



INTEGRATE



BUILD



PORTAL

IMPACT

Praha, March 13, 2007

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kezzler



Does safety
ever stop ?



Kezzler's 1st postulate on drug security

*” No drug product is
safe before having
been authenticated,
after which it will
be much **safer**”*



Kezzler's 1st postulate on
drug security

(street version)

*"If you **don't** check it,
you **haven't** checked it"*



Kezzler's 2nd postulate on
drug security

*” Regulations don't stop
counterfeiting,
security technologies will
provide safer products”*



Kezzler's 2nd postulate on
drug security

(street version)

*"The product item is the
King of Security"*

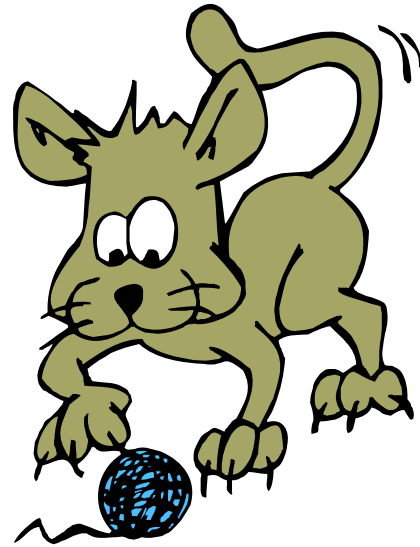
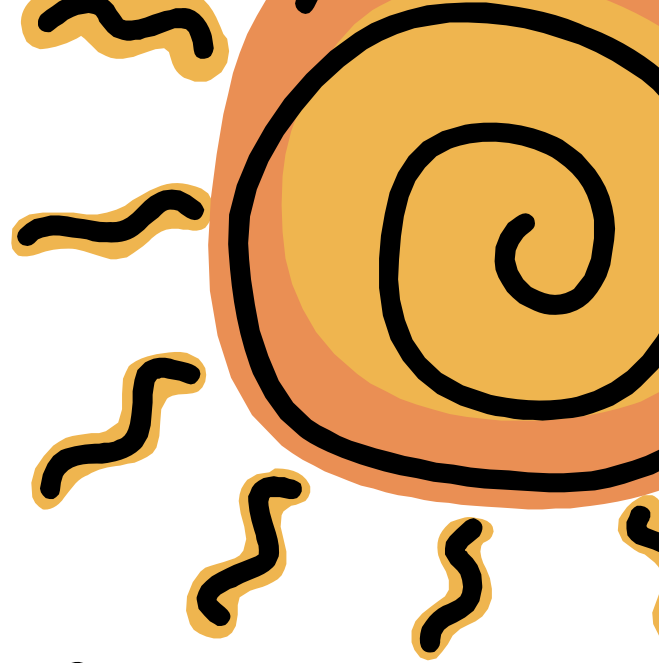
Why do we need product security ...




OR

In the dark all cats are black







**The world's largest
and most motivated
intelligence service**

Meet the consumer



Digital ID
(Security code)



All cats allowed
– if identified !

Time is of essence
control in real time

Multi-purpose

- Quality Assurance System
- Anti-counterfeiting measure
- Diversion detection
- Production outsourcing control
- Licencing control
- Information system
- Anti-theft
- Recall system
- Customer service system
- Law and regulatory compliance
- Business Research tool
- Marketing and loyalty system

Information Technology makes the digital identity based solution both proactive and reactive – as well as dynamic to evolving needs

Core technologies

KEZZLERCODING

authentication

Numbering technology designed for fast and secure authentication of extreme high volume products. Every single product item/unit is marked with a unique, non-repeated encrypted alphanumeric code. Generation and authentication of kezzlercodes is performed online without ever storing the codes in a database system.

Kezzlercodes are self-contained and reconstructed on demand by the kezzlercode encryption engine.

Kezzlercodes do not carry or contain any product or logistical information. They simply serve as a transient link to such dynamic information.

COMPASS

hierarchy tracing

Tracing technology handling products packaged in a hierarchy marked with kezzlercodes. Separates the tracking (*authentication + circumstantial information*) and tracing process, leaving a minimum database footprint storing only tracking entries that actually have taken place.

Compass boosts the retrieval of a complete reverse and forward tracing record by searching all hierarchical levels in parallel and independently and further narrowing the processing covering only the affected lot/batch as a superindex.

Core technologies - 2

Source Protection

system level

The digital seed elements employed for kezzlercode generation and authentication (SSP keys) may be stored and processed blindly by several INDEPENDENT AND CLOSED computer system entities *without* encryption key exchange.

This gives protection against Social Engineering Attacks, i.e. extortion attempts to obtain authentication codes from one single (internal) source.

With kezzlercodes these codes "do not exist" in clear text (no repository) in addition to the fact that even on the system level they cannot be acquired unless extorting *several and all* bodies trusted with their respective keys.

No single party is empowered to generate nor authenticate the kezzlercodes, a process which may only be done successfully when all bodies coact.



Intentor SSP 3.1.1 , performance data per *production block*

Block type	Second	Minute	Hour	Day	Year
Generation	6 000	360 000	21,6 M	518 M	189 B
Authentication	65	3 900	234 000	5,6 M	2,05 B

M = 10^6 (million) , B = 10^9 (billion)



Strengths:

Easy to apply

Inexpensive

Instant authentication

Granular protection down to item level

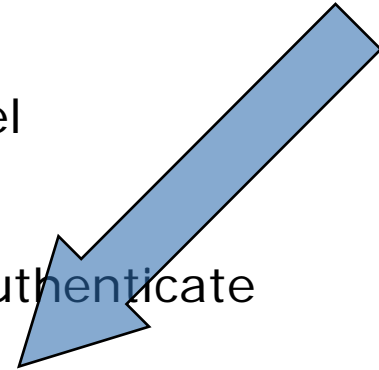
Is pro-active and re-active

No need for expertise or devices to authenticate

VERY HIGH AUTHENTICATION RATE !

Generates intelligence

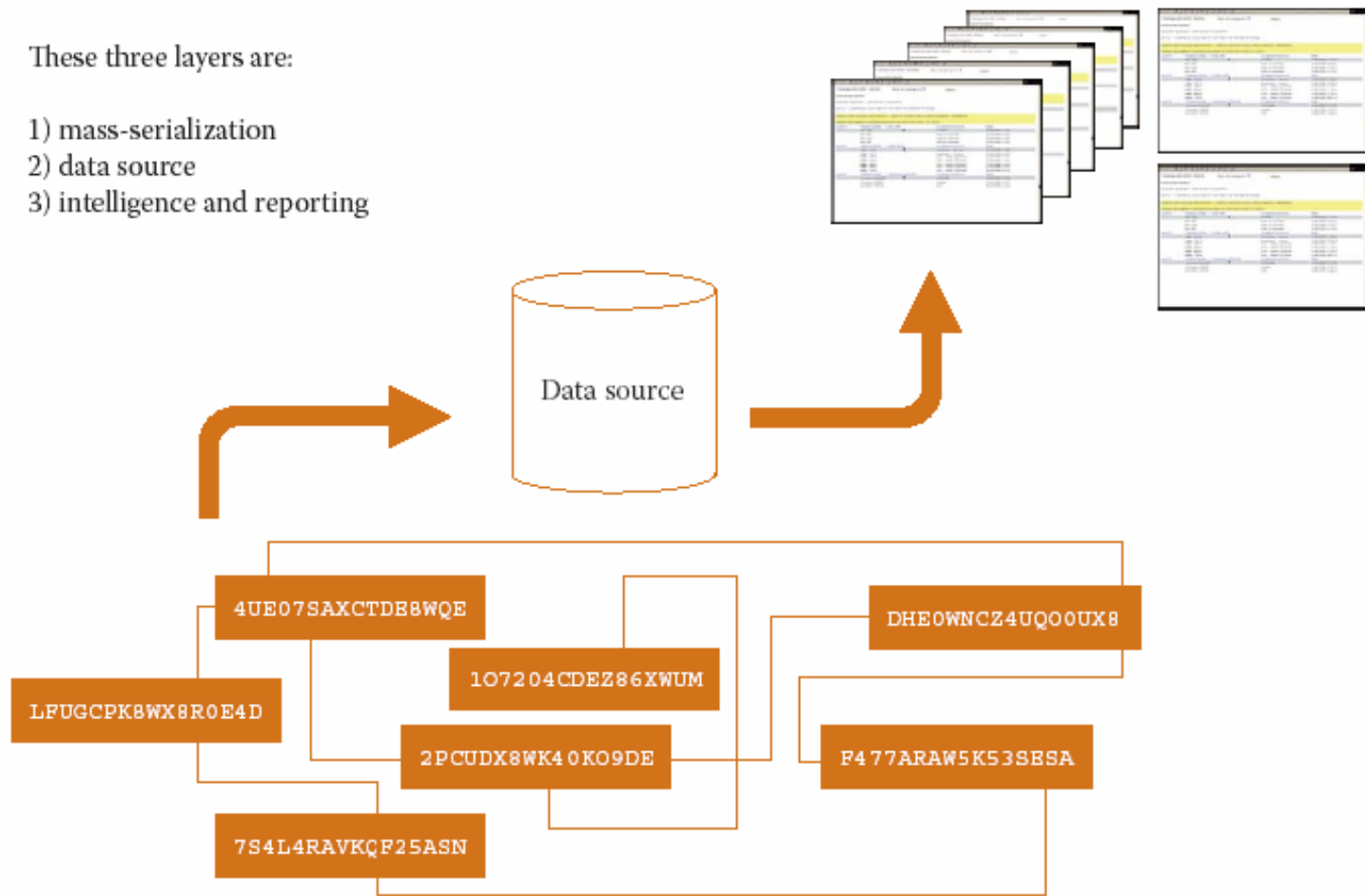
Longevity of protection is excellent



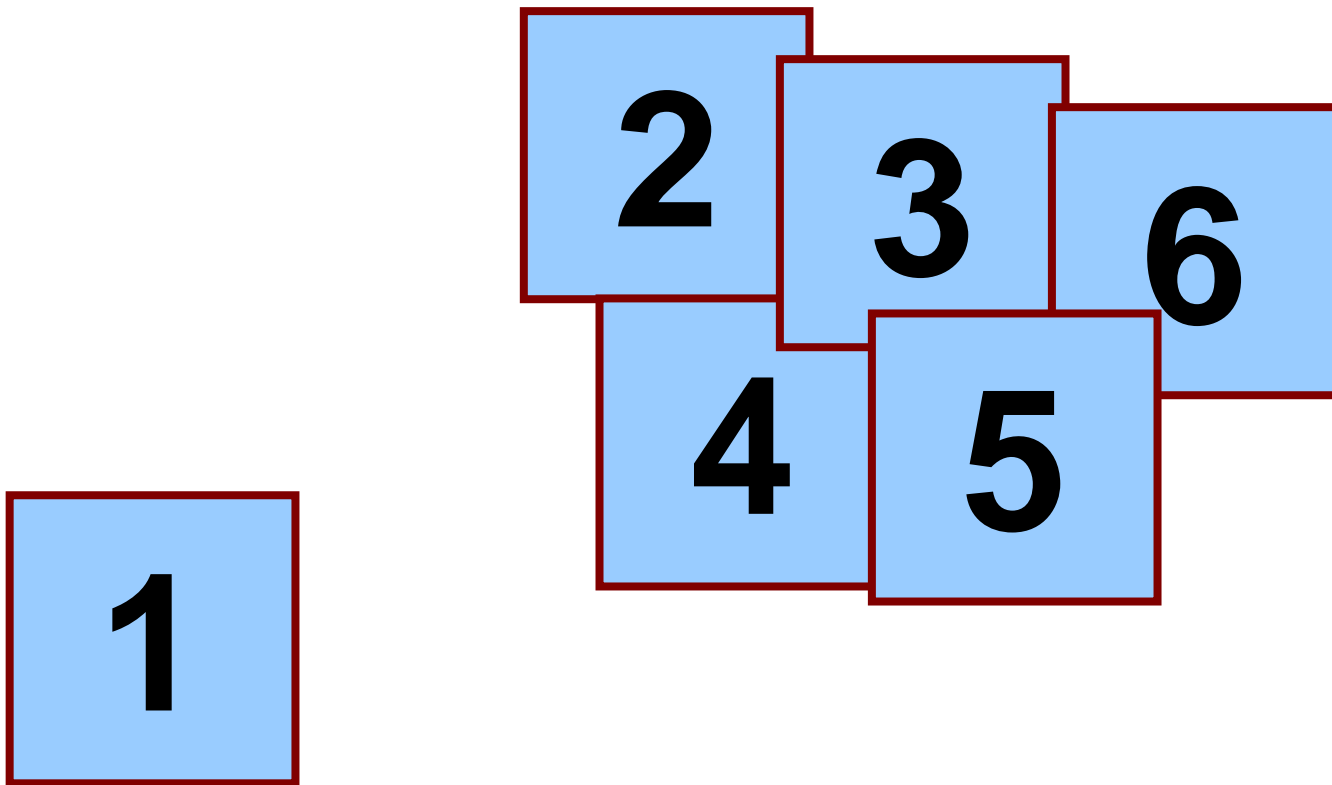
Secure Track and Trace Functionality Layers

These three layers are:

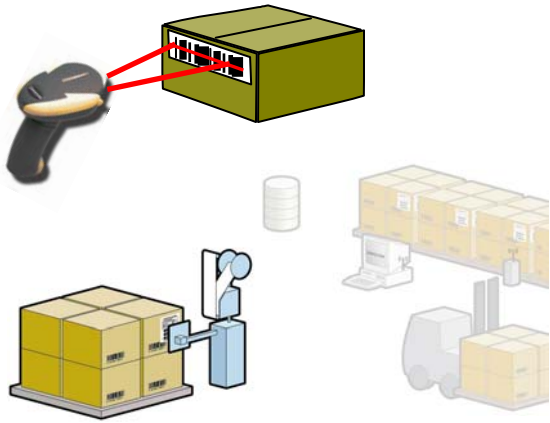
- 1) mass-serialization
- 2) data source
- 3) intelligence and reporting



THE SIX STAT FOUNDATION PILLARS



1



Participation is mandatory

2



Digital ID

3

ONLY
the security code
permits secure
tracking and tracing

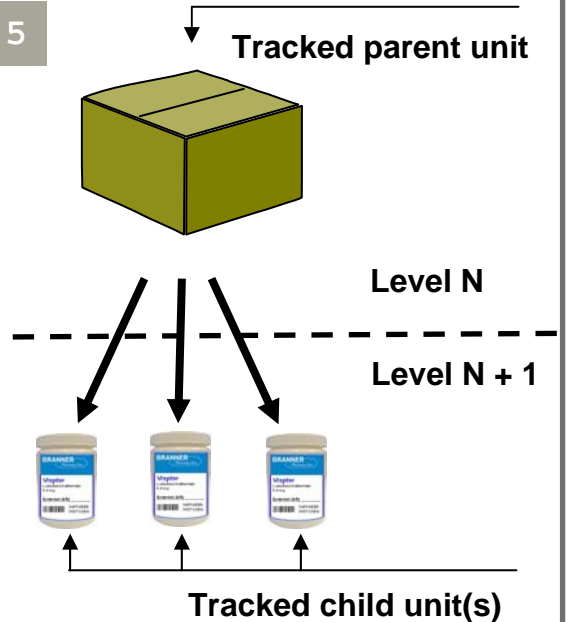
4



Logical groups

LOT NO

5



Tracked parent unit

Level N

Level N + 1

Tracked child unit(s)

6



Global scalability



LFPAG7W2LKD4WUI2

HK2IWF0HU20KA8M7

SKWFDQU8AOQTI272

IA2DUF5K72WOHMFV

253FIAEUGU2MMK7W

W27IX8CSAUD0KN2F

WQ2HKAU1QE2X7GIF

O2KZWFUAINUU6B27



Question

- what if someone copies a security code and puts it onto another product ?



ANSWER

Part 1 – physical protection

The identity codes are protected by the product packaging

- hidden / out of sight / covert
- tamper evidence
- void if removed data carrier
- forensic data carrier



ANSWER

Part 2 – logical protection

The Product ID (codes) are protected by the software

- limit of allowed public FIRST authentications to ONE
- counterfeiting *must* buy genuine product first !
- Secure Tracing Intelligence reveals "out-of-order" authentications and tracking/tracing behavior
- Safety in Numbers, extremely difficult to counterfeit million and billions of unique product items

System components

Secure Track and Trace Software

Product ID data carrier

Selected on basis of

Security
Cost
Packaging

+ running on

LASER

Glass and metal, etc

TEHSL

Tamper Evident
High Security Labels

OTHER

RFID, taggants, ink-jet, etc

=

World leading product security

Technological challenge

An enormous number of product units are being manufactured globally. Conventional technologies, such as databases, are not designed to manage such a number of products and their unique identities.

Intelligence and control by security

Re-active

Enforceable Supply Chain Polices

... propelled by product identity

Preventive

Monitoring the product safety 24/7

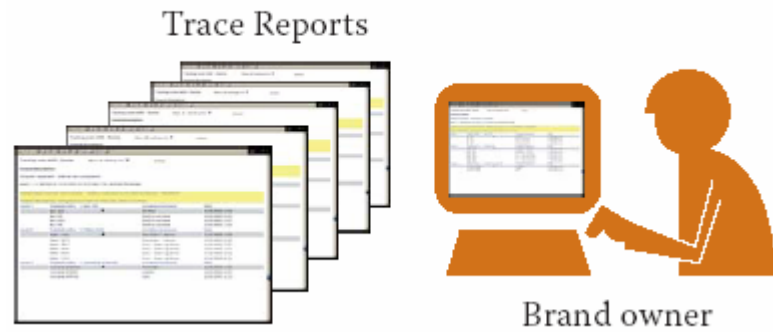
Acting upon data

Reactive supply chain policy



Proactive supply chain policy

Accumulating data

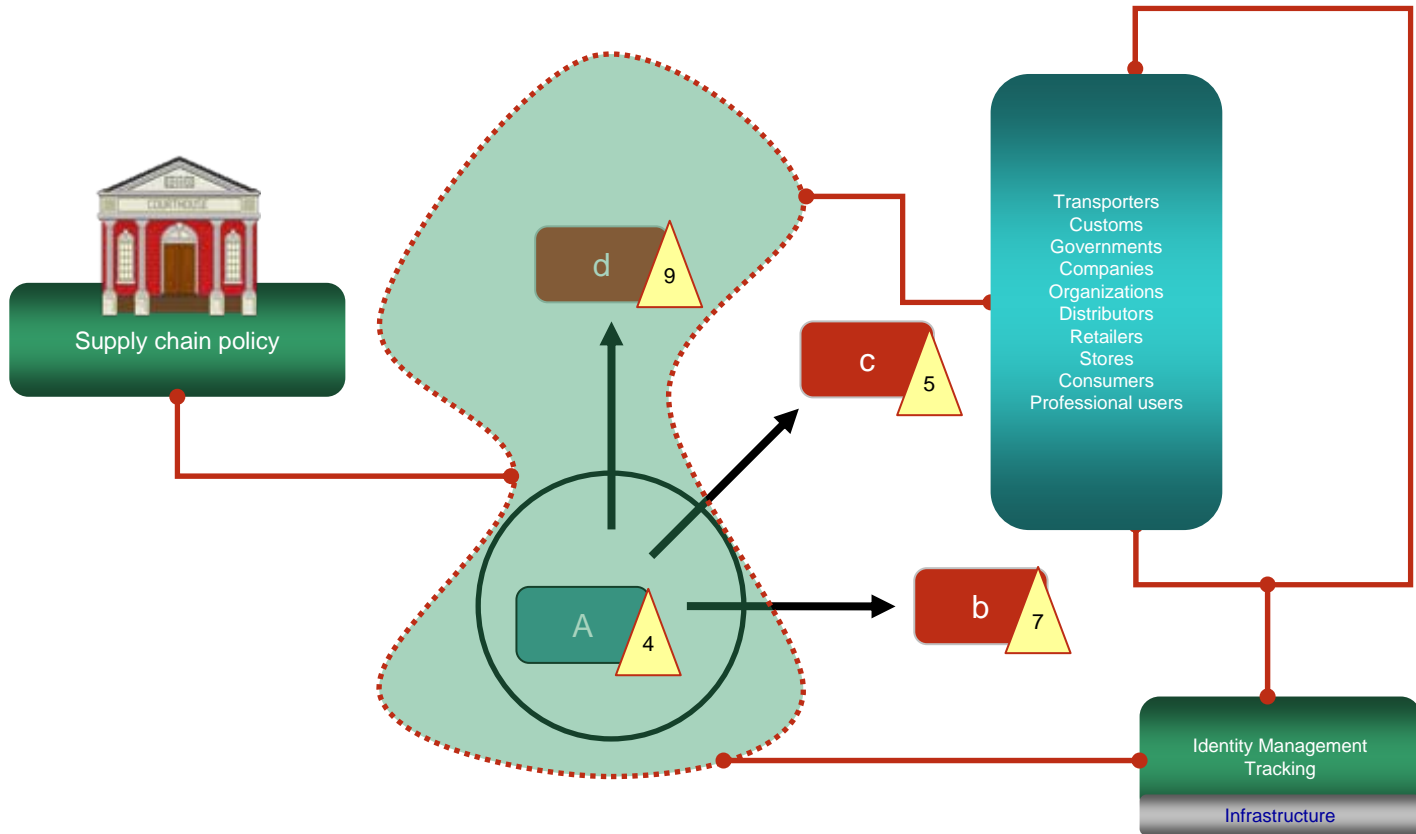


Product security by remote control

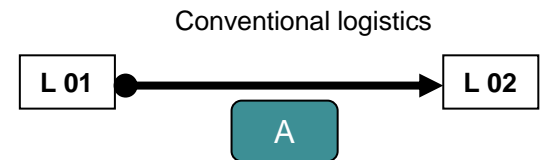
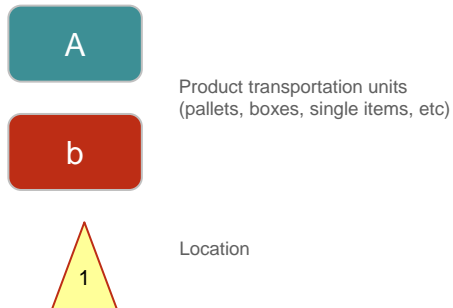


In the supply chain nobody knows you're a dog

Secured supply chain



Legend





unit trace report

Visptor www.branner.info

Report date 2004-10-06 04:21 / AuthID TR443
 NDC 541-976-2267
 Batch 1W004RF6
 Produced 2003-01-08

Production site NC123/12
 Exp. date 2007-01-07
 ePC readout 01.3452332.876521.78654

Security code 34F 56KER 54S 71GE4

12 - Product Recall Class II issued 2004 - 06 - 01

[details](#)

Alert status code(s)

46 - Updated Consumer Advise

[details](#)

Level 1 - shipment

Unit (1/1)	Location	Dispatch ID	Date and time	Action
7TFXZDR62WDV4RGN	123 Raleigh, NC	25543	2003-01-12 13:42	out
	454 Salt Lake City, UT	6554	2003-01-16 16:46	in
	454 Salt Lake City, UT	8776	2003-01-18 09:54	split

Level 2 - pallett

Unit (12/13)	Location	Dispatch ID	Date and time	Action
STGYUGHT900TR2WQ	454 Salt Lake City, UT	8776	2003-01-18 10:11	out
	211 Bismarck, ND	5431	2003-01-21 07:30	in
	211 Bismarck, ND	5431	2003-01-22 11:12	split

Level 3 - carton

Unit (42/54)	Location	Dispatch ID	Date and time	Action
KLMN46IK3471NMJK	211 Bismarck, ND	5433	2003-01-25 14:33	out
	321 Seattle, WA	6112	2003-01-27 19:22	in / csplit

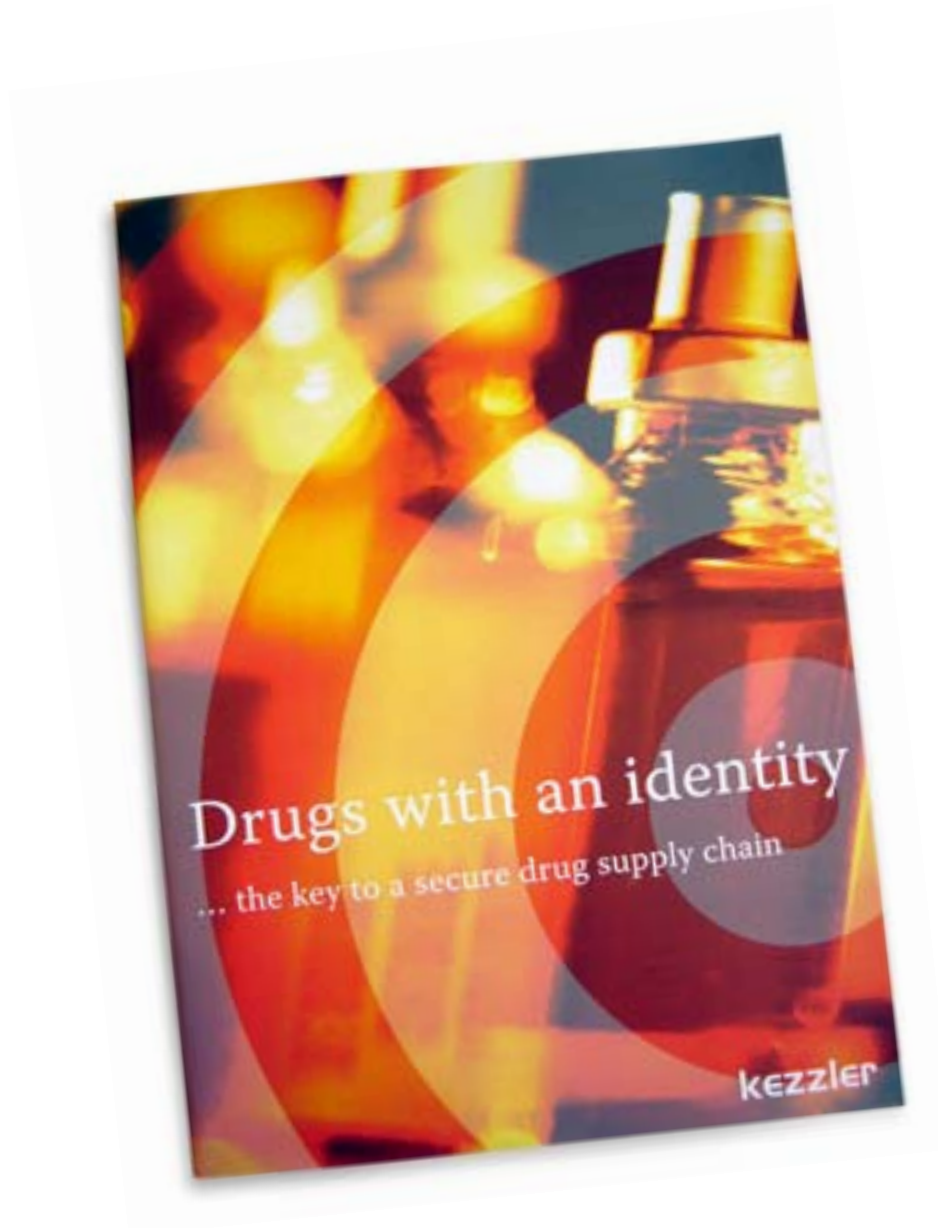


Secure Track-and-Trace enablers

- Product ID (carried by product to be protected)
- Authorization (of users and locations)
- Internet
- Supply Chain Policies Enforced by Remote Control

Furter reading

kezzler



safety in numbers®