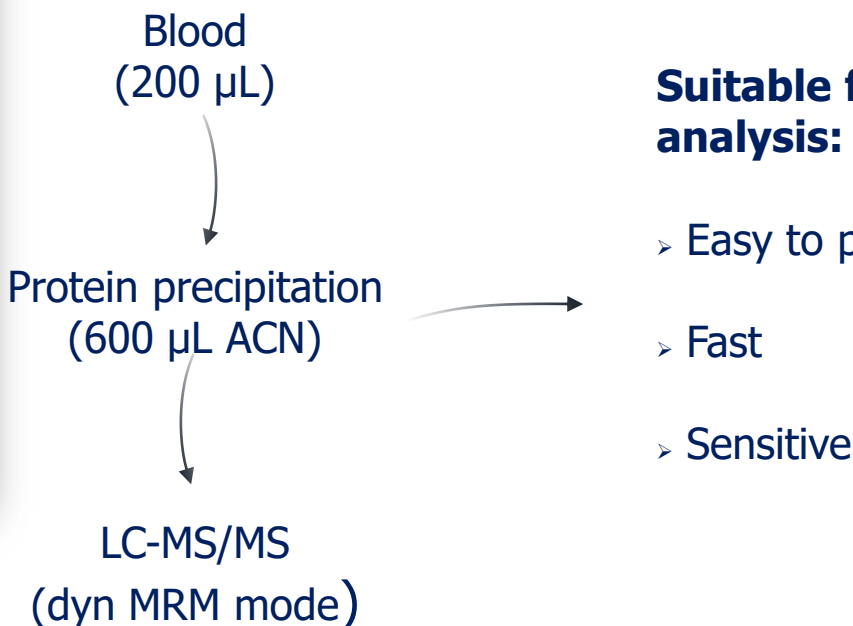


# Analytical Results

New screening methods for the simultaneous detection of 64 NPS and 5 amphetamines in blood by LC-MS/MS



## Procedure





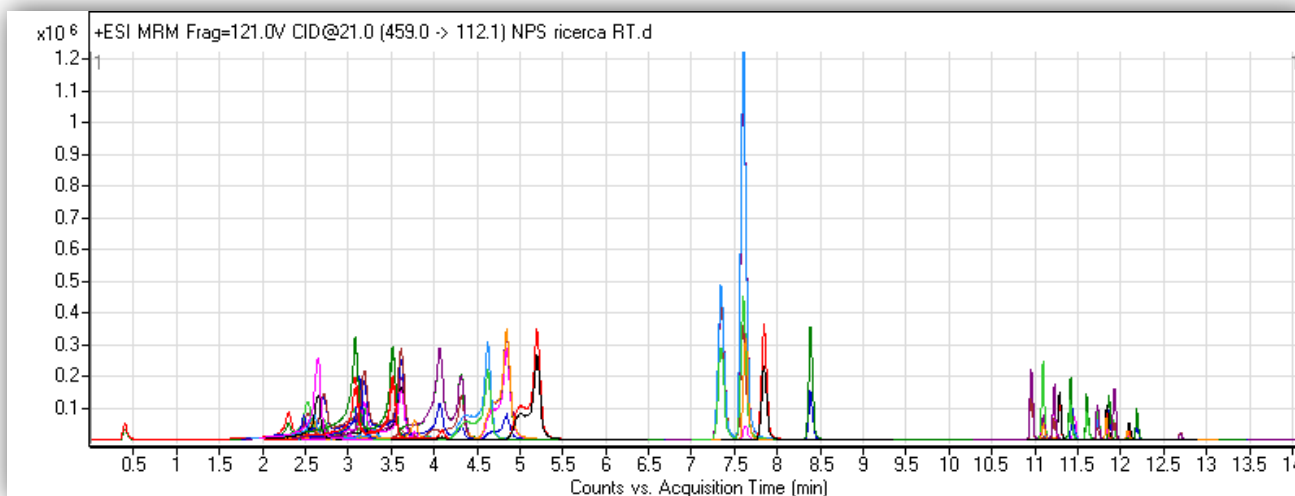
# New screening method: LC-MS/MS conditions

Time <i>min</i>	%B vs %A	Flow <i>mL/min</i>
0	1	0.4
6	30	0.4
8	50	0.4
12	100	0.6
15	100	0.6

A: 5 mM HCOOH in H<sub>2</sub>O      B: ACN  
Column: Zorbax Eclips Plus C18

**Dynamic MRM mode** enables the monitoring of transitions (two for each compound) in a **specific detection window** around the expected retention time of each compound.

Thus, **background noise** and **matrix interferences** are **reduced**, improving the **sensitivity** of the method.



# New screening method: Compounds

**28 Synth. cannabinoids** *AB-FUBINACA, 5F-APINACA, ADB-PINACA, CB-13, WIN 55,212-2, 2 RCS series, 17 JWH series, 3 AM series, Pravadoline.*

**19 Synth. cathinones** *1-naphyrone, 2-FMC, 3,4-DMMC, 3-MMC, 4-FMC, 4-MEC, Buphedrone, Butylone, DMC, Ethcathinone, MDPV, Mephedrone, Methcathinone, Methedrone, Methylone, Naphyrone, Pentedrone, Ethylone, Pentylone.*

**5 phenetilamines** *25D-NBOMe, 25H-NBOMe, 2C-E, 2C-N, 4-FA.*

**5 amphetamines** *Amphetamine, MDA, MDEA, MDMA, Methamphetamine*

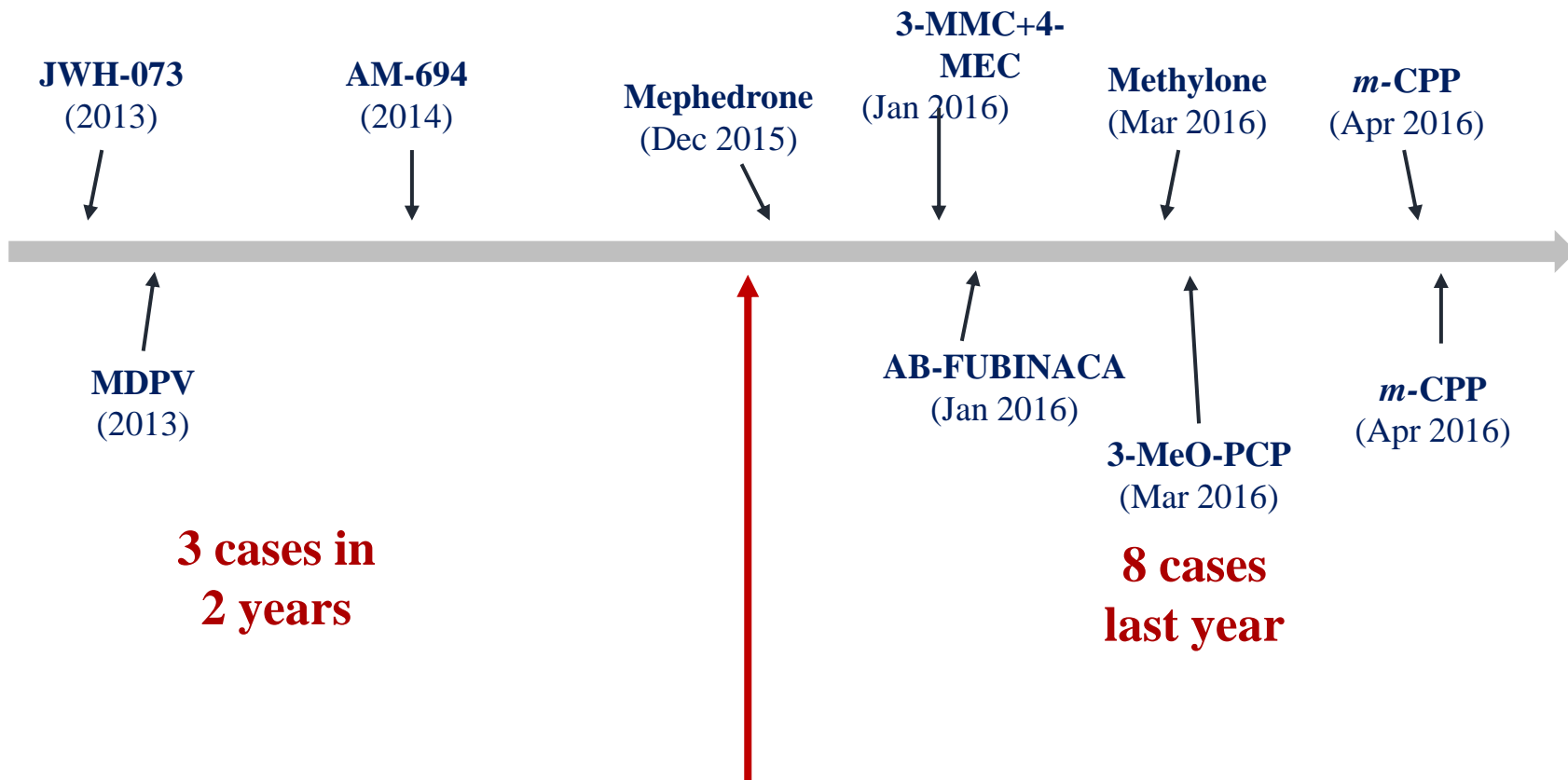
**3 indanes** *2-AI, 5-IAI, MDAI*      **ketamines** *Ketamine, Nor-ketamine, Methoxethamine*

**2 piperazines** *BZP, m-CPP*

**2 phencyclidines** *3-MeO-PCP, 4-MeO-PCP*

**2 tryptamines** *4-OH-DiPT, 5-MeO-DiPT*

# Detection in Biological Samples



**3 cases in  
2 years**

**8 cases  
last year**

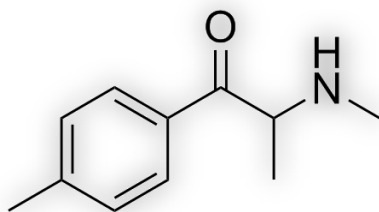
**Fully validation and  
application of  
the new analytical method**

(Sep 2015)

# In VIVO: Analytical Results

## Case 1 (Dec 2015)

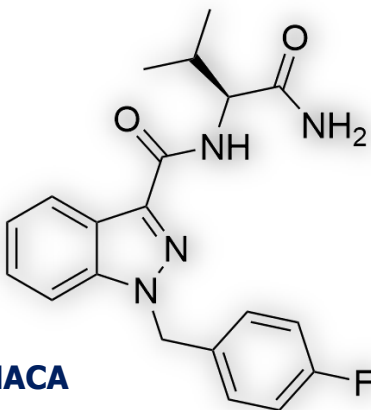
Female 23 years old



**Mephedrone**

## Case 2 (Jan 2016)

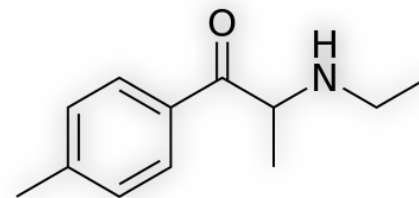
Female 16 years old



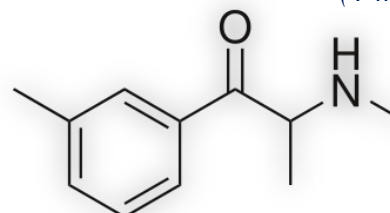
**AB-FUBINACA**

## Case 3 (Jan 2016)

Male 43 years old



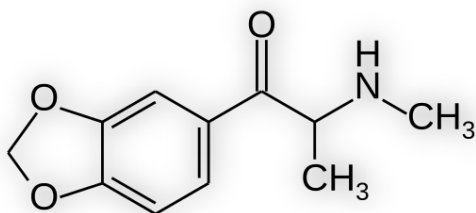
**4-MEC**  
(4-methylethcathinone)



**3-MMC**  
(3-methylmethcathinone)

## Case 4 (March 2016)

Male 32 years old



**Methytlone**

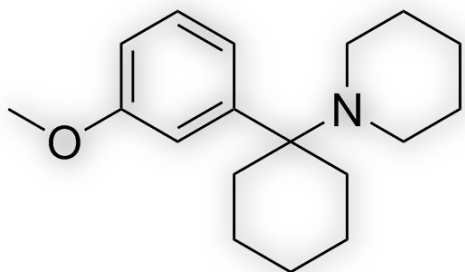


**First case of *in vivo* detection in Italy**

# In VIVO: Analytical Results

## Case 5-6( Mar 2016)

Male 19-21 years old



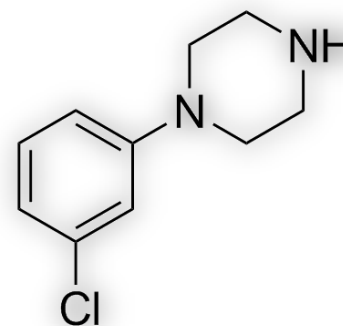
**3-MeO-PCP**  
(3-methoxyphencyclidine)



First case of *in vivo* detection in Italy

## Case 7-8(Jan 2016)

Female 19 years old, male 38 years old

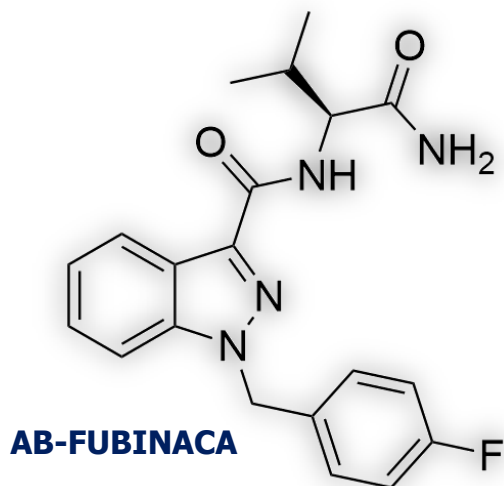


**m-CPP**  
(meta-chlorophenylpiperazine)

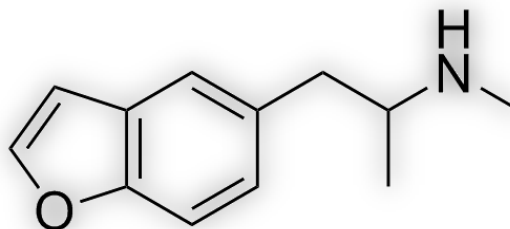
First case of *in vivo* detection in Italy →

# In seized material: Analytical Results

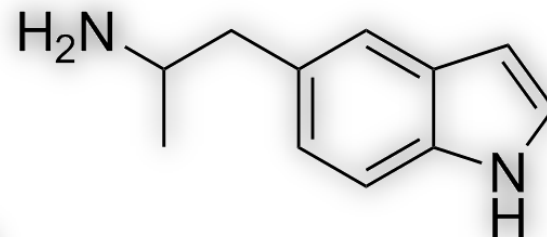
## SEIZURE 1



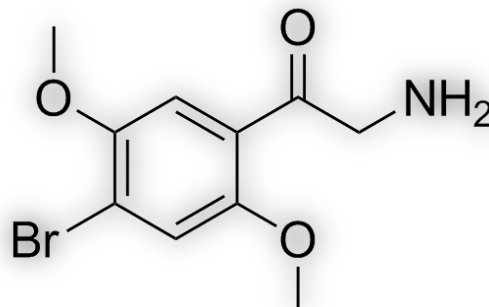
## SEIZURE 2



**5-MAPB**  
*5-(2-aminopropyl)benzofuran*



**bk-2C-B**



**5-IT**  
*5-(2-aminopropyl)indole*

**The detention and identification of the previously described substances , both in seized materials and in biological samples, has been possible thanks to the activities promoted by the I-SEE Project**

but

the number of documented NPS cases in biological fluids is still low.  
This could be **due to**:

- **lack of routine analytical protocols** to search these substances
- **difficulties encountered by laws enforcement in identifying and seizing them**

**and not** because their use is not common among the population



# COMUNICATION AND DISSEMINATION

All the analytical results achieved have been presented and disseminated in scientific venues:

**22nd ENFSI Drugs Working Group Meeting** Bled, Slovenia  
May 10<sup>th</sup> - 11<sup>th</sup> 2016 Organized by Ministry of Interior Police – Slovenia

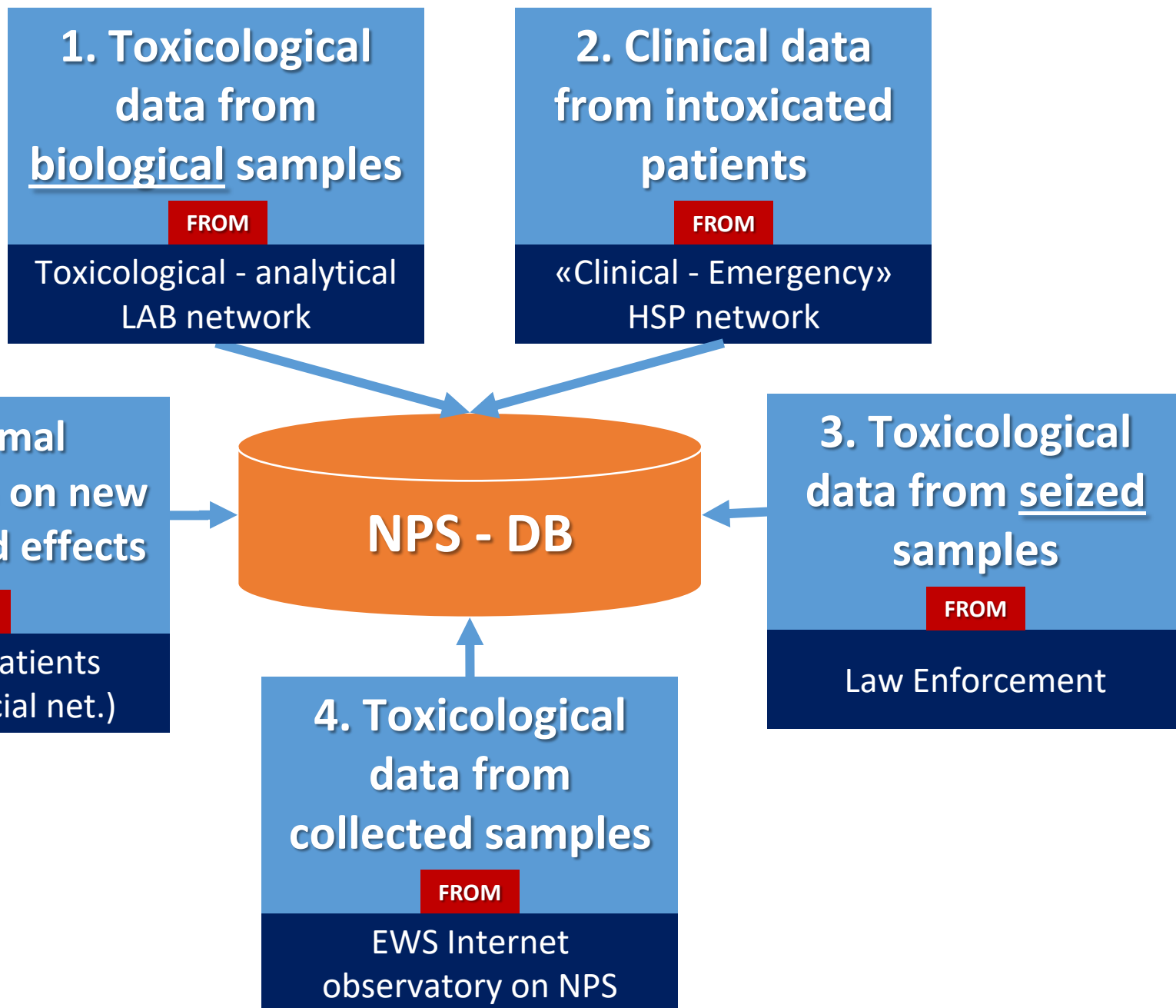
**CROTOX 2016 meeting** Porec, Croatia October 9<sup>th</sup>-12<sup>th</sup>  
Organized by the Croatian Society of Toxicology



**54<sup>th</sup> TIAFT Meeting** Brisbane, Australia  
28<sup>th</sup> August – 1<sup>st</sup> September 2016



The **final results** will be disseminate to **Ministries of Interior and Ministries of Health of Member States, EMCDDA, United Nations Office on Drugs and Crime, World Health Organization**





**ADVANCED**  
Early Warning System  
**RESEARCH**

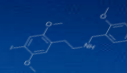
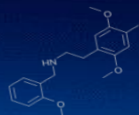
# DATA ENTRY, CONSULTATION AND REPORTING

## Home Page





# ADVANCED Early Warning System RESEARCH

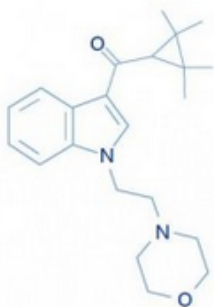


In collaborazione con  
  
UNIVERSITÀ  
DEGLI STUDI  
FIRENZE  
URiToN – TF – DSS

## NPS DATA BASE

### Gestione Molecole - Modifica

« **Dati generali** Proprietà chimico/fisiche Sicurezza Farmacocinetica/metabolismo Informazioni laboratoristiche dalla letteratura Farmacologia Informazioni tossicologiche



Data inserimento \*:

06 gg 02 mm 2014 aaaa

Nome comune/sigla molecola:

A-796,260/1-(2-Morfolin-4-iletil)-1H-indol-3-il]-(2,2,3,3-

Nome sistematico/IUPAC:

1-(2-morpholin-4-ylethyl)-1H-indol-3-yl]-(2,2,3,3-tetram

Stereochimica:

Sinonimi:

A-796,260

Brand:

Gergali:

#### CAS

Forma libera 895155 - 26 - 7

Sale  
Cloridrato:  -  -   
Solfato:  -  -   
Altro:   -  -

#### Natura della sostanza

☒ Sintetica    Sintesi nota:    ☐ Si    ☐ No

Descrizione:

# Functional information since 2015

N. Substances registered 168

N. Clinical cases registered 41

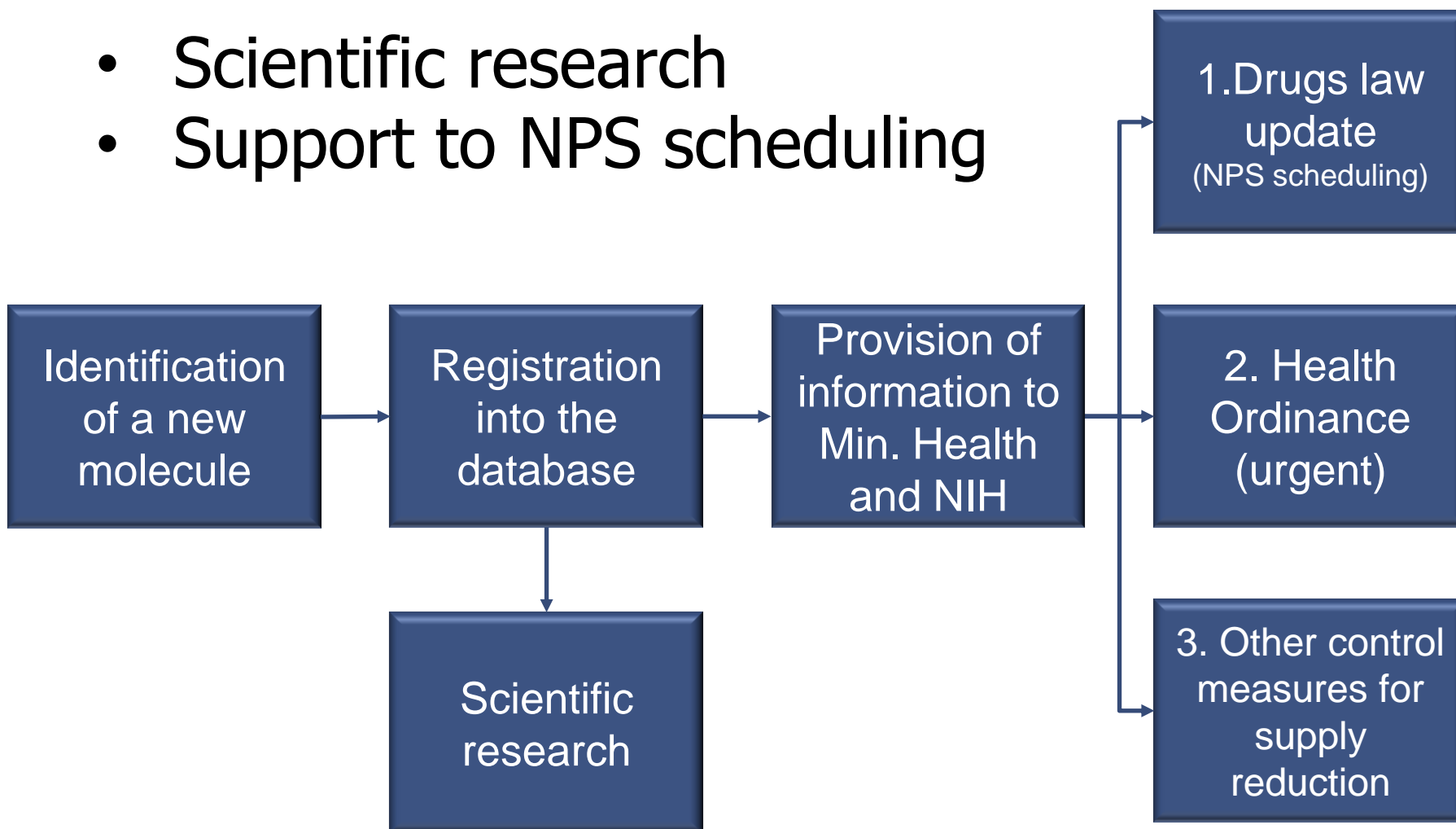
N. Seizures registered 71

N. Collected samples registered (ie. Internet) 25



# FUNCTIONAL INFORMATION

- Scientific research
- Support to NPS scheduling



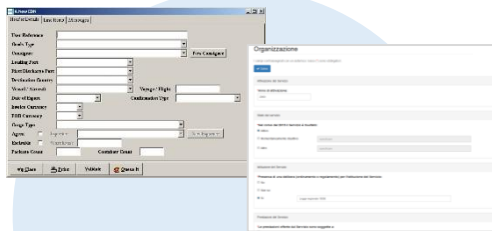




# EWS.DATA MANAGEMENT PLATFORM (DMP)



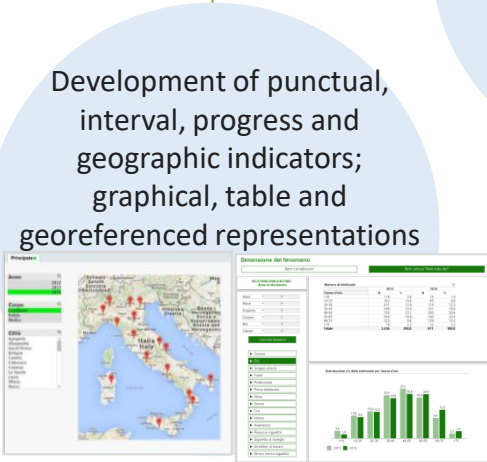
Different formats  
accepted for data  
input



Acquiring  
information/data  
through online  
platforms or data entry  
application



Data QUALITY control  
(coverage, completeness,  
consistency) and  
representation with  
indicators and graphs



Development of punctual,  
interval, progress and  
geographic indicators;  
graphical, table and  
georeferenced representations



PDF reporting production,  
export of charts and  
graphs, reports and  
notification sent according  
to recipient

# NPS REPORTING

## Standard reporting



European Monitoring Centre  
for Drugs and Drug Addiction




National report

## Customized reporting


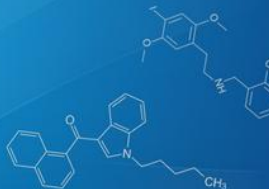
- Researchers
- Lab personnel
- Health professionals
- LEA
- Regional and National institutions

## The I-SEE project



**I-SEE**  
European Project  
on New Psychoactive Substances

Project for strengthening information exchange between Italy and South East Europe neighbouring countries on New Psychoactive Substances



Co-funded by the Prevention and Fight against Crime Programme of the European Union  
JUST/2015/THED/CRIMES/456428

## Presentation

The main objective of the I-SEE project, which involves the National Early Warning Systems (EWS) on drugs of Italy, Republic of Slovenia and Republic of Croatia, is to strengthen information exchange on New Psychoactive Substances (NPS) between Italy and South East Europe neighbouring countries, where drug smuggling is easy due to the right of free movement of persons and goods into EU territory. The project intends to ease Law Enforcement activities and cooperation both within countries and among participating countries by means of the valorization of national EWS experiences and good practice exchange.

Target groups of project activities are Law Enforcement, professionals working in analytical laboratories, clinical centres and NGOs involved in prevention, treatment and rehabilitation of drug addicts.

The work is organized in 3 steps:

1. Building up network with Law Enforcement, NGOs and health sector (Republic of Slovenia). A number of NGOs will be selected to collect NPS samples from drug users and transmit them anonymously to Law Enforcement to be analyzed. Analytical results will be provided, for control purposes, and to inform drug users about what they are consuming. In parallel, health professionals will be involved to share clinical information on NPS with Law Enforcement and NGOs.
2. Building up clinical network (Republic of Croatia), to develop an effective network in clinical settings, including clinical toxicology laboratories, emergency wards, departments of forensic medicine and other relevant subjects in the health sector, so as to increase scientific and professional capacities related to the identification of NPS in biological samples and effective treatment of intoxicated patients.
3. Developing tools for strengthening NPS information exchange and identification (Italy), by arranging a model

# DISSEMINATION AFTER THE FINAL CONFERENCE

Dissemination of final results to:

- EMCDDA
- United Nations Office on Drugs and Crime
- World Health Organization
- Ministries of Interior and Ministries of Health of Member States



# MONITORING AND EVALUATION PROCESS: MAIN TASKS PERFORMED

- Ensuring the correspondence between internal program and actual activities
- Analysing the achievement of project objectives, deliverables and outputs with respect to what declared in the project form
- Working with partners to highlight problems to be solved
- Providing support to problem solving

EVALUATION  
QUESTIONNAIRE  
Activities



# SATISFACTION QUESTIONNAIRE

## Method

- One questionnaire per year of activity
- 2<sup>nd</sup> SQ sent to each WP leader on 26<sup>th</sup> November 2016 and returned by 13<sup>th</sup> December 2016.
- The measurement scale adopted for answers moves from 1 (strongly disagree) to 5 (strongly agree).



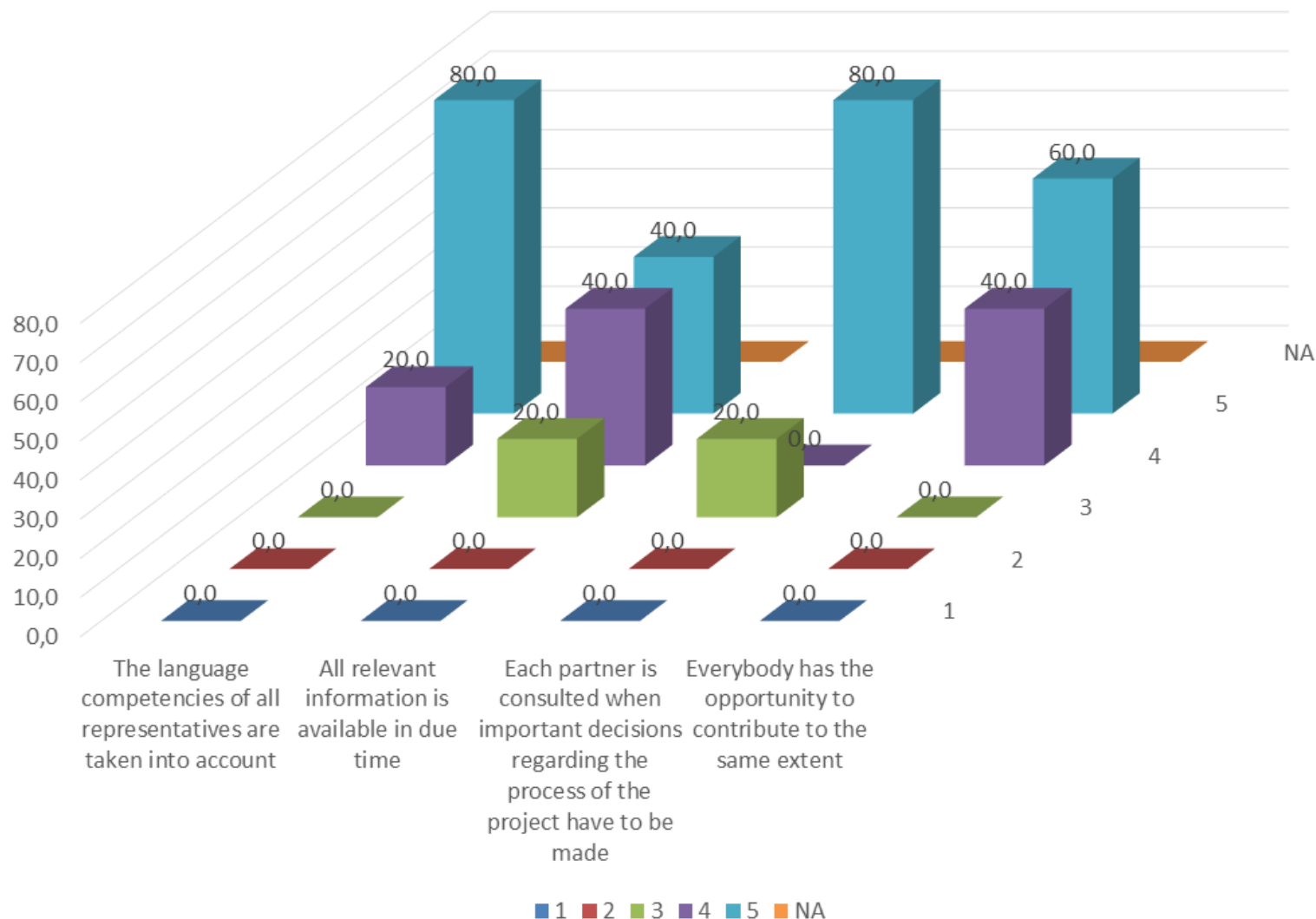
The image shows the front cover of a 'Satisfaction Questionnaire Report'. At the top left is the I-SEE logo and text. At the top right is the European Union flag and text indicating co-funding by the European Union. Below this is a descriptive line for the I-SEE project. The title 'SATISFACTION QUESTIONNAIRE REPORT' is centered. At the bottom, there is a table with project details.

Project title	I-SEE - Project for strengthening information exchange between Italy and South East Europe neighbouring countries on New Psychoactive Substances
Grant Agreement No.	JUST/2013/ISEC/CRUGS/AG8428
Workstream	WSE4
Date	February 2016
Dissemination level	Open to all

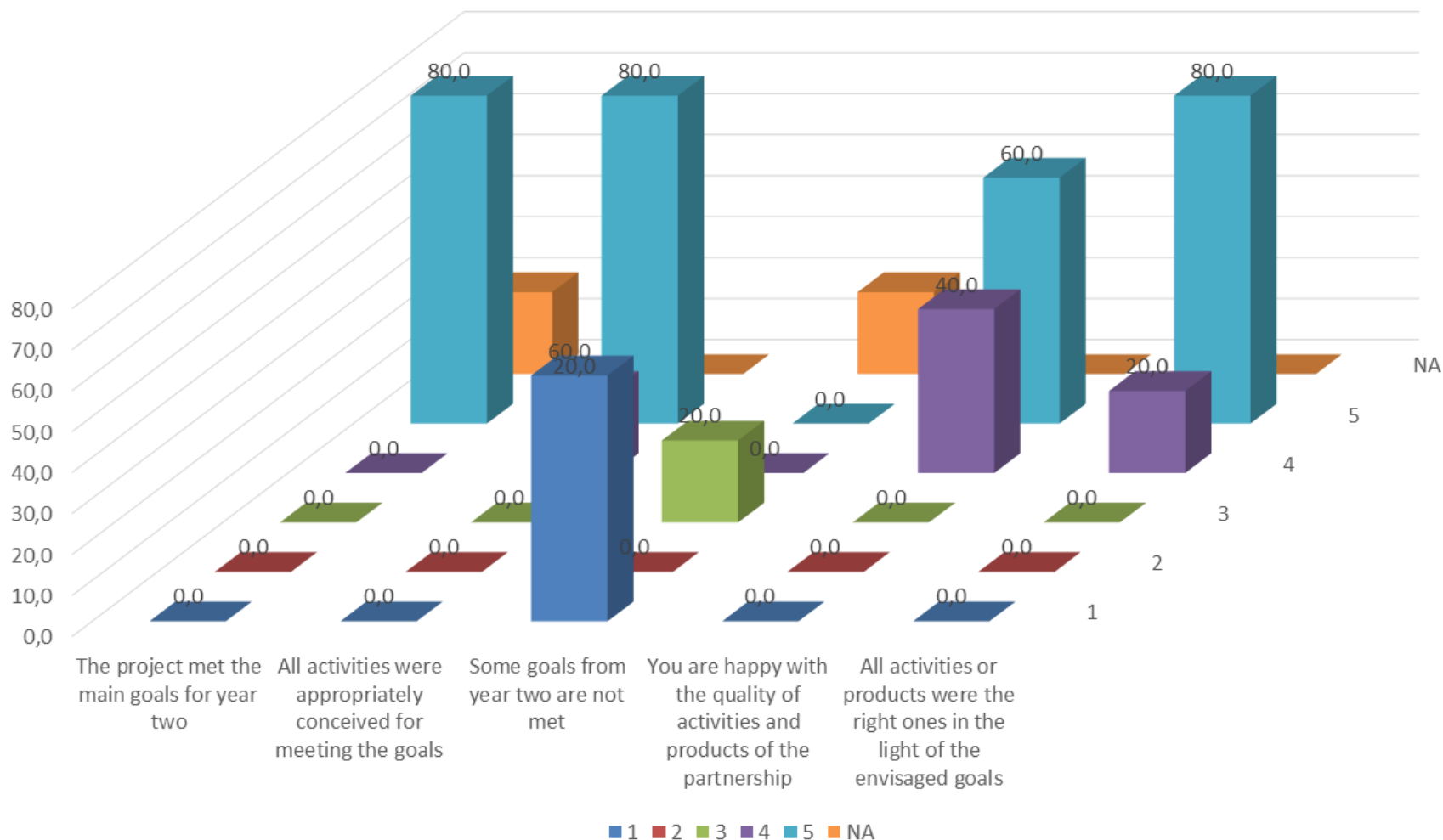
1



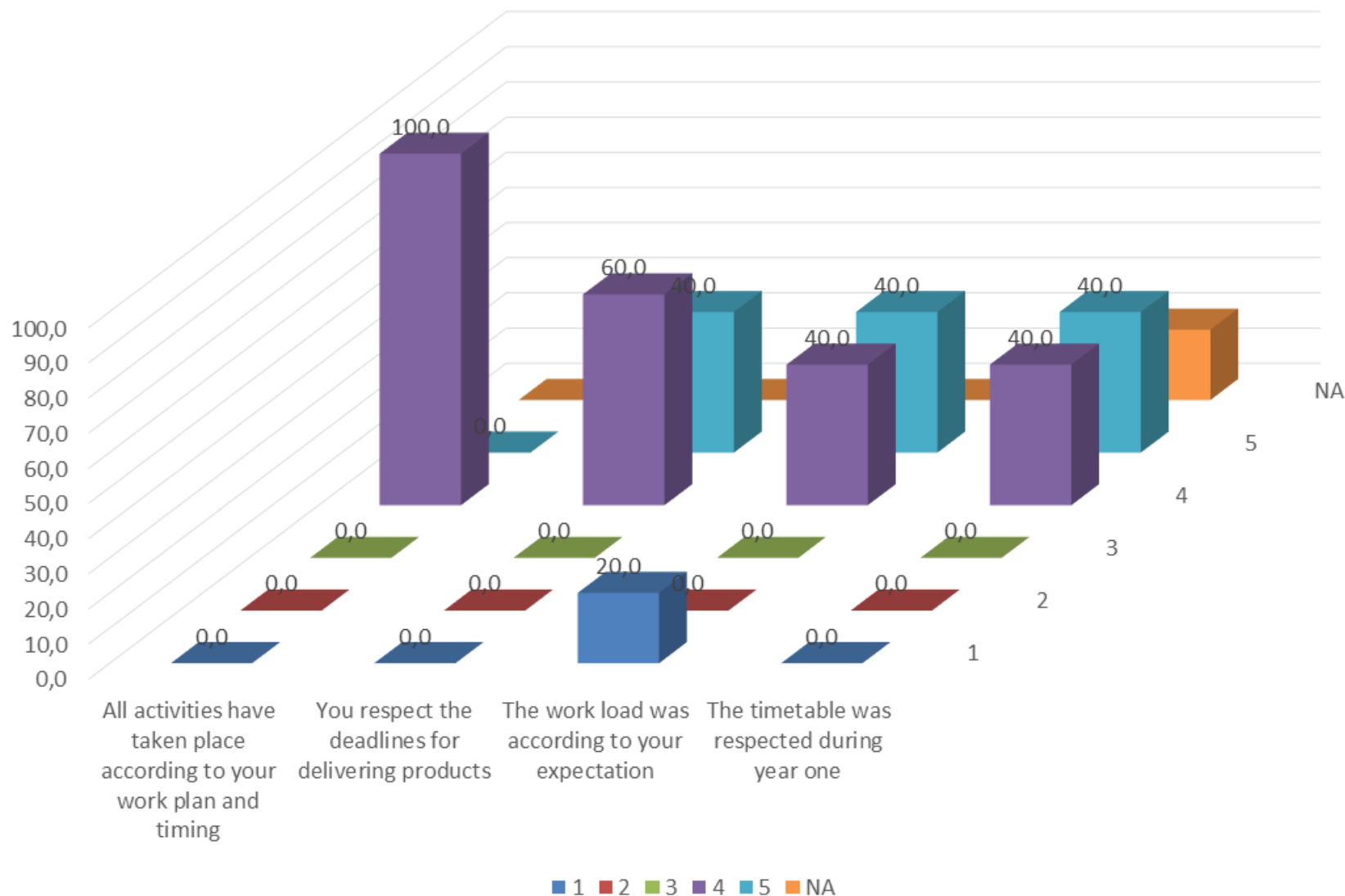
# DECISION MAKING PROCEDURE



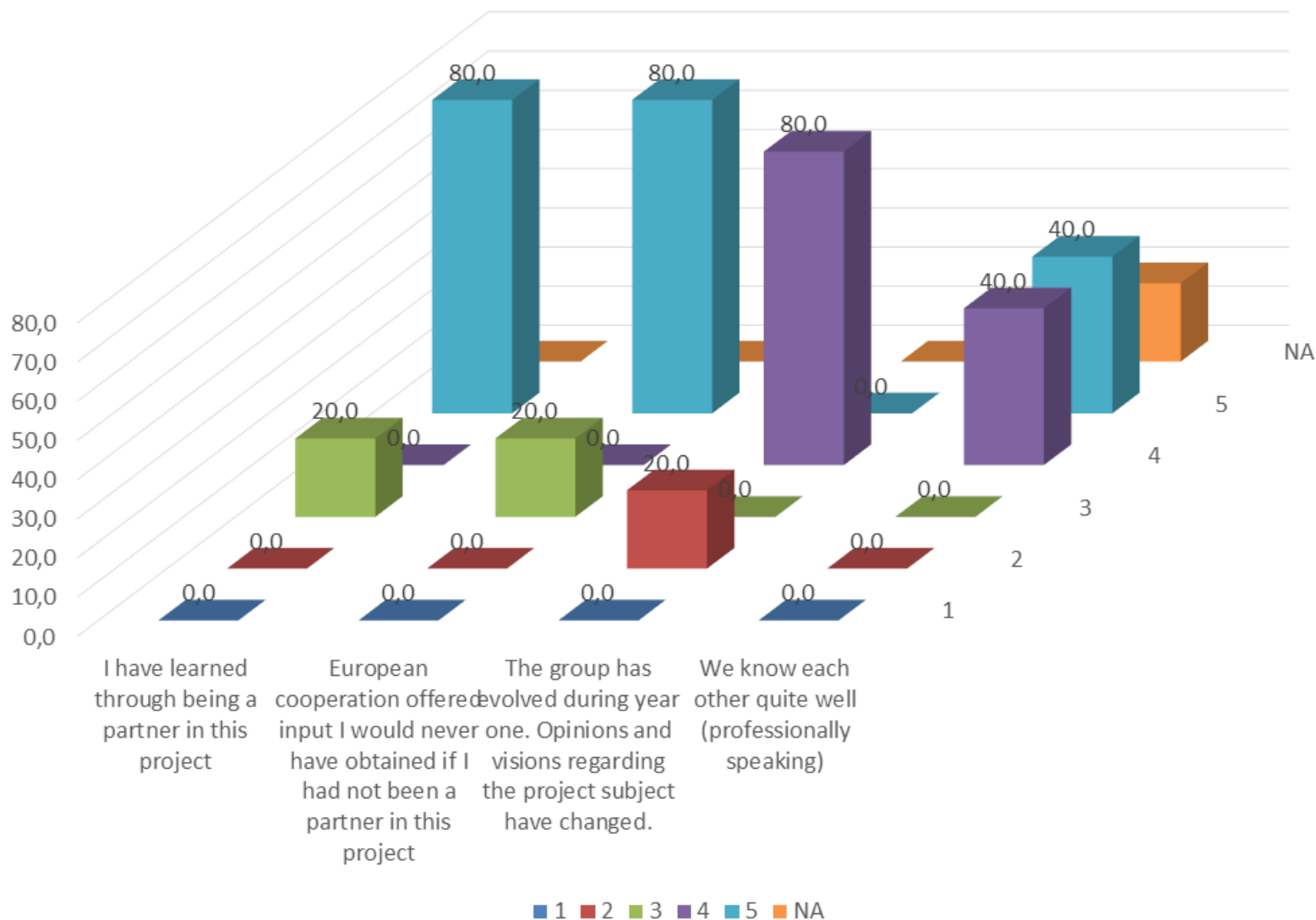
# GOALS



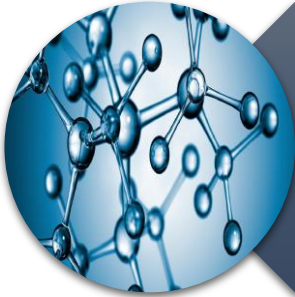
# TIMETABLE



# LEARNING



# LESSON LEARNED FROM WS3 AND WS4



Importance of information sharing on NPS in Italy and with project partners (cases, database, knowledge, experience, tools, etc.)



Importance of looking at the NPS phenomenon from several points of view (clinical, analytical, LEA, users, etc.)



Importance of involving several stakeholders to tackle the NPS issue (health professionals, researchers, LEA, public officials, journalists, etc.)

# LESSON LEARNED FROM WS3 AND WS4



Strengthened experience in EU project  
management  
(activity and administration)



Strengthened collaboration between  
Italy, Slovenia and Croatia



Gratitude for partners so committed,  
collaborative, creative, generous and  
ready to live mutually enriching  
experiences