

課題探求科目/特別講義

2019.10.15

# Risk/Crisis Management③

## 危機管理論③

Risk management in the era of IT improvement(1)

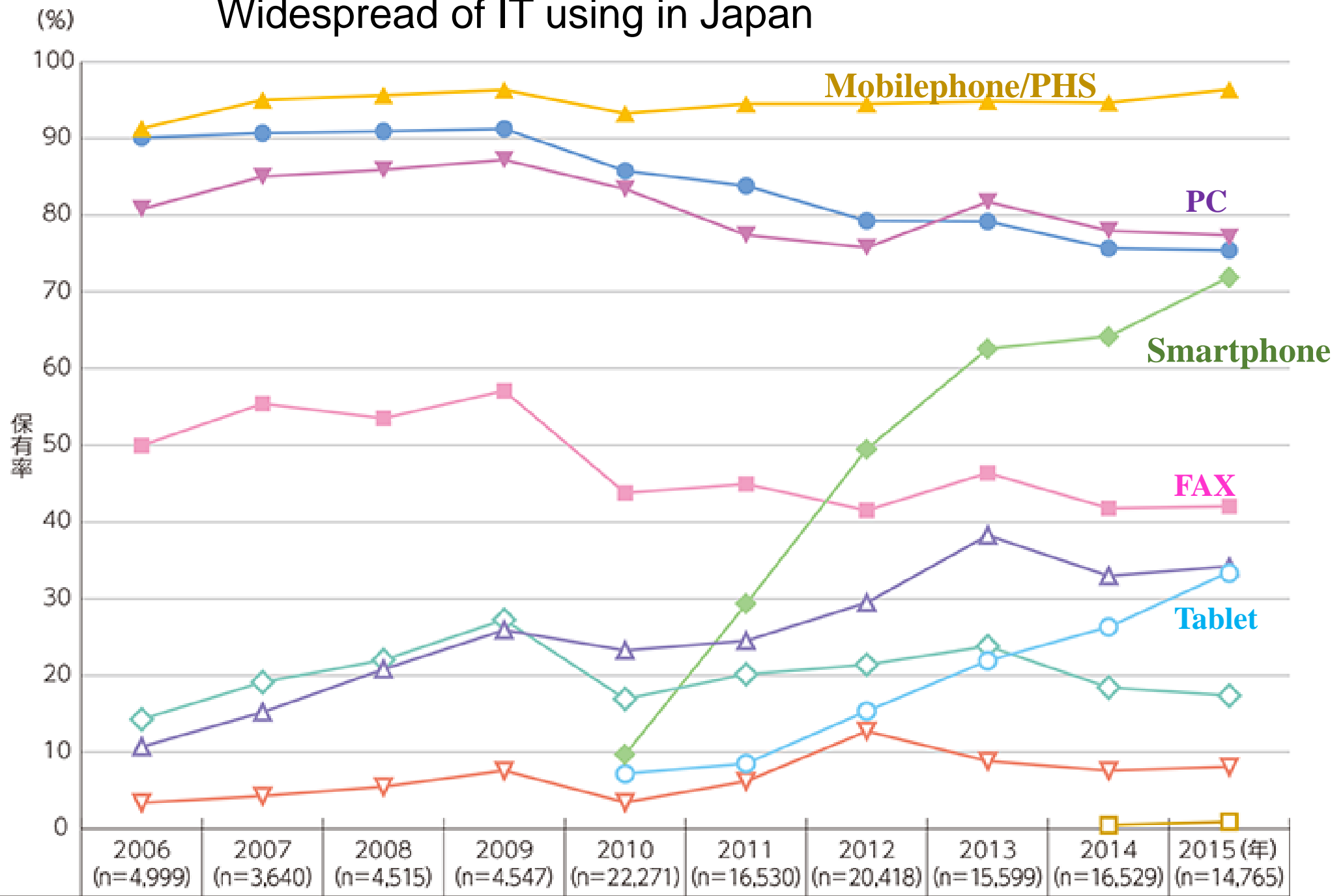
IT時代の危機管理(1)

Prof. Fumiaki Yasukawa

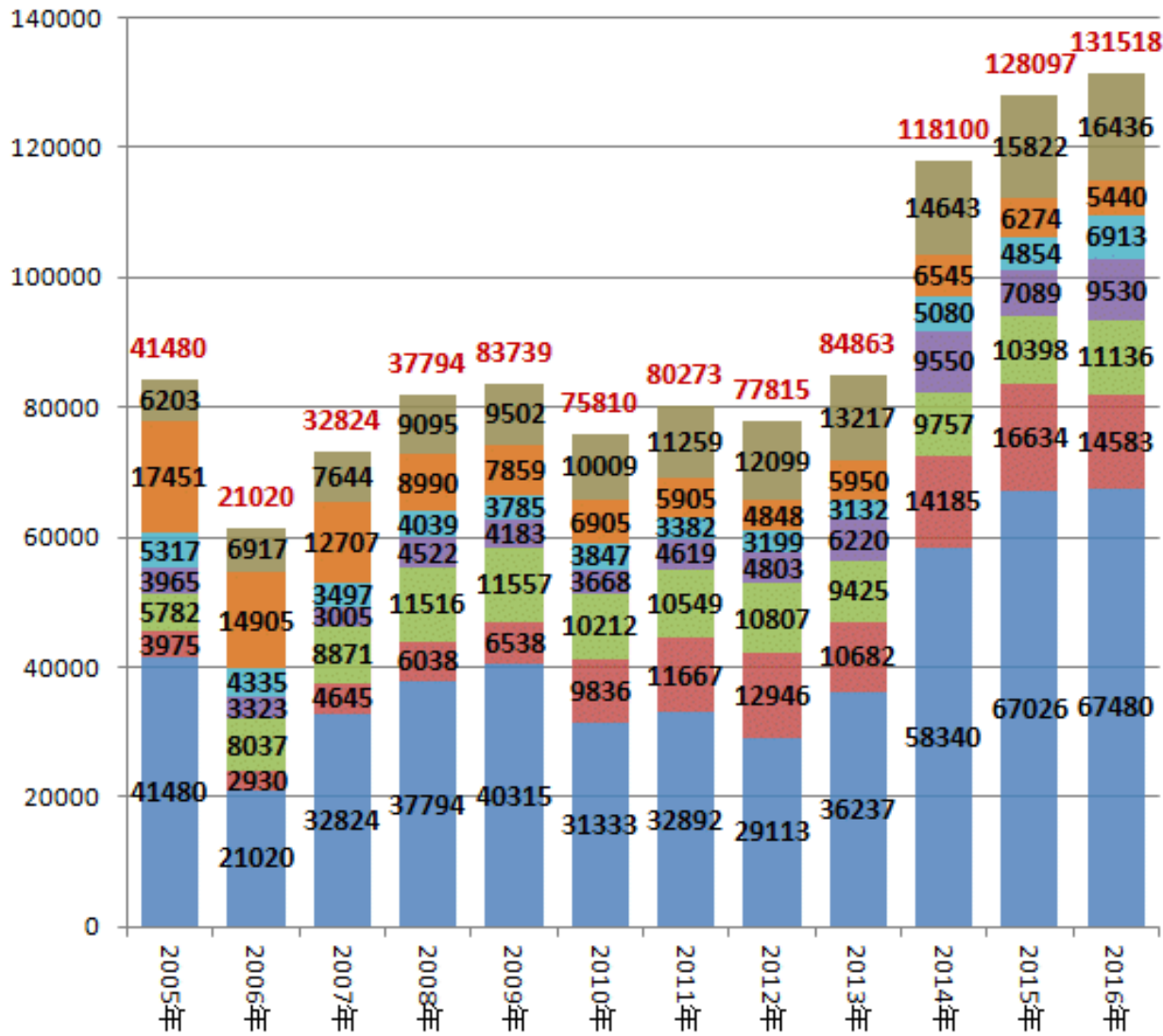
担当: 安川文朗

# IT Risk surrounding daily life events

# Widespread of IT using in Japan

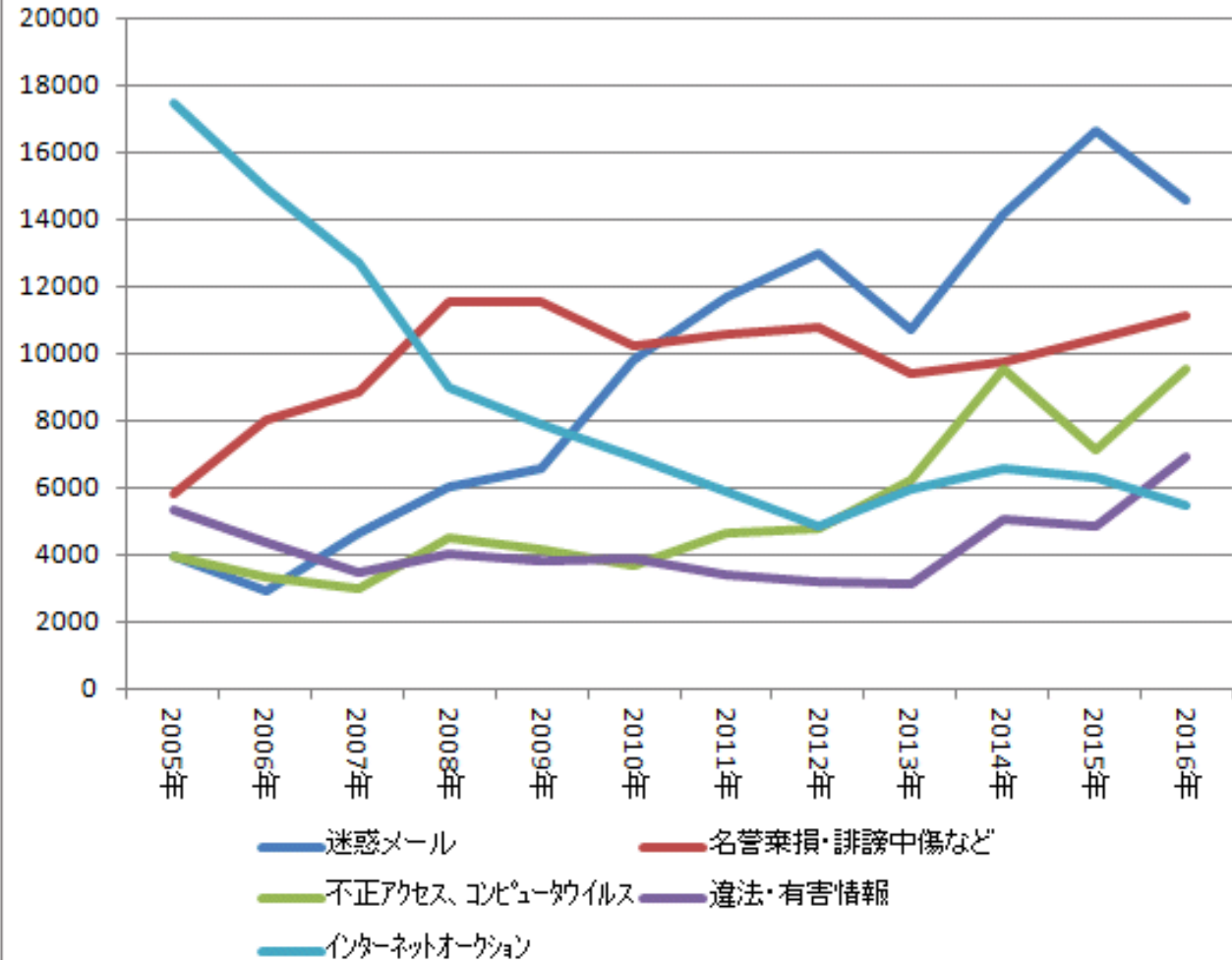


## サイバー犯罪などに関する相談件数推移(件)



- 詐欺・悪質商法(インターネットオークション除く)
- 迷惑メール
- 名誉棄損・誹謗中傷など
- 不正アクセス、コンピュータウイルス
- 違法・有害情報
- インターネットオークション
- その他

## サイバー犯罪などに関する相談状況 (詐欺・悪質商法以外)



## Number of “cyber crimes” through IT

Data : Japanese Bureau of Police 2017

# Ranking of cyber related risks

by Information Promotion Agency  
Japan(IPA)

rank	major cyber threats in 2017	major cyber threats in 2018
1	information leak	information leak
2	ransomware attack and damage	ransomware attack and damage
3	personal information theft through internet	bussiness male fraud
4	disturbance attack to IT services	improper use of vulnerable information
5	information leak due to mal governance	lack of IT security professions
6	manipulation of website	personal information theft through internet
7	illegal login in website	vulnerability of IoT equipment
8	vulnerability of IoT equipment	information leak due to mal governance
9	underground service	disturbance attack to IT services
10	illegal use of internet banking	underground service

# What is **IT risk**?

Risk related to IT system dealing with.....



criminal access to / through Internet

trial for breaking down IT securities



**Serious treats for social infrastructures**

# Information security and risk management

## What is security?

Secure + free from care → situation without anxieties  
安全 心配からの解放 心配のない状況

## The situation of **security loss**

**Loss of confidentiality** 機密性の喪失

Illegal information leakage 不法な情報漏えい

**Loss of integrity** 完全性の喪失

Illegal information falsification and destruction 不法な情報改ざん破壊

**Loss of availability** 加用性の喪失

Inhibition of data use and IT implementation データやITシステムの利用阻害

# Phase of IT Risk

① Safe (risk) of IT system itself

ITシステムそれ自身のリスク

**Weakness against cyber attack**

**Uncontrollable situation by IT complexity**

② Safe (Risk) of information dealt with IT system

ITシステムで扱われる情報のリスク

**Fake information due to computer virus**

③ Safe (Risk) of services provided by IT system

ITシステムで提供されるサービスのリスク

**Overdependence onto IT functions and information**



Example of ①

Example of ②

Example of ③

Example of ①

Fishing virus

Spy ware

Example of ②

Example of ③

Example of ①

Fishing virus

Spy ware

Example of ②

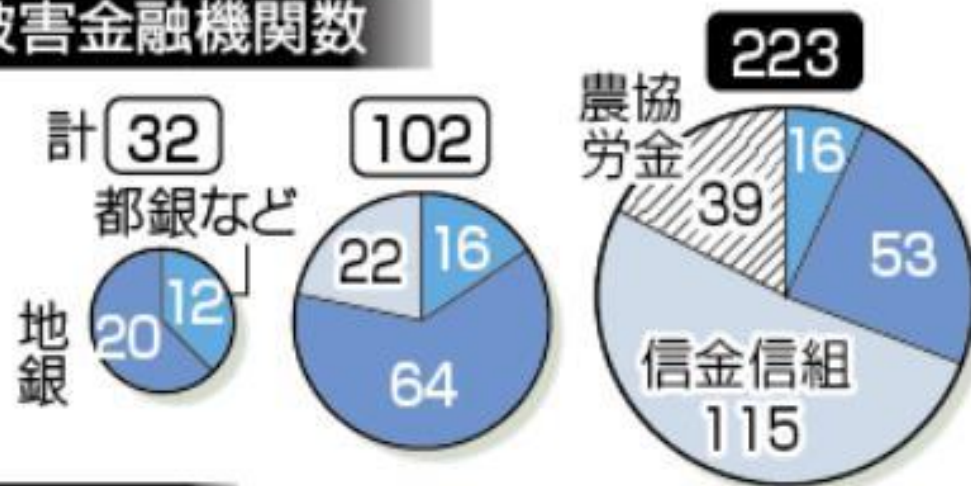
Dark web

Ransomware

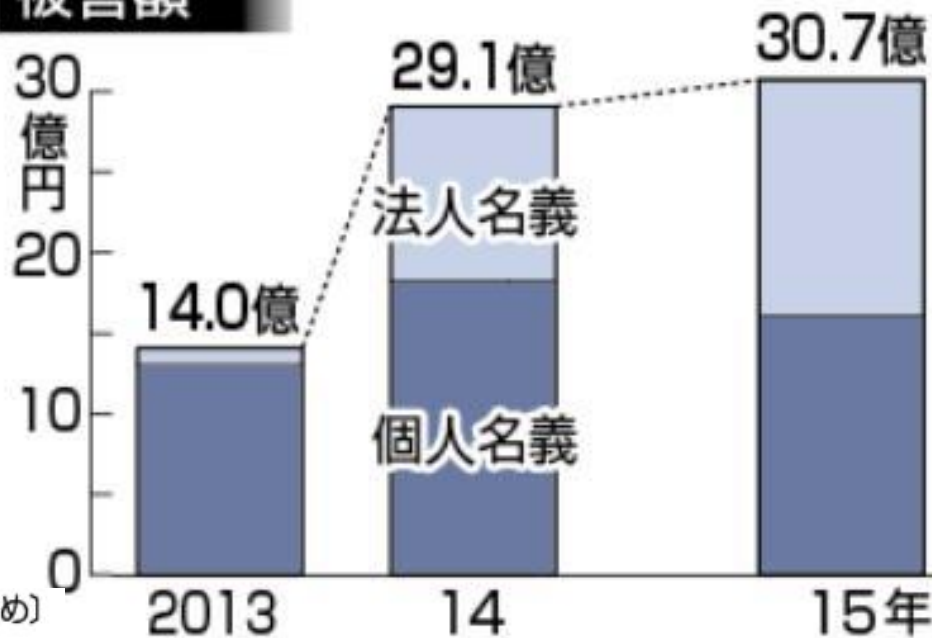
Example of ③

# Number of internet banking

## 被害金融機関数

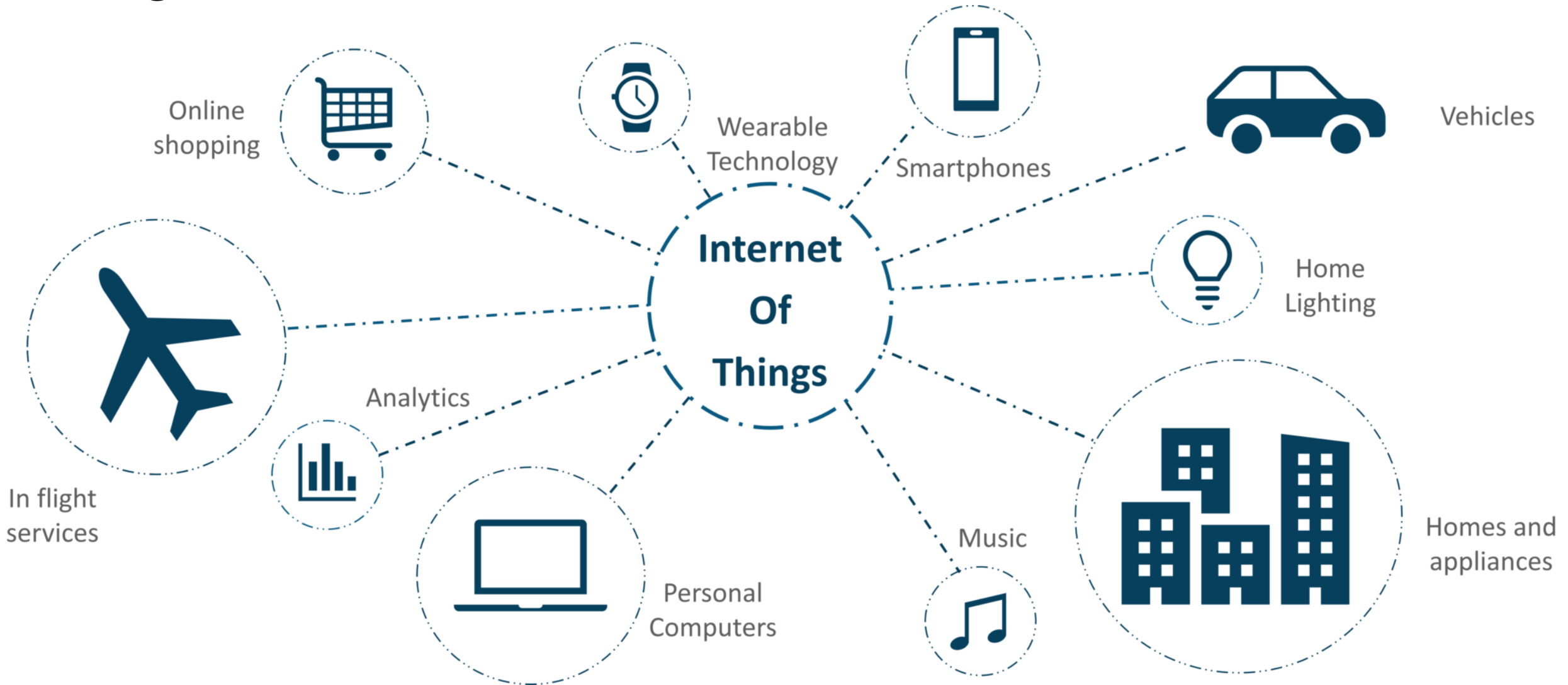


## 被害額



[警察庁まとめ]

# Image of IoT



# Five Guidelines of IoT security

G1 ( Policy ) : settle the basic policy of security considering natures of IoT

- Commitment of managers, preparation for good environment

G2 ( Analysis ) : cognition the risk of IoT

- Identify what should be secured
- Imagine the risk when things is connected
- Learn previous failures

G3 ( Design ) : design to secure what should be secured

- Adopting parts and whole
- Relevancy of safety and relief
- Establish appropriate evaluate system

G4 ( Construction, connection ) : thinking on the network

- Monitor situation of each connected things
- Install Authentication function

G5 ( Operation ) : do best way to information exchange in safe and relief condition

- Communicate with key persons to share what they need to keep
- Communicate with peoples to share what is risk in case of using things