EPS NPS PROJECT

CRIMINOLOGICAL ANALYSIS OF THE NPS MARKET

THE DEMAND FOR NPS
AN EXPLORATORY STUDY

SHORT RESEARCH REPORT ON PRELIMINARY FINDINGS BY RISSC - RESEARCH CENTRE ON SECURITY AND CRIME

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The Project **EPS/NPS - Enhancing Police Skills on Novel Psychoactive Substances** is coordinated by RiSSC and developed in cooperation with University of Hertfordshire Higher Education Institution (UH) (UK), University of Szczecin (US) (PL), Eotvos University (ELTE) (HU) and INTERPOL (associate partner), with the financial support of the EU Commission - Targeted call on cross border law enforcement cooperation in the field of drug trafficking - DG Justice/DG Migrations and Home Affairs (JUST/2013/ISEC/DRUGS/AG/6429). The Advisory Board is composed by experts from Arma dei Carabinieri, EUROPOL, INTERPOL, Swiss Federal Police, UNODC and US Drug Enforcement Administration. The overall objective of the Project is to contribute at enhancing a knowledge-based joint EU approach to effectively addressing the rapid spread of NPS, by promoting in particular the generation of data/knowledge, information-sharing, and cooperation.

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RiSSC is an independent no-profit Italian research centre dealing with security and crime. The Centre promotes social and cultural development on crime prevention by means of research activities, education/training initiatives and technical assistance projects on the most relevant criminal phenomena and their trends, on the causes/factors that facilitate crime and anti-social behaviour, and on the countermeasures to prevent/reduce both crimes and their impact. RiSSC implements projects for prevention and risk reduction in favour of public and private bodies, involving a network of experts and researchers who contribute to a multi-disciplinary approach.

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EXECUTIVE SUMMARY

This working paper presents the preliminary outcomes of the research activity carried out within the Project EPS/NPS - Enhancing Police Skills concerning Novel Psychoactive Substances (NPS), co-financed by the European Commission and coordinated by RiSSC – Research Centre on Security and Crime (IT), developed in cooperation with the University of Hertfordshire (UH) (UK), the University of Szczecin (US) (PL), the Eotvos University (ELTE) (HU) and INTERPOL.
In detail, it illustrates the introductory results of a pilot study on the demand of NPS carried out under the Workstream 1 – Generation of data and knowledge.

Preliminary findings provided by this study concern in particular the demand of NPS among the participating countries involved in the Project (Hungary, Italy, Poland and United Kingdom), with a specific focus on the Italian context. The aim is to contribute at understanding how the demand is likely to influence and impact on the supply chain of the psychoactive substances.

Key findings:

- **Prevalence use of NPS**. It seems to be still limited compared with other illicit drugs. According to Flash Eurobarometer,[1] NPS use seems to have increased in the last years while, according to the Global Drug Survey, [2] in 2015 it has been apparently decreasing. 2010 seems to have been the year of the greatest spread of NPS use;

- In the Global Drug Survey, according to authors' opinion, the decrease of NPS use is due to the fact that *"beyond being cheap, most of these new drugs offer less desirable and a riskier experience than the traditional drugs used across the world"*. [3]

- **NPS user profiling**. The most common characteristics of NPS users result to be as follows:
  - NPS users are mainly young people aged 15 – 30;
  - As for the users of other illicit drug, NPS users are mainly male;
  - People use NPS especially in recreational nightlife scenes, in particular in Italy and in UK, while in Hungary and Poland NPS are sought also by marginalized groups of drug addicted people;
  - Most NPS users are users of other illicit drugs and the poly-drug use is the main pattern regarding the use of NPS, which are often taken in combination with other illegal and/or legal drugs (e.g. alcohol);
  - NPS users often look for substances that facilitate socialization and help keeping awake during the night;
  - It results that there is an increasing seeking of recreational and entactogen drugs.

1 TNS Political & Social (2014), Flash Eurobarometer 401. Young people and drugs. Available at: http://ec.europa.eu/public_opinion/archives/flash_arch_404_391_en.htm.
2 The Global Drug Survey is an online survey carried out by an English Independent Research Organisation. Initially, it was aimed at readers of the dance music/clubbing magazine "Mixmag". Nowadays, it is also related to other media partners, such as the Guardian and Gay Times (www.globaldrugsurvey.com).
3 For more information: www.globaldrugsurvey.com/the-global-drug-survey-2015-findings.

Specific factors driving the rise of NPS on the market. The most relevant are hereby schematised:

- **Peculiar characteristics sought and expected by NPS users**, such as:
  - Stimulant-like properties (increased energy – talkativeness – insomnia);
  - Effects of empathy and euphoria;
  - Good quality of the substances in terms of reliability, chemical purity, effective potency, absence of side effects.
- **Legal status**. It can influence the choice mostly in naive users, specifically for the (dangerous) association of "legal" as "safe". This is peculiar of NPS users; in fact, people using other illicit drugs do not associate "legality of the substances" with "safety", and in general they don't give importance to the legal status of the substances. However, from the users' standpoint, the shifting of the substance from legal to illegal status generally means the availability of lower quantity/quality of the substance itself and higher prices.
- **Harshness of drug policies vs. availability of the psychoactive substances.** Users tend to look for NPS when a lack of traditional drugs in retail distribution occurs, also determined by (new) drug policies or enforcement activities.

Health implications. They are yet largely unknown, mostly because of the lack of rigorous testing and the fast-changing nature of the substances themeselves. In particular, verifying the potential dependence property of these substances can be useful not only in terms of public health, but also in order to hypothesize the success of a specific/new psychoactive substance on the market.

Awareness/knowledge. People seem to be always more informed on drugs thanks to the increasing use of Internet, of social media and specific apps of information on drugs; but, even if well informed, there is a strong lack of awareness and knowledge about the risks and harms related to dosages and to the combined use of NPS with other psychoactive substances and other drugs. Younger and naive users seem to be less aware and informed about the drugs they take, while experienced drug users appear to be more aware and careful about the composition, effects and dosages of drugs they take.

Supply chain. NPS supply does not seem far different from the supply of illicit drugs, because according to available information users take drugs mainly from friends and dealers.

Role of the Internet. According to several studies, the online market is expanding also because of the numerous benefits that drug users declare to have by shopping online, such as reduced risks of exposure to violence, less adulterated drugs, much security about products' quality and desertion compared to a street dealing. Moreover, buying online also means to have access to a lot of new drugs.

According to the preliminary findings of the study, it may be assumed that the demand of NPS is likely to change in a more rapid and unpredictable way with respect to traditional illegal drugs, and to involve a wide range of potential categories of users. In particular, a progressive overlapping between users and dealers is emerging; from the criminological standpoint, this aspect is of particular relevance because it could impact significantly also on the supply chain and on the NPS market structure.

INTRODUCTION

The last decade has seen the introduction of a wide variety of New Psychoactive Substances on the market as a legal alternative to illicit drugs; they are sold through various ways of distribution, such as Internet, smart shops, head shops, or a street-level drug dealing. Also known as 'legal highs', "designer drugs", "research chemicals" and "bath salts", NPS chemical composition is often unknown, and represents a great matter of concern in terms of public health and safety.

This study represents a part of the activities expected by the Project EPS/NPS - Enhancing Police Skills concerning Novel Psychoactive Substances (NPS), under the Workstream 1 – Generation of data and knowledge, aimed to:

- Describe NPS supply chain in terms of production, distribution and sale;
- Understand the role of Internet and the involvement of organised crime;
- Assess the related risks.

Specifically, this report is focused on the analysis of the demand for NPS as a relevant part concerning the definition of the supply chain and of the market structure. In fact, given that the market has always a key role in orienting choices and strategies, it's important to take into account that also drug experiences, perceptions and information sharing among drug users, can influence the way of purchasing and using drugs. Furthermore, the overlapping of roles between users and dealers is a peculiarity of the NPS market that need to be explored.

In order to understand the dimension and characteristics of the demand related to these drugs, the study has tried to focus on the analysis of the "set" – here intended as motivations, expectations and risk perceptions about the drug use – and of the "setting", that is the social and cultural context of drug users.

Furthermore, it's important to examine the way NPS users approach to the NPS market, in a context in which the globalization is more and more leading to the introduction of a great variety of new substances (different by legal status and nature), thanks to the developing of the Internet market.

Starting from a brief description of the main groups of NPS and the related risks, the report then illustrates the preliminary findings of the study focused on the following elements:

PREVALENCE OF NPS USE;
SET AND SETTING OF NPS USE;
MAIN NPS CHARACTERISTICS DRIVING THE USE;
THE INFLUENCE OF THE LEGAL STATUS OF NPS ON THE USE;
KNOWLEDGE AND INFORMATION ABOUT DRUGS;
MAIN WAYS OF PROCURING DRUGS.

1. METHODS AND DATA COLLECTION

In order to examine the demand for NPS, this stage of the Project has been oriented to answer to some important questions:

- What do the data tell about the prevalence use of NPS, in particular at the European level?
- Which are the main patterns of NPS use?
- Which are the main reasons of NPS use from the point of view of users in terms of sought effects and availability of drugs?
- How can NPS use-related risks and harms affect the demand for NPS?
- Which are the main sources of information for users and the main ways of procuring drugs?

In order to analyse these aspects, the research plan has moved to gather information from different sources:

- Literature analysis;
- Institutional National and International Agencies for Drugs;
- National and International Early Warning Systems;
- National and International Research Centres on Drugs;
- National and International Health Agencies;
- Harm Reduction Services;
- Italian Drug Addiction Centres;
- Users Drugs Forum.

The research activity was related to:

1. Analysis and collection of data and reports on NPS from national and international Authorities, Institutes and research centres in order to provide information on the dimension and characteristics of NPS use at the international level;

2. Consultation of online forums in order to analyse self-reported drug experiences, description of sought NPS effects and types of information asked by users;

3. Collection of interviews to the key informants at the national level. The selection of interviewed people has been based on the recognition of the main services that, from different points of view, observe drugs and NPS users:

a. Operators of harm reductions services, in order to collect information of emerging patterns of use;
b. Operators from Health Services to provide information of main health emergences related to NPS use;
c. Operators of Drug Addiction Centres in order to understand the emerging demand for treatment related to NPS use.

Information provided by key informants have been integrated whit evidences from national and international studies and grey literature.

1. Media analysis of the articles of the most popular Italian (online) newspapers at the national level in order to:

a. Improve information on NPS phenomenon;
b. Describe how media representation of NPS has changed over the last five years;
c. Investigate the media representation of the phenomenon and its potential influence on the NPS supply chain.

At this stage of the project, media analysis has specifically contributed to collect additional information on NPS phenomenon, focusing the attention on articles describing risks and harms related to substances.

Interviews with key informants

As regards the interviews with key informants, 12 interviews has been conducted. For the sake of privacy, the names of the interviewees are not quoted in the Report, however a code has been attributed to each interview. As schematised in the table hereby enclosed, the code is composed by the category to which the interviewees belong, and the progressive numbers of the name of interviewee (listed in alphabetic order). This method allows to keep the anonymity of interviewees and, at the same time, to make the research activity traceable.

Some methodological difficulties have been encountered mostly during the data collection

Table 1

CATEGORY	CODE	QUANTITY
Harm Reduction Services	HRS	6
Health and Social Services	HSS	3
Drug Addiction Centres	DAC	3

process. In particular, the lack of common definitions of reference and available data about NPS use at the international level resulted to be of particular relevance. As confirmed by UNOCD, "Use data for NPS at the substance level are still limited. One of the reasons is the fact that there is a large number of different NPS available on the market, and some of them are sold under street names that could imply a variety of different substances. For instance, the term "spice", often used with reference to the use of synthetic cannabinoids, does not relate to a specific substance and, could instead, refer to a large variety of substances"[1]. So, although a lot of surveys and studies are available in many countries, it is difficult to clearly understand the prevalence of NPS use mostly because of the lack of standardised methodology of data collection at national and international level.

In addition, in Italy it's difficult to collect data from Drug Addiction Centres, because NPS use is not yet associated to specific treatment services.

The Italian context differs from other European countries in terms of treatment and services supply: in Hungary, the spread of Synthetic Cathinones injected in association with heroin and amphetamine by people who use drugs habitually or heavily, led to the implementation of treatment services and harm reduction programmes; in UK, because of the increasing number of people addicted to mephedrone, new specific services have been implemented.[5]

To work among young people attending raves, techno parties, free parties, is an important methodological approach that allows health services to get in contact with young people who use drugs and are not known by the Drug Addiction Services. Social operators working in these contexts report the use of NPS among young people, but their suggestions are not verifiable, since in Italy these services can't do drug-checking on site, so they don't have the possibility to collect data about the used substances.

[4] UNODC (2015), World Drug Report 2015, p.73. Available at: www.unodc.org.

[5] EMCCDA (2015), European Drug Report 2015: Trends and Developments. Available at: www.emcdda.europa.eu.

2. DEFINITION OF "NEW PSYCHOACTIVE SUBSTANCES"

2.1 DEFINING NPS: THE LACK OF COMMON WORKING-DEFINITION

The definition of NPS at the international level includes "substances of abuse, either in a pure form or a preparation, that are not controlled by the 1961 Single Convention on Narcotic Drugs or the 1971 Convention on Psychotropic Substances, but which may pose a public health threat" (Council of the European Union decision 2005/387/JHA).

As UNODC points out in the explanatory note to the 2014 Global Synthetic Drugs Assessment[6], the term "new" does not necessarily refer to new molecules or chemical structures, as NPS usually use molecules analysed in the past by pharmacology, but for compounds that have recently emerged on the market and are sold as "bath salts", incenses, natural products, which imitate effects of illicit drugs and are difficult to be controlled.

Some experts[7] consider that this broad definition of NPS is inappropriate in order to allow a clear and detailed knowledge of key factors characterising their market and use. This is due to some essential reasons:

- The actual NPS scheduling of psychoactive substances varies from country to country and can get the comparison between different national contexts more complicate;
- The actual scheduling constantly changes, so it's difficult to define and know when a substance can still be considered one of the NPS or not;
- A great variety of substances are included and analysed by the NPS legal definition, without taking into account that, in structures, effects and backgrounds, they are more closely related to other controlled substances, synthetic stimulants or amphetamine-type stimulants.

UNODC includes the following substances among the NPS:

AMINOINDANES;
SYNTHETIC CANNABINOIDS;
SYNTHETIC CATHINONES;
KETAMINE AND PHENCYCLIDINE-TYPE SUBSTANCES;
OTHER SUBSTANCES;
PHENETHYLAMINES;
PIPERAZINES;
PLANT-BASED SUBSTANCES;
TRYPTAMINES.

According to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), and its Early Warning System the main groups are:

PIPERAZINES;
BENZODIAZEPINES;
ARYLAMINES;
TRYPTAMINES;
OPIOIDS;
PHENETHYLAMINES;
OTHERS SUBSTANCES;
SYNTHETIC CANNABINOIDS;
SYNTHETIC CATHINONES.

A useful way of classifying drugs can be provided by discerning NPS on the basis of their main effects, as suggested by "Drugs-forum".[8]

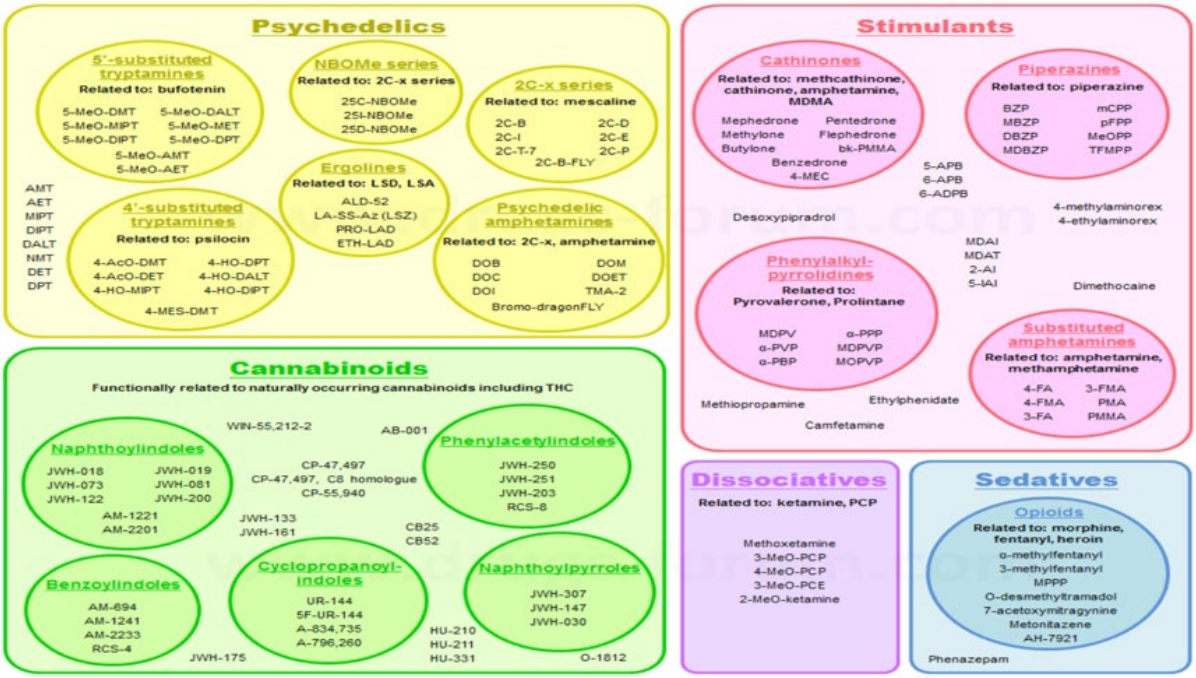
[6] UNODC (2014), Global Synthetic Drugs Assessment. Amphetamine-type stimulants and new psychoactive substances, Explanatory notes. Available at: www.unodc.org.

[7] In particular, J.P Grundt, http://www.npsineurope.eu; and Drugscope (2015), Not for human consumption. An updated and amended status report on new psychoactive substances (NPS) and 'club drugs' in the UK. Available at: www.drugwise.org.uk.

[8] "Drugs-forum" is a website from a non-profit organization of drug information and addiction help (https://drugs-forum.com).

Taking into account the complexity of defining NPS, for the sake of this study, the international definition of NPS shared among Institutional Centres such as UNODC and EMCDDA has been adopted: "New psychoactive substances are substances of abuse, either in a pure form or a preparation, that are not controlled by the 1961 Single Convention on Narcotic Drugs or the 1971 Convention on Psychotropic Substances, but which may pose a public health threat".[9]

Figure 1: Scheme highlighting the major families and subfamilies of research chemicals. www.drugs-forum.com



[9] UNODC (2013), The challenge of new psychoactive substances. A Report from the Global SMART Programme. Available at: www.unodc.org; EMCDDA (2011), Responding to new psychoactive substances. Available at: www.emcdda.europa.eu.

2.2 MAIN GROUPS OF NPS

A brief description of the main NPS groups is here provided. The main sources consulted are UNOCD Monitoring Advisory System and EMCDDA.[10]

SYNTHETIC CATHINONES

(Mephedrone, Methylone, Pyrovalerone, Naphyrone, etc.) Are sold as a legal replacement of stimulants such as amphetamine, methamphetamine, cocaine. They can be found in powder, pills or capsules. Cathinone is an active ingredient of the leaves of the khat plant. The production takes place mostly in China and India, and then substances are imported in Europe where they are processed, packaged and sold as "legal highs" or on illicit market.

SYNTHETIC CANNABINOIDS

Synthetic cannabinoids are sold as a legal replacement of the cannabis. In the last years over than 130 different cannabinoids were reported. Most of these substances were produced in China. When they arrived in Europe, they were found mostly in powder, and then they have been added to plant materials and sold as "legal highs". At the beginning, Cannabinoids tried to reproduce molecules similar to THC, as for example the HU-210. In the last decade new types of substances have emerged on the market. Even if these substances are sold as replacement of cannabis, their chemical structure is dissimilar from TCH and shows a variety of different structures, with different effects and also a more difficult possibility to be identified. These substances are sold as herbal mixtures or herbal blend that let the consumers think that they are using natural herbs similar to cannabis, while their effects are due to the presence of synthetic compounds. JWH-018 is considered to be three times potent than THC.

SYNTHETIC PHENETHYLAMINES

Some Phenethylamines derive from amphetamine, methamphetamine, but they also include ring substituted substances, such as 2C - NBOMe, 2C-B, 2C-H, 2C-E, DOB, DOC. The Service of drug checking in Switzerland (www.danno.ch) identified blotters of 25NMBOE sold as LSD. Sniffing and swallowing in the form of blotters are the most common modes of administration. Young people using these substances describe effects similar to the MDMA. Doses must be lower than other traditional drugs such as LSD or MDMA because of their powerful effects.

SYNTHETIC OPIOIDS

Synthetic opioids have similar effects to heroin, but they are sold as designer drugs by European and Chinese online shops. They are often used non-medically as anaesthetics and analgesics. The most famous opioid, because of its dangerous effects, is Fentanyl, an analgesic similar to morphine but much more potent. Street names: Apache, China girl, China white, dance fever, friend, goodfella, jackpot, murder 8, TNT, Tango and Cash.

TRYPTAMINES

Tryptamines are known as serotonergic hallucinogens; they can be of both natural or synthetic origin. Natural tryptamines include serotonin, melatonin, bufotenin, 110 5-Methoxy-N,N- dimethyltryptamine (5-MeO-DMT) and dimethyltryptamine (DMT) that can be found in the ayahuasca, a brew made by a mixture of plants, used in shamanic rituals in Amazonia. Tryptamines are generally swallowed, sniffed, and more rarely injected. They are usually sold on Internet as research chemicals. Doses can vary from 60 to 100 mg if smoked, from 20 to 50 mg if snorted, from 2 to 3 mg if injected.

KETAMINE

Ketamine is a human and animal anaesthetic that, depending on dosage, can be a strong psyichedelic. Ketamine was produced for the first time in 1963 in Belgium as a substitute of Phencyclidine (PCP or Angel dust), an anaesthetic used in the 1950s that was later banned because of its hallucinogenic and delirium effects. Ketamine can be found in powder to

[10] UNODC Advisory Alert System - www.unodc.org/LSS/Home/NPS; The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) - www.emcdda.europa.eu.
[11] UNODC (2013), p.11. Cit. 9.

snort, or in liquid form to swallow. The most famous derivative is Methoxetamine, that has a much longer duration of action and intensity of effects than ketamine. Street names: K, special K, kit kat, Tac, Cat valium, Cat tranquilizer, Vitamin K, ket, Super K.

PIPERAZINES

Piperazines are known and used as stimulants. "Piperazines have been described as 'failed pharmaceuticals', as some had been evaluated as potential therapeutic agents by pharmaceutical companies but never brought to the market".[11] Piperazines are usually sold as ecstasy, and can be found in form of capsules, or powder. Street names: pep, pills, party pills, Jax, A2, Benny Bear, Flying Angel, Legal E or Legal X, Pep X, Pep Loveor Nemesis, 3CPP, 3C1-PP or CPP.

PLANT-BASED SUBSTANCES

Plant-based substances include: Khat (according to UNOCD, the second most popular plant- based substance, after salvia divinorum, reported by Member States from 2009 to 2012), Kratom (recently reported on NPS market) and Salvia Divinorum. Salvia divinorum is a Mexican psychoactive plant, whose leaves contain psychoactive chemicals that produce hallucinations when chewed or dried and smoked. It is mainly sold on headshops online as 'herbal ecstasy'.

2.3 MAIN RISKS AND HARMS RELATED TO THE NPS USE

One of the most important concerns about NPS is related to their potential related harms, but it's stated that there is a lack of evidences on the health implications of NPS, and on their potential addictive properties. Knowledge on potential addictive properties of NPS can be useful not only in terms of public health but also, as shown before, given the importance of positive drug experiences of users, in order to hypothesize the success of NPS on the market.

EU Early Warning System in the last years has reported an increasing number of alerts referred to serious adverse events to the use of NPS such as deaths. In Hungary, New Psychoactive Substances were detected in 14 out of 31 report drug-induced deaths in 2013.[12] In UK, in 2013, there were 60 deaths where an NPS was mentioned on the death certificate.[13] Even if NPS deaths are relatively low compared to the total of deaths from drug misuse, over recent years there has been an increase in NPS-related deaths. Moreover, with reference to Synthetic cannabinoids, UNODC reported that an analysis of herbal blends highlighted the increasing number of reports on suicides associated with the preceding use of these products.[14] Recent analysis by the European Drug Emergencies Network[15], which supervises the emergency in sites presentations in 16 European sentinel European centres, found that 5,6% of all drug-related emergencies involved new psychoactive substances, especially Cathinones.

Institutional sources, such as UNODC and EMCCDA, suggest that further researches are needed to provide evidences of short and long-term health risks and the addiction potential associated with the use of these substances.

Some clinical studies on Synthetic cannabinoids reported addiction and withdrawal symptoms similar to those of Cannabis.[16] Moreover, the lack of information about what substances exist in the smoking mixtures can make difficult to predict the strength of different products; the regular use of products containing this NPS could increase the resulting risk of developing psychotic illnesses such as schizophrenia.[17]

[12] More detailed information available at: www.emcdda.europa.eu/publications/edr/trends-developments/2015/online/chapter2.
[13] Office for National Statistics (2014), Statistical Bulletin. Deaths related to drug poisoning in England and Wales. 2014 registrations. Available at: www.ons.gov.uk.
[14] More detailed information available at: www.unodc.org/LSS/SubstanceGroup/Details/ae45ce06-6d33-4f5f-916a-e873f07bde02.
[15] P. Dargan (2015), General Overview of the Euro-DEN Dataset. Available at: www.lisbonaddictions.eu.
[16] More detailed information available at: www.unodc.org/LSS/SubstanceGroup/Details/ae45ce06-6d33-4f5f-916a-e873f07bde02.
[17] More detailed information available at: www.talktofrank.com/drug/synthetic-cannabinoids#aka=Spice.

Risks related to Synthetic cannabinoids can be confirmed by the data from the Global Drug Survey, which suggest that, in the past 3 years, the number of people asking for emergency medical treatment has increased: "For the third year running, these drugs were more to likely to leave people needing emergency medical treatment than any other group we explored this year - with 3.5% of last year users reporting having sought Emergency Medical Treatment in the last year (a 30% increase from 2.5% last year). The risk increased to one in 8 users who reported using 100 or more times".[18] Additional findings from the Global Drug Survey highlighted the risk of dependence on these drugs with over 60% of those using 50 or more times reporting withdrawal symptoms cessation.

According to the Australian Institute of Drug Abuse, Synthetic Cathinone could be addictive and reported that drug users, after their regular use, felt uncontrollable urges to use the drug again and others withdrawal symptoms such as:

DEPRESSION;
ANXIETY;
TREMORS;
PROBLEMS SLEEPING;
PARANOIA[19]

With regard to the main risks related to drug use, health workers confer great importance to the psychical contexts in which parties and events take place. In fact, incidents reported during raves are often due to fractures, falls, related to the physical characteristics of the locations near rivers, lakes on in the woods.

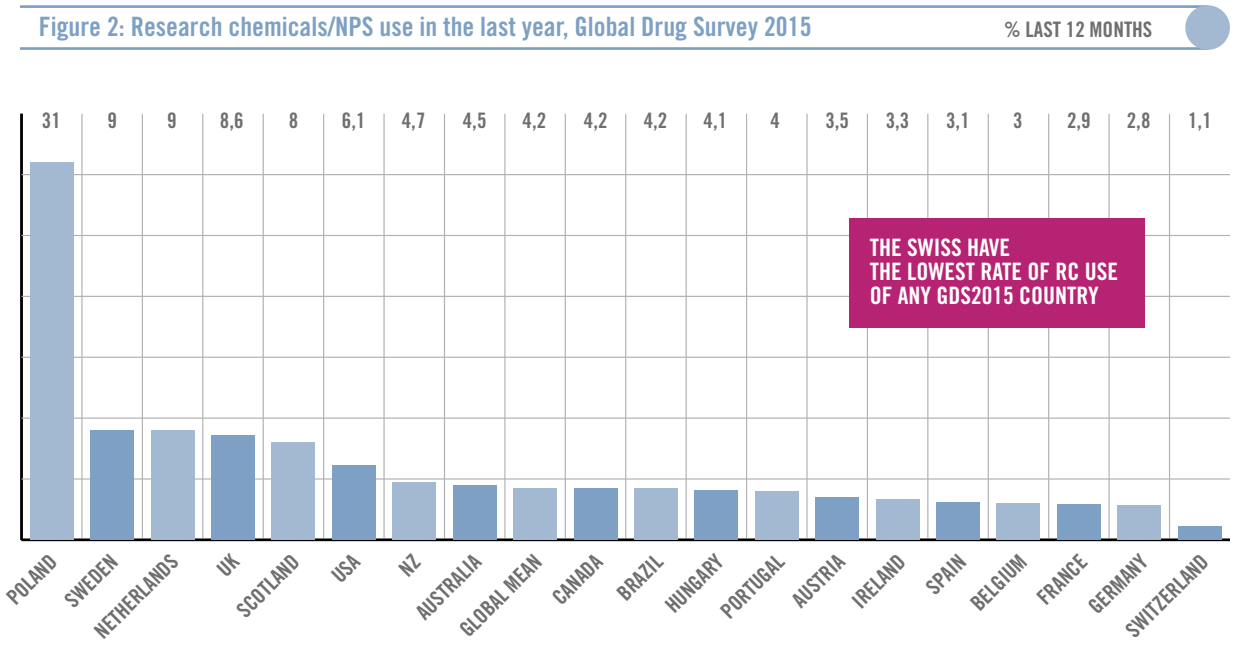
[18] More detailed information available at: www.globaldrugsurvey.com/the-global-drug-survey-2015-findings.
[19] More detailed information available at: www.drugabuse.gov/publications/drugfacts/synthetic-cathinones-bath-salts.
[20] More detailed information available at: www.globaldrugsurvey.com.

3. THE DEMAND FOR NPS

3.1 PREVALENCE OF NPS USE

At the international level, the Global Drug Survey collects data on NPS use in the world, and it is one of the most important online surveys. In 2015, 102.000 people from 50 Countries in the world have been involved in the research.[20] Even if the sample can't be considered statistically representative of global population, findings from the survey considerably enhance the understanding of the NPS use and spread. Figure 2 shows the prevalence of NPS use in the countries involved in the survey: in Poland, 31% of people declared the use of NPS, followed by Sweden, Netherlands and United Kingdom with 8,6%. The lowest rate of NPS use is recorded in Switzerland. At the European level, use and attitude towards drugs are examined by the Flash Eurobarometer, which analyses the public opinion in European Union Member States. In 2011, the Eurobarometer "Youth attitudes on Drugs - No. 330" introduced some questions about young people experiences with new psychoactive substances or 'legal highs'. The last survey carried out in 2014 involved 13.000 young adults, aged 15–24 in the EU Member States and found out that 8% of the sample used new psychoactive substances at least once, with 3% using them in the last year. So the use seems to remain still low, even if it has increased of 3% since 2011. According to the survey, in Italy the prevalence of people saying to have tried NPS is 6%, in a middle position between countries with the highest level of use, such as Ireland (22%) and Spain (13%) and the countries with the lowest level such as Cyprus and Malta (0% e 2%). In United Kingdom, Poland and Hungary young people declaring use of NPS at least once are respectively 10%, 9% and 4%.

Figure 2: Research chemicals/NPS use in the last year, Global Drug Survey 2015



[20] More detailed information available at: www.globaldrugsurvey.com.

Figure 3: Prevalence use of NPS in Europe – 2014- Flash Eurobarometer No. 330

Q3. New substances that imitate the effects of illicit drugs such as cannabis, ecstasy, cocaine etc. may now sometimes be available. They are sometimes called [INSERT 'local name' such as, 'legal highs', 'research cemicals'] and can come in different, form, for example herbal mixtures, powders, crystals or tablets. Have you ever used such susbtances?

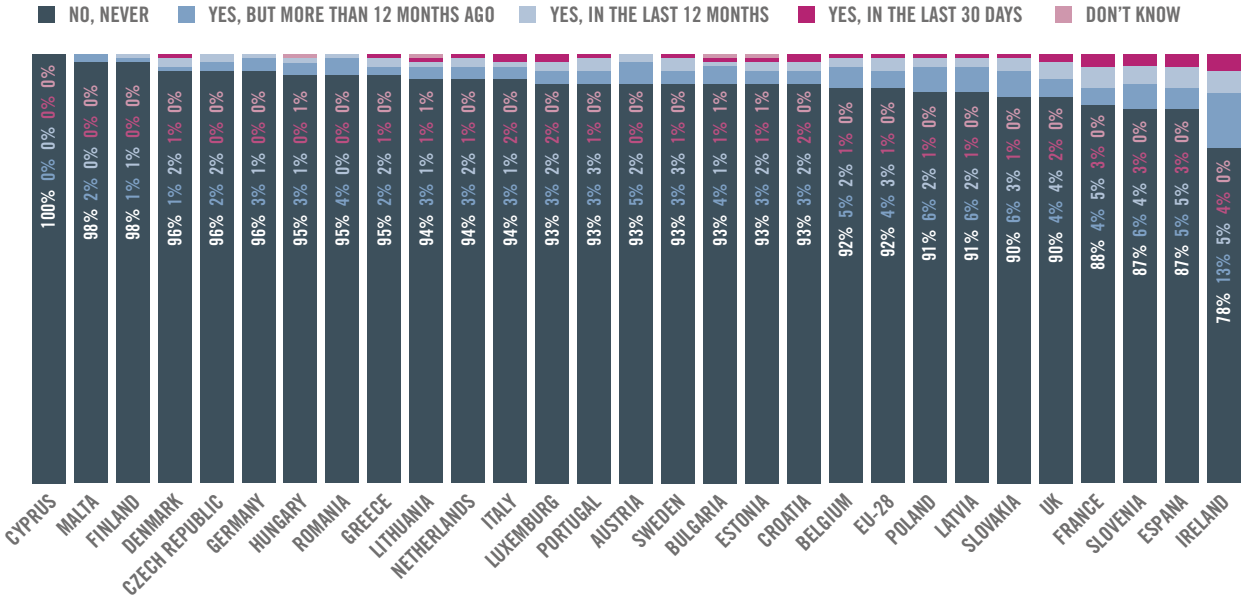


Table 1: NPS reported by UNODC Early Warning Advisory System by Country and NPS groups in 2014-2015

	HUNGARY		ITALY		POLAND		UNITED KINGDOM		NPS TOTAL
	2014	2015	2014	2015	2014	2015	2014	2015	
AMINOINDANES	1	0	1	0	0	0	8	0	**10**
HALLUCINOGENIC	0	0	2	0	0	0	0	0	**2**
KETAMINE & PH	1	0	3	1	2	0	0	1	**8**
PHENETHYLAMIN	7	3	22	5	8	0	18	2	**65**
PIPERAZINES	1	0	1	0	0	0	3	0	**5**
PLANT-BASED	1	0	2	0	0	0	3	0	**6**
SYNTETIC CANNABINOIDS	53	15	21	3	18	8	45	4	**167**
SYNTETIC CATHINONES	34	11	27	8	13	3	20	11	**127**
TRYPTAMINES	1	0	6	1	4	0	7	2	**21**

Table 1 shows the NPS reported to UNODC Early Warning Advisory System in Hungary, Poland, Italy and UK. Data confirmed that the most common NPS are Synthetic cathinones, followed by Synthetic cannabinoids. Another interesting aspect is the large number of unclassified substances reported.

In the last years, the use of NPS has led to a growing attention to the monitoring of these substances and several countries have included NPS in national drug surveys, but reported use of NPS in the general population remains limited if compared to recorded prevalence of traditional illicit drugs. National Surveys mostly investigate on NPS use among young people.

In **United Kingdom**, the Crime Survey for England and Wales 2013/2014[21] reported that 0,6% of people aged between 16 and 59 used Mephedrone, and 0,5 used Salvia Divinorum. In young population, aged 16-24, Mephedrone has been the most used NPS, reaching a rate of 4.4% in 2010/11 and then falling to 1,9% in 2013/14. As for adults, the use of other NPS measured by the 2011/12 survey was low, and reported use of Salvia divinorum in 2013/14 was at a similar level as Mephedrone.
An English online survey on legal highs carried out among 468 NPS users aged 18 years and older (www.mylegalhigh.org)[22] shows that 32% of the sample used Syntethic cannabinoids, followed by 18% using both Psychedelic and Stimulants. In this survey, the modal age of first NPS use was 16.5 years and 36%, 45% and 56% of respondents had taken their first NPS before the ages of 18, 19 and 21, respectively.

In **Italy**, national surveys do not report a prevalence use of specific NPS among general population. The Espad Italia Study records the use of some NPS among students aged between 15 and 19 of 405 Italian High Schools (over 700.000 respondents). The prevalence rate of NPS use in 2014 was 3,1%. NPS are mostly used by 19-years-old students (5% of male and less than 3% of female). The main NPS used by this students is the “Spice”, followed by Ketamina and Salvia divinorum.

In **Poland**, NPS prevalence rates in the general population don’t seem to be high. In the 2012, a national survey conducted by the CBOS Foundation among Poles aged 15-64, found out that 1.4% of the respondents reported using NPS in a lifetime.[23] In mid-2013, a quantitative survey on a representative sample of the Polish population aged over 15 showed a lifetime prevalence rates of 2% (3% of them were male, 2% were female). The highest prevalence was recorded in 20-24 age group, with a prevalence of 8%. The rate recorded among respondents aged 15-29 was 4%. In the others age groups, the rates ranged from 3% (25-34) to 0% (55-64). According to another national survey among people aged 18-19, in 2010 the last 12 months’ prevalence rates reached for new psychoactive substances was 7% (3% in 2008) and in 2013 the lifetime prevalence rates have been halved since 2010, reaching the 5% (10% in 2010). The survey also shows that the closure of the smart shops had an impact on the consumption. NPS are mainly used by boys. However, 2.8% of girls had experimented with NPS in the last 12 months, the rates for the last 30 days were not recorded.[24]

In **Hungary**, the 2014 National Report from the Reitox National Focal Point reported that according to a survey carried out in 2013 measuring lifetime prevalence of illicit drugs used among on 1959 respondents aged between 19-64[25], Syntethic Cannabinoids were the second most used substances after cannabis. In the 19-34 years’ sample, cannabis was followed by synthetic cannabinoids (Life Time Prevalence 7,7% of respondents), ecstasy (6,5%), amphetamine (5,1%), New psychoactive substances (3.8%), and LSD (3.1%).

[21] Crime Survey for England and Wales findings are reported in G. Stephenson, A. Richardson (2014), New Psychoactive Substances in England. A review of the evidence, Crime and Policing Analysis Unit. Available at: www.gov.uk.
[22] C. Russel (2014), The legal high national survey 2014. Findings from the legal high national survey. Available at: www.drugmisuseresearch.org.
[23] National Bureau for drug prevention (2014), New Psychoactive Substances. Problem and Response. Available at: www.cinn.gov.pl
[24] TNS Polit ical & Socia l (2014), Flash Eurobarometer 401. Young People and Drugs. Available at : http://ec.europa.eu/public_opinion/archives/flash_arch_404_391_en.htm.
[25] ELTE Institute of Psychology (2013), KÖZ-ÉRZET 2013 in HU Reitox National Focal Point (2014), 2014 National Report (2013 Data) to the EMCDDA. Available at: www.emcdda.eu.

3.2 SET AND SETTINGS OF NPS USE

Main contexts of NPS use are recreational nightlife scenes, in particular in Italy. Also in UK, NPS seem to be used mostly by people who regularly visit pubs and clubs in nightlife contexts, even if anecdotal reports from experts and specialist organisations record that the use of NPS among groups of vulnerable young people is becoming a cause of alarm[26]. In Hungary, beside the recreational use, NPS continue to be used and injected by people who use drugs heavily. In 2013 and 2012, the most frequent NPS used in this group has been the "Crystal" a substance containing the active substance Pentedrone that led to a strong demand among national harm reduction services[27]. Also in Poland, the number of injecting drug users among marginalized people seems to be increased in 2012, from 4300 to 10000[28]. According to the UK Home Office, the main reasons for using NPS declared by users are their relative availability, price and quality, and the main motivations to initiate NPS use are curiosity, boredom and need to relax. These motivations are not far different from motivations related to the use of illicit drugs[29]. Findings from the UK legal high national survey[30] suggest that the main reasons of using NPS are: curiosity, the seeking of good experiences, and the unavailability of illicit drugs (Figure 4).

A focus on nightlife contexts

The interviews among people and the support of the available literature contributed to draft some characteristics of NPS users in the nightlife contexts, mainly aged between 15 and 34 years, identified on the basis of the context of use and attitudes towards drugs. A first group is represented by young people attending raves and free parties of the techno scene.

In these contexts, drugs have always represented a specific cultural and symbolic meaning, from which differences in the drug use come from: ***"It depends on the types of parties, in goas you can find especially hallucinogenics, and less amphetamines than in techno parties, that ideologically are not accepted, because of his stimulant properties, as for MDMA"*** (HRS, int. 2).

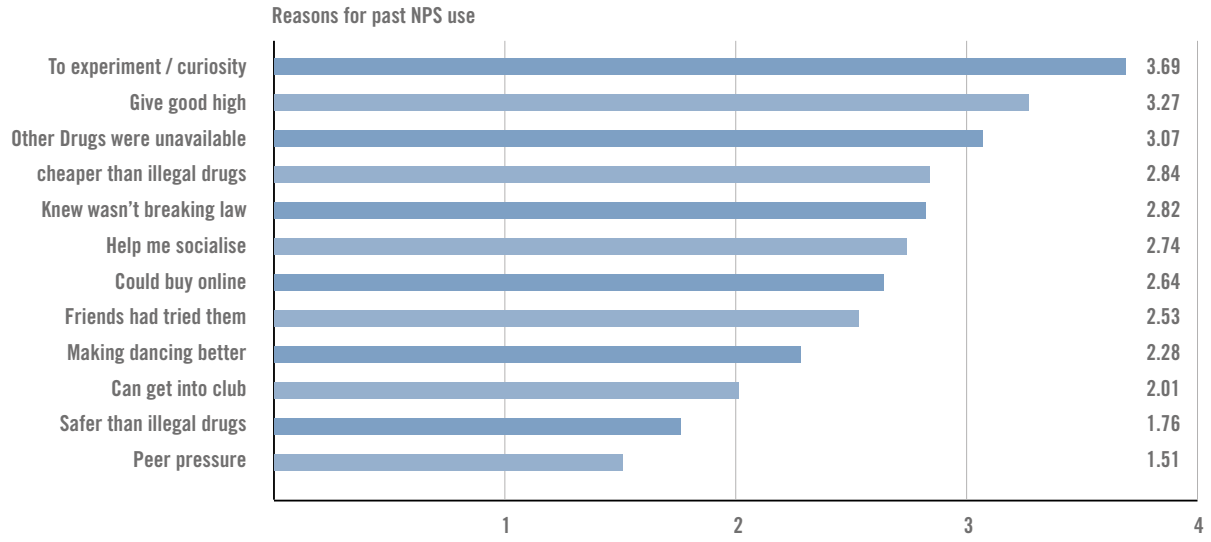
In these contexts, the favourite drugs are empathogens and stimulants, in order to facilitate socialization and keep awake during the night. These substances are used in combination with alcohol and cannabis. A survey carried out by Neutravel, an Italian outreach service operating during raves, parties, collected over 1.959 questionnaires during parties[31] (the 24 % during free party, 57% during small events and 19% in big events) and 97 brief interviews. In free parties, the average age is 22, in small events 23, and in big events 23,3. The use of heroin seems to be stigmatized from these users and drug injection doesn't seem to be considered. The main drugs used during parties are Alcohol, TCH (both used by 60% of respondents), followed by Ketamine (50%), Amphetamine and Speed. Qualitative interviews pointed out a limited use of NPS, such as Tryptamines and Phenethylamines (2CB, 2CE).

Starting from 2012, in these recreational contexts, outreach workers observe the use of Methoxetamine, the research chemicals sold in replacement of Ketamine: ***"We found Methoxetamine three years ago, in Bologna were circulating a batch of Ketamine, much stronger than usual and then we discovered it was Methoxetamine. At the beginning users didn't like the effects, that seem to be more effective and stronger than Ketamine, and they got scared about it, but now, that they know Methoxetamine, they appreciate and sometimes prefer it to Ketamine"*** (HRS, int. 5).

In spite of cultural crossbreeding related to the nightlife scene, raves and free parties still seem to represent a distinctive factor characterizing patterns of use, rather than mainstream contexts of club and discos. In the latter ones, users take NPS in association with alcohol, cocaine and MDMA. A study carried out in the club scene of Rome[32] between September and November 2013 administrated a questionnaire on the use of recreational substances to a population sample of 273 persons (18–30 years old) in 5 nightclubs in Rome. Findings showed that 78% of respondents declared a lifetime previous use of NPS/club drugs, such as Amyl Nitrite (45%), Synthetic Cannabinoids (35%), Mephedrone (18.8%), Ketamine (18%), (GHB) (10.2%), and Salvia divinorum (3.2%).

[26] Home Office (2014), New Psychoactive Substances (NPS). Resource pack for informal educators and practitioners. Available at: www.gov.uk.
[27] HU Reitox National Focal Point (2014), 2014 National Report (2013 Data) to the EMCDDA. Available at: www.emcdda.eu.
[28] A. Malczewski (2014), Injection NPS challenging for response in Poland. Annual expert meeting on Drug-related deaths (DRD) and Drug-related infectious diseases (DRID), Lisbon, 17/10/2014. Available at www.emcdda.europa.eu.
[29] G. Stephenson, A. Richardson (2014), cit. 21.
[30] C. Russel (2014), cit. 22.
[31] Findings from the survey were presented during the National workshop "Il progetto SAR -NEUTRAVEL. La prossimità nei contesti del divertimento e dei consumi", Turin, 21-22.05.2015.
[32] A. Vento et al. (2014), Substance Use in the Club Scene of Rome: A Pilot Study. Available at: www.ncbi.nlm.nih.gov.

Figure 4: NPS users mean ratings of agreement about each of the 12 reasons related to the NPS use



http://www.drugmisuseresearch.org/

Moreover, the sample showed high poly-drug use frequencies: among psychoactive substances consumers, the totality (100%) claimed an alcohol consumption, and 31% (12% of the total sample) declared the assumption of two or more illicit drugs. Researchers considered that the use of newer psychoactive substances appeared to be very high and gave two possible suggestions to explain this finding: ***"A recent spread of knowledge and consumption of NPS in the Italian youth population or despite an overall limited use, a widespread consumption in peculiar subpopulations".***

These suggestions seem to be confirmed by many studies about the use of NPS in homosexual recreational contexts. I-TREND projects from The French Monitoring Centre (OFDT)[33], described this profile of drug users as characterized by a poly-drug use of others illicit drugs and a consumption of NPS during sex. In this group the so-called "slamming" practise has emerged: it is the injection of drug before or during sex. The most used substances in this context is Mephedrone. Many evidences are available from UK literature investigating on specific characteristics of Mephedrone that drove the rise of this substance. A survey carried out in the gay-friendly dance clubs in south London[34] in 2010 to 308 respondents found out that 27% of participants have used or were planning to use Mephedrone during the night. The same study reported that 41% of respondents reported using Mephedrone in the past month and 52% reported Mephedrone use in the past year, while the prevalence of other NPS was lower.

The poly-drug use

As suggested by the data showed below, in recreational contexts, NPS are usually used in combination with other legal or illegal drugs.

According to the ESPAD Italia Survey, young people declaring use of NPS seem to be users of other illicit drugs: 99% of respondents who have never used cannabis also say they have never used these new substances that imitate illicit drugs, while 17% of those who used cannabis in the last 30 days have also used these new substances during the same time period.

Users of Salvia Divinorum are likely users of other illicit drugs, in particular of cannabis, ecstasy and cocaine. The 2013/14 CSEW[35] showed that, among those who had used Mephedrone in the last year,

[33] E. Lahaie et al. (2013), Nouveaux produits de synthèse et Internet, Tendances, p. 84. Available at: www.ofdt.fr.
[34] G. Stephenson, A. Richardson (2014), cit. 21.
[35] Home Office (2014), Drug misuse: Findings from the 2013/14 Crime Survey for England and Wales. Available at: www.gov.uk/government/uploads/system/uploads/attachment_data/file/335989/drug_misuse_201314.pdf.

98% had taken any other illicit drug in the last year: 80% had taken cannabis in the last year; 73% had taken cocaine in the last year; 62% had taken ecstasy in the last year.

Data suggest that the main pattern of use of NPS users is poly-drug use. According to some experts, the reason is the fact that, in the last years, the drug use is no more strictly connected to a specific life-style (as, for example, in the case of stereotyped figure of the cocaine user), but drugs seem to have lost their cultural and symbolic meanings: ***"Today, in the situation of economic crisis, substances are approached as others goods, as disposable objects from which people want rapid effects, without a real attachment to the substance. This aspect facilitates the drug market, because if more people has this attitude toward drugs, more people will be faithful customers, as for the alcopops, because users have the same attitude than for the others goods, and in this context the use shift from legal to illegal. On the other hand, the key-role of the market in orienting choices and strategies is predominant, the consumer of illegal substances acts as a normal consumer of whichever sort of consumables, but has lesser product guarantees and protections and, as a consequence, is often exposed to bigger health-related risks"*** (DAC, int. 11)

So, according to the researcher of the Department of Addiction Service of Milan, doing a parallelism with the digital world, the new generation is a generation of "Experiential natives", such as digital natives, growing up in a historical phase of social acceptance of drugs. This phenomenon has produced a fracture between two ways of considering psychoactive substances: on the one hand there are people who consider them "drugs", on the other hand some people live substances just as tools to access to new sensorial and relational experiences, without thinking to ethic and cultural issues[36].

3.3 MAIN NPS CHARACTERISTICS DRIVING THE USE

If the drug use is considered as a goal-orientated behaviour, analysing consumer's attitudes towards drugs provides information and knowledge about types of the favourite drugs in order to identify the key-factors that can influence the users' choices. This paragraph describes some characteristics and NPS effects that can determine their increasing use on the market.

As explained before, all the interviewed outreach workers outlined the constant use of **Ketamine** in the nightlife scene. Ketamine has been introduced in Italy in specific recreational contexts of raves and free parties since the mid of 1990s, but today it is used not only in underground contexts, but also in the mainstream nightlife scenes. So, in Italy, Ketamine is no more considered a New Psychoactive Substance. This substance is mostly recreational even if, depending on dosages, it can produce different effects, from relaxing to hallucinogenic ones. Operators have also observed its recent use as antidepressant among young girls. Many users involved in the research carried out by Guido Vidotto Fonda[37] report many positives effects deriving from the consumption of Ketamine. These advantages can be summarized in:

- A great variety of effects, that, depending on the context of use, dosages and route of administration, vary from euphoria/relax to soft/strong dissociation, up to sinking into the k-hole;
- Lower doses of Ketamine (0,1-0,2 grams) seem to be preferred in contexts such as dancing;
- Intensity and rapidity of effects. When injected, ketamine's effects may start to be felt in less than 2 minutes, while when snorted it takes 5-10 minutes to be effective;[38]
- Absence of strong negative side effects;
- Capacity to regulate the effects and abstinence of other drugs. Some interviewed people have referred to use ketamine when they incur in symptoms of addiction from other drugs, in particular from heroin.

[36] Osservatorio Regionale per le Dipendenze (2012), Consumi di sostanze: un approfondimento qualitativo attraverso interlocutori privilegiati. Available at: www.ored-lombardia.org/prevolab.
[37] G. Vidotto Fonda (2013), Ketamina. Stili di consumo, FrancoAngeli, Milano.
[38] Erowid, How long Ketamine last? Available at: www.erowid.org/chemicals/ketamine/ketamine_faq.shtml#duration.

As said, in 2012 in North Italy **Methoxetamine** (MXE) appeared on the market, sold in nightlife contexts to replace the Ketamine. At the beginning, due to the fact that users were unaware of the substances they were taking, MXE wasn't appreciated because of the unexpected effects different from Ketamine. But, then, becoming experienced in taking the Methoxetamine, users began to appreciate the versatility of the substances. Today, MXE seems to be used in both solitary and social settings, where MXE is useful in reducing inhibitions and enhancing conversation.
One of the users' experience is reported in the section "Erowid experience vaults", where description of unexpected effects is well provided: ***"I took MXE the day before yesterday and am only now fully recovering from the effects of the drug. A friend brought up a bag of what she thought was Ketamine at the time, and I proceeded to sniff about 80mg in one line [...] My nose burnt like hell, and eyes watered like mad straight away. About ten minutes in the film I had put on started to distort, words being elongated, overlapping sounds and at the same time unable to find where they are coming from. Then I experienced a shrill vibrating noise, seemed to be coming from inside my head, but all over the room at the same time [...] I began to panic. [...] I was convinced this was the end, my head kept leaving my body and resurfacing somewhere else. I was apologizing and blubbering to god to satan to stop the vibrations in my head, I was convinced my brain couldn't handle this foreign substance (verbally I said foreign secretaries apparently) and that I was going to die here in my kitchen, my limbs jerked everywhere for some reason, more like a possession than the k hole I was expecting. [...] On the whole, a very real experience that I cannot wait to feel again, I felt I could feel my sight it sounds weird but my vision was like running water. I would do it again and definitely feel its addictive quality".***[39]
The desired effects and dosages of MXE differ in relation to the modalities of intake. Since it is a dissociative anaesthetic, MXE can produce sensory deprivation, derealisation and dissociation from the physical body. The desired effects may vary according to the dosage and the modality of intake, and can include euphoria, empathy, pleasant intensification of sensory experiences, especially while listening to music.[40]

The other new psychoactive substance do not always have the same success of methoxetamine, as for 4MA, a research chemical that is intended to imitate MDMA and belongs to the group of Phenethylamine. According to experts, this NPS has not achieved success on the market because of negative effects such as nausea, abdominal pains, high blood pressure, flutter, headache.

Many evidences are available in UK literature investigating on specific characteristics of **Mephedrone** that drove the rise of this substance. According to people interviewed in the study carried out by McElrath and Van Hout41, Mephedrone shows some properties that rarely can be found in other substances, such as:

- Stimulant-like properties (increased energy – talkativeness – insomnia);
- Effects of empathy and euphoria;
- Absence of negative side effects;
- Presence of pharmacological properties that allow users to maintain physical control of the drug experience and to keep control in social contexts;
- Consistency of effects and potency.

As already shown, **Synthetic cannabinoids** seem to be the most used NPS among drug users. Young people seem to choose this NPS because of the perception of having a "safe experience" with it. The statement of "safe" can be referred to the fact that taking Synthetic cannabinoids permits to avoid legal problems, since this NPS is difficult to be checked by a normal drug test. Moreover, for younger users, the perception of safety can be induced by the attractive packaging and commercial messages describing Spice and others Syntethic cannabinoids as "natural herbs" or "harmless incense blend".[42]
In older and more experienced users, Synthetic cannabinoids are appreciated for the potency of their effects. Some positive effects are described as:

- A similar effect to smoking cannabis, but more intensive;
- Disconnection from thoughts, feelings, memories and sense of identity (dissociative state);
- Euphoria. [43]

[39] Erowid, First Unwilling Time, MXE (represented as Ketamine). Available at: www.erowid.org/experiences/exp.php?ID=9564.
[40] O. Corazza et al (2012), Phenomenon of new drugs on the Internet: the case of ketamine derivative methoxetamine, Human Psychopharmacology: Clinical and Experimental, 27, 145–149.
[41] K. McElrath, M.C. Van Hout (2011), A preference for Mephedrone: drug markets, drugs of choice, and the emerging 'legal high' scene, Journal of Drug Issues, 41, pp 487-508. The study included 22 in-depth interviews to respondents from the Republic of Ireland and 23 from North Ireland.
[42] L. Fattore , W. Fratta (2011), Beyond THC: the new generation of cannabinoid designer drugs. Available at: http://journal.frontiersin.org/
[43] Druginfo, Synthetic Cannabinoids, www.druginfo.adf.org.au/fact-sheets/synthetic-cannabinoids-web-fact-sheet.

3.4 THE INFLUENCE OF LEGAL STATUS

It is generally known that New psychoactive substances have rapidly emerged on the market as "legal" alternatives to internationally controlled drugs. Therefore, legality seems to represent an important and distinctive aspect of the NPS market, and knowing the influence that legal status of substances can have on users' perceptions and habits help to generate new and additional elements to the definition of the NPS supply chain.

Several studies have tried to investigate if legal status of NPS could be considered a factor driving their use.[44] Most of the available evidences come from studied carried out among users of NPS and other illicit drugs, while less information are provided on users who have not previously used illicit drugs. This could be because experienced drug users are more numerous than naive users and, therefore, they are easier to be approached by researchers.

Some studied carried out among experienced users[45], suggest that users of other illicit drugs don't give importance to the legal status of the substance.
Moreover, for existing drug users, the legal status of NPS does not imply safety. A survey among 4[46] UK students showed that 74,2% of respondents didn't consider 'legal highs' to be safer than illicit drugs and 50,8% of the sample knew that some "legal highs" can contain illegal component.[46]
Some studies carried out in UK[47] investigate the use of Mephedrone pre- and post-legislative controls and found out that the experienced drug users of NPS and other illicit drugs had carried on using the substance despite its illegal status. According to people involved in the research, when Mephedrone was legal, it was of better quality, cheaper and more easily available than the traditional illicit drugs.

Therefore, from the users' point of view, the legal status of the NPS mean that the substances cost less if compared to the price of the illegal ones and they are different in packaging since they are branded, labelled and per-sealed; these features encourage buyers to give the perception of a market that is more regulated than the illicit one. This can be a key driver in particular for users who have not previously used illicit drugs. Moreover, some studies suggest that for this group of users, the legality of a substance means safety: ***"A concern surrounding non-controlled NPS is that they could be attracting for a new and naive group of drug users. It is supposed that their legal status, veneer of safety and ease of availability might attract users that would not engage in illicit-drug-taking activity"***.[48]

So the legal status can be a key driver of the NPS use for this group of users and recent studies suggest that banning NPS can lead to a decrease in NPS use.[49] But, the change of the substance from legal to illegal status can also affect the demand for NPS among drug experienced users. For this group, if a substance becomes illegal, the availability of NPS will change in terms of quantity, quality and cost: in general, in the illicit market, the substances have a lower quality and a higher price.[50]

3.5 KNOWLEDGE AND INFORMATION ON DRUGS

Knowing the information and messages on drugs and specifically on the NPS circulation among users can represent a useful aspect to understand how people approach to the drug market, in order to consider if their awareness and knowledge about NPS characteristics and risks can represent a key factor able to drive choices in their pattern of use. Moreover, experience sharing and drug-focused opinion forming around drugs can have an indirect but important influence on the demand as well as on the whole supply chain.
This chapter will outline some elements related to the types of knowledge on drugs and the main sources of information for the users.

Knowledge on drugs and NPS

As reported in the previous chapter, many harms and risk are related to the use of NPS and are strictly connected to the lack of knowledge among the drug

[44] G. Stephenson, A. Richardson (2014), cit. 21.
[45] A. Bancroft, P. Scott Reid (2015), Concepts of illicit drug quality among darknet market users: purity, embodied experience, craft and chemical knowledge, Internationional Journal of Drug Issue. Published online 10.12.2015; G. Stephenson, A. Richardson (2014), cit. 21
[46] O. Corazza et al. (2014), "Legal highs": safe and legal 'heavens'? A study on the diffusion, knowledge and risk awareness of novel psychoactive drugs among students in the UK, Rivista di Psichiatria, 2, 89-94.
[47] K. McElrath, M.C. O'Neill (2011), Experiences with mephedrone pre- and post-legislative controls: Perceptions of safety and sources of supply, International Journal of Drug Policy, 22, 120-127; K. McElrath, M.C. Van Hout (2011), cit. 41.
[48] G. Stephenson, A. Richardson (2014), cit. 21.
[49] B.P. Smyth et al. (2015), So prohibition can work?" Changes in use of novel psychoactive substances among adolescents attending a drug and alcohol treatment service following a legislative ban, International Journal of Drug Policy, 26, 887-889.
[50] K. McElrath, M.C. Van Hout (2011), cit. 41.

users, according to outreach workers. Below, there are the main features:

- Types of specific substances that are used. The lack of knowledge about the substances that the users take causes unexpected effects and the risk of getting wrong with dosages;
- Use of unknown substances. The ESPAD Italia Survey 2015 outlined that 2,5% of respondents declared the use of unknown substances in their lifetime: 56% of them said to have used unknown substances less than two times, while 23% for more than 10 times. This matter can be related to an emerging phenomenon observed by the operators of the Regional Centre for non-violence of the Piedmont: they declared that in 2015, on the total 100 women accessing to the service, almost 30% was composed by young girls (aged between 14 and 20) referring to have been subjected to violence during recreational time in discos or clubs, but without having memory of that experience. Young girls report to have taken some kind of unknown drugs by friends, most in form of herbal mixtures and sometimes in form of pills.[51]
- Right dosages that are recommended. From the point of view of the outreach workers, there is a lot of confusion about the doses needed for the different substances. The main risks identified by outreach workers are referred to problems concerning dosages, since doses for NPS must be lower than the ones used for other traditional drugs such as LSD or MDMA because of their powerful effects. In the case of Phenethylamines, doses must be lower compared to other traditional drugs: for example MDMA normal dosage ranges around 100 mg, while the average dose of the N-Bomb 25I-NBOMe is between 0,5 and 0,1 mg.
- The risks related to the poly-consumption and the effects produced by the combination of two or more substances. Outreach workers observed the dangerous use of NPS in combination with other legal and illegal drugs. In particular, in the Italian context the main risks related to Ketamine derive from using this substance with other drugs, especially with heroin and other opiates, because it causes a higher probability to die for overdose. The combination of Synthetic cathinones with alcohol can also increase the risks of coma and death.

Concerning the users' awareness and knowledge about drugs, the interviews and information collected by the media analysis show different points of view. On the one hand, media and institutional representatives from Health Services underline a great and alarming lack of information among drug users; on the other hand, outreach workers report a good knowledge about substances, sometimes better than the operators' one. According to the Flash Eurobarometer 2014, only 16% of respondents haven't been informed at all about drugs in the past, while 29% of people have been informed about NPS.

However, according to outreach workers, some specifications are needed:

- Some differences must be considered between people attending raves and free parties and clients of discos and clubs. In the first group, people seem to be more aware of the drug they are using and more careful about effects and dosages, while in the second group, a lower attention to substances seems to be more spread;
- Other differences must be related to the age. People aged between 20 and 35 seem to be more aware of the drug used than people aged between 15 and 19;
- Moreover, being informed about drugs not necessarily corresponds to an awareness of the risks and harms related to drugs. As suggested by several studies[52], poly-drug use reflects the changes in the various risk perceptions that tend to consider as dangerous only the acute effects, neglecting those determined by a continuous use.

Main sources of information on NPS

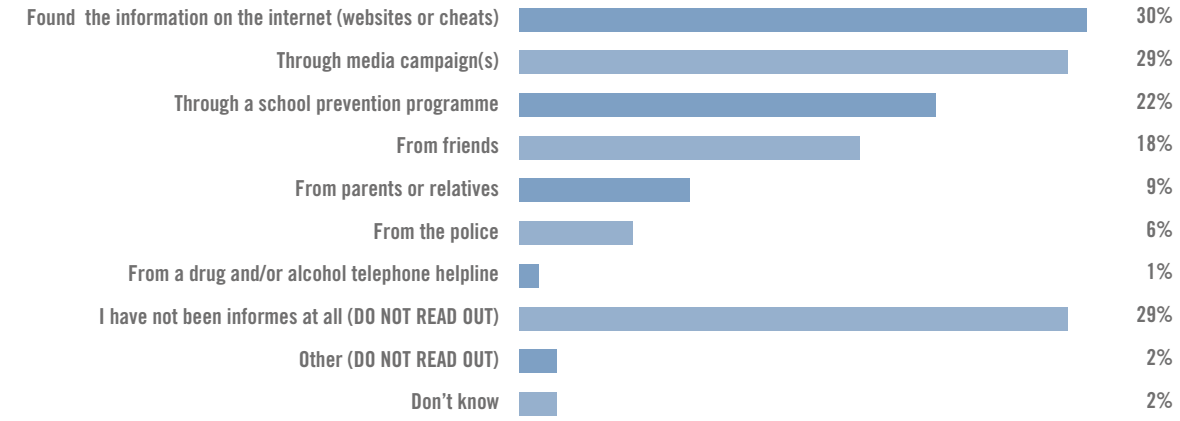
According to the Flash Eurobarometer, Internet is the most mentioned source of information on illicit drugs (59%), followed by friends (36%), doctors, nurses or health professionals (31%), parents or relatives (25%), and specialised drugs counsellors or centres (21%)[53].

With regard to NPS, 30% of young people are most likely to have received information on the Internet, 29% through media campaigns, 22% through school prevention programmes and 18% from friends. Less than one in ten received information from parents or relatives (9%), from the police (6%), or from a drug or alcohol telephone helpline (1%). Internet is also the

[51] Even if they declare the use of drugs, urine and blood tests are not able to detect these substances. According to the operators of this service, these substances are not Ketamine or GHB, because they usually can be identified by drug tests. Violence experience mainly seems to take place in groups of friends.
[52] EMCDDA (2002), Polydrug use. EMCDDA 2002 selected issue. Available at: www.emcdda.europa.eu.
[53] TNS Political & Social (2014), cit. 1.

Figure 5: Main Source of information on NPS, Flash Eurobarometer, 2014

Q6. Have you received information in any of these ways over the past year about the effects and risks of the use of new substances that imitate the effects of illicit drugs? Please choose up to three.



most mentioned source of information on the effects and risks of drugs in the past year (37%), followed by media campaigns (33%), school prevention programmes (32%), and friends (21%)[54].

Findings from Flash Eurobarometer underline the growing use of Internet as a source of information on drugs. This evokes two significant remarks:

- Young people don't recognize adults (parents, teachers or operators) as someone with whom they can speak about drugs;
- Young people preferred contexts that guarantee anonymity. People seem to get information from operators or experts through the use of forums or chats that allow people to keep information or tell their personal experiences without the need of exposing themselves.[55]

Concerning Internet as an important tool of information, recent studies have highlighted the important role of social media for the communication about drugs. Social media include different types of social interaction sites and Apps, such as social networking sites, photo- and video-sharing sites, blogs, and discussion and forum sites. According to the recent EMCDDA study, social media facilitate the supply of drugs in many ways:

- They improve the information sharing about drugs, their effects, prices and availability;
- Users can directly advertise drugs for sale;
- They give to potential buyers the information concerning how and where they can purchase drugs.[56]

Other sources of information mentioned by outreach workers are some specific Apps used to communicate about illicit drugs, in particular about cannabis (e.g. Freweed). This is confirmed by the study mentioned above: ***"410 drug-promoting Apps were identified, the majority of which (98%) were found to promote cannabis, with many providing a forum for like-minded drug-users. Some examples of the types of Apps found are: drug-themed 'wallpaper' Apps; Apps that provide information on drug use; drug-themed gaming Apps; drug use simulations; drug-themed clock widgets; a drug-themed battery icon widget; drug- related stickers; and Apps used to share substance use stories. Others, such as the "How to Sell Weed" App, provide instructions for the production and sale of cannabis"***. [57]
As shown in the study, many Apps informing about cannabis have been identified, while the existence of Apps related to information on NPS is still unknown. Only with reference to the Mephedrone, the EMCDDA study reported the use of Grindr (a social network App for homosexual people) to locate partners for 'chemsex' or 'party-and-play'.

[55] This aspect has been explored during the national meeting hold in Florence, Rotte Digitali. Salute, benessere mentale, adolescenza 2.0, Florence 16.02.2016.
[56] EMCDDA (2016), The internet and drug market. Available at: www.emcdda.europa.eu.
[57] EMCDDA (2016), cit. 56, p. 118.
[58] R.M. Pavarin (2015), Risks, consumer and substances. Studies and surveys in the metropolitan area of Bologna, Universitas Studiorum, Mantova 2015, p. 70.

3.6 MAIN WAYS OF PROCURING DRUGS

According to operators most of young people attending nightlife contexts buy NPS during the events, from friends or dealers, sometimes trying to sell them to other users or friends. Supply of NPS doesn't seem to be far different from supply of other illicit drugs. This hypothesis can be supported by the fact that, as shown before, most NPS users are also users of other illicit drugs and it can be supposed that channels of purchasing NPS are the same of those used to get other drugs. A qualitative study involving consumers and experienced professionals carried out by the Drug Monitoring Centre of Bologna observed that a method used to purchase substances in situation of economic crisis is to create "buying groups" in order to purchase larger quantities at lower prices. Such organizations are formed for convenience, and also with unknown people. ***"This offers the possibility of reselling at market prices (or even to "cut" with other, less expensive products) and then earning more money than the amount invested. Many dealers go abroad to purchase the substances, bring them to Italy and resell them, speculating on the price differences"***[58].
In this study this way of procuring drugs is confirmed for illicit substances, but it would be relevant to understand if it also occurs for the NPS supply.
In Italy the online market of NPS doesn't seem as widespread as in other countries, mainly because of the presence of an efficient retail offline distribution of illicit drug in the national context. Evidences outlined by the UK Home Office also suggest that purchasing NPS from the Internet seems to be still limited.[59]
This suggestion is confirmed by the findings of Flash Eurobarometer 2014, which show that 68% of respondents using NPS in the last 12 months procured substances from friends, while 27% bought them from a drug dealer, 10% purchased them from a specialised shop and only 3% bought NPS on the Internet.[60]
However, the increase of the online market must be considered in order to get some evidences suggested by international surveys and studies that underline the numerous benefits that drug users declare to have from online shopping, especially on the darknet.

Outreach workers who could test the substances bought on Internet reported the availability of higher quality substances on the darknet than on offline market. This hypothesis seems to be confirmed by some users of other illicit drugs involved in the recent study of Bancroft and Reid who found out that: ***"Unsurprisingly for committed darknet users, they all agree on one point: whatever it meant, quality is expected to be reliably high in the darknet. We found that users have already made use of offline markets, and 'street quality' is a commonly used term for the lowest quality product. As one interviewee explains, although it is possible to obtain good quality products in the offline markets, it is not possible to do so reliably or as cheaply"***[61].

According to the Global Drug Survey 2015, online market is expanding because of the numerous benefits that drug users declare to have from online shopping, represented not only by a higher certainty of the product quality, but also by reduced risks of exposure to violence and desertion related to street dealing.[62]
Moreover, users involved in the study of Bancroft and Reid and respondents to the Global Drugs Survey 2105 agreed on the fact that buying online means to have access to a lot of new drugs not available on the local market and to have fun exploring the range of different available options. However, some relevant differences need to be established between the surface web and the darknet markets located in the deep web:

- According to the EMCDDA study, the surface web seems to be more oriented towards the sale of NPS, while the majority of sale activity linked to illicit drugs appears to take place on the deep web. This can be confirmed by the findings of the Global Drug Survey, which found out that on the web the main drugs purchased still are the illicit drugs as powder MDMA (37% of respondents), LSD (30,3%) and MDMA pills (26,5%), while different types of NPS are bought by 20% of respondents;
- Moreover, a difference between Surface web and Deep web seems to be found in terms of substances quality. As shown above, drug users approaching to darknet markets are expected to buy high-quality substances, while operators of institutional services who can test NPS sold on the shop online of the surface web declare a poor quality of products and observe inaccurate information about substances and dosages needed.

Further research is still needed on these issues, however.

[59] G. Stephenson, A. Richardson (2014), cit. 21, p. 36.
[60] TNS Political & Social (2014), cit. 1.
[61] A. Bancroft, P. Scott Reid (2015), cit. 45, p. 6.
[62] More information available at: www.globaldrusurvey.com.

4. CONCLUDING REMARKS

Analysing the demand for NPS is important to outline the supply chain of the NPS in a more detailed way and to identify some driving factors that can help to hypothesize future scenarios of the NPS market.
In particular, the analysis delineated in this study has tried to focus on the NPS market from the users' standpoint by taking into consideration those elements that seem to be more relevant for them. The most important ones are as follows:

- Types of effect expected and sought from NPS;
- Perception of the quality of NPS;
- Influence of the legal status related to the perception of safety, price, availability and quality;
- Type of the information shared among NPS users;
- Approach to the NPS market and its connection with illicit market;
- Advantages expected from NPS supply channels, in particular from the Internet market;

To enhance the knowledge of the NPS supply chain from the point of view of the demand means also to examine in depth some factors and specific characteristics of NPS users. Evidences from this study suggest some hypotheses that need to be confirmed:

- NPS users can be divided in two main groups, different by age, knowledge, awareness of NPS, and susceptibility to legal status: experienced users of other illicit drugs and naive drug users. Experienced users are older than naive users, more aware and careful about the substances they are taking, their dosages and effects. Naive users seem to be more influenced by the legal status of NPS and are more inclined than experienced users to associate legality to safety;
- Some differences between market on the surface web and the darknet market are emerging in terms of type of substances sold, quality, and aimed target. Darknet markets seem to be more oriented towards selling high-quality illicit drugs, but also offer a great variety of other substances for experienced users seeking for new drugs. The surface web seems to be more oriented towards selling NPS of inferior quality and more dangerous for the unexpected and unknown effects. Surface web could be more addressed to naive users.

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https://www.erowid.org/
http://www.legalhighsforum.com/

Websites of information and harm reduction on drugs

http://www.bluelight.org/vb/faq.php
www.talktofrank.com
www.sostanze.info.it

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