

## GDPO Situation Analysis

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# A year since the closure of Silk Road: A snapshot of evolved Dark Net drug markets (October–November 2014)

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### Subject

Over the year since the original Silk Road Marketplace closed as a result of law enforcement activity, the ‘hidden’ marketplaces operating over the Tor Network have fragmented and overcome a loss of trust due to scams, hacking attempts and interdiction operations. Dark Net markets are enjoying renewed growth, spurred by enhanced security features and information exchanges that make it easier for new users to participate, and which have renewed consumer and seller confidence in hidden market transactions.

### Analysis

- In terms of listings, the hidden marketplaces have seen exponential growth over just a few months. In contrast with the near-monopoly held by the original Silk Road in terms of listings and market share at the end of October 2013, a year later there are now more markets offering a larger range of products<sup>1</sup>.
- Between October 16<sup>th</sup> and November 2<sup>nd</sup> 2014 there were three main markets which had a majority share of total listings:
  - ∅ Evolution with 17,512 listings and a 27.97% market share of total listings
  - ∅ Agora with 17,200 listings and a 27.47% market share
  - ∅ Silk Road 2.0 (prior to closure in November 2014) with 15,837 listings and a 25.29% market share.

These marketplaces made up for a staggering 80.73% of the total number of listings across the 14 marketplaces analysed here, with an average market share of 26.91%. The rest made up for the remaining 19.27% of the market, with an average market share of only 1.75%.

<sup>1</sup> For the purposes of this report fourteen of the largest marketplaces of the darknet have been analysed. These are (ordered by the number of listings): Evolution, Agora, SilkRoad 2.0, Cloud 9, Andromeda, Hydra, Bluesky Marketplace, TOM Market, Black-Bank Market, Tor Bazaar, Alpaca, Middle Earth Marketplace, Area 51, and Outlaw Market

- The data shows a pronounced growth tendency in the listings of the analysed markets, with average growth of 114.62%<sup>2</sup> over the span of five months. Among the three largest markets Evolution had grown most with 92.35% followed by Agora with 44.65%. Contrary to all expectations, but understandable due to the hack it suffered in February 2014 as well as due to the lack of security measures in contrast to its counterparts, Silk Road 2.0 was one of the three markets that suffered a contraction as its listings decreased by 11.06%. Nonetheless, since May 2014 the overall online darknet marketplaces' growth stands at a massive 40.98%

This expansion of hidden market operations is due in part to new features such as multi-signature escrow, internal tumblers and 2-factor authentication. These have helped to allay user concerns that their money will be stolen or their Bitcoins traced by law enforcement through the blockchain. These facilities have driven trade by reducing barriers to market entry, including fear of law enforcement and scamming. Some markets require users to provide a Bitcoin address and/or PGP signature before registering. This acts as an authentication measure while reducing the entry of users who do not understand how the markets work. This has led to smoother overall market operation as administrators have to deal with less technology related questions from new users.

Another factor driving market growth is the variety of third party sites offering links, articles and advice on various markets both on the darknet and on the regular internet such as deepdotweb.com and vault43.org. These sites have links to markets, show their uptime and provide analysis that allow users to make a more informed choice on where to get their products. They also provide information to new users on Bitcoin, Tor and PGP that breaks down lack of understanding of key technologies that have previously been a barrier to market entry.

## Challenges for Law Enforcement

There appear to be six key challenges for law enforcement going forward:

1. Relationships between users of the hidden Dark Net markets are purely transactional. This poses operational challenges for law enforcement whose frameworks for interdiction are configured around deconstructing vertically organised criminal groups and networks. The emergence and growth of hidden markets requires new investigative approaches if online drug transactions are to be contained and interdiction successful. These have not yet crystallised.

“... it appears that EU law enforcement, Europol included, has not fully conceptualised how to integrate this cyber dimension into all relevant aspects of police work, let alone devise a strategy and implementation plan to make this happen”

**Europol EC3, iOCTA Report 2014<sup>3</sup>**

2. Law enforcement agencies currently lack the technological capacity and specialisation necessary to counter the new wave of advanced cyber criminality. There needs to be programmes for the study of such technologies, and for centres of excellence in the field of hidden markets and future technologies that will focus on anonymity.
3. National legislative frameworks and activism against increased surveillance of cyber activities are an impediment to the expansion of law enforcement activities.

2 Some of the smaller markets, with listings in the realm of hundreds witnessed levels of growth as high as over 500% in the same timeframe

3 Europol EC3. (2014). *The Internet Organised Crime Threat Assessment (iOCTA)*. [https://www.europol.europa.eu/sites/default/files/publications/europol\\_iocta\\_web.pdf](https://www.europol.europa.eu/sites/default/files/publications/europol_iocta_web.pdf)

4. Decentralised cryptocurrencies such as Bitcoin remain difficult to trace as they offer pseudonymity, and anonymity if the coins are laundered. Law enforcement progress in addressing the use of Bitcoin for illicit hidden market transactions will increase the development, adaptation and security robustness of new mediums of exchange. The emergence of new cryptocurrencies and related technologies such as DarkCoin, Darkwallet, Stealthcoin and BitcoinDark are compounding the problems posed by Bitcoin and they offer much higher levels of anonymity to users. While Bitcoin remains the main currency used in hidden markets, it is clear that the effort to create more anonymous cryptocurrencies is moving faster than the capacity of law enforcement operations to limit and curtail their use as tools for money laundering and facilitation of illegal markets.
5. As internet use expands, media coverage of the hidden markets grows and more sites like deepdotweb and vault43 begin to emerge, average internet users will become more aware of these markets and participation numbers will continue to increase. Improvements in security features will increase the trend of cyber drug trading, which is seen to offer less risk than street-based sales and purchase.
6. As demonstrated in all other aspects of enforcement against illegal drug markets, progress in interdicting and closing down key actors serves only to fragment dynamic market activities, a hydra headed syndrome that mitigates against sustained progress in reducing the supply and consumption of illicit drugs. In terms of the hidden markets, this ongoing dilemma in drug policy enforcement has been demonstrated in the proliferation of new market sites following the much-trumpeted closure of Silk Road.

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