
The Activities of Japan OSS Promotion Forum

November 16, 2016

Japan OSS Promotion Forum
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(Fujitsu, Senior Vice President Software Technology Unit)



- 1. Fluctuations in the world**
- 2. Transformation of the company by ICT**
- 3. Japan OSS Promotion Forum**

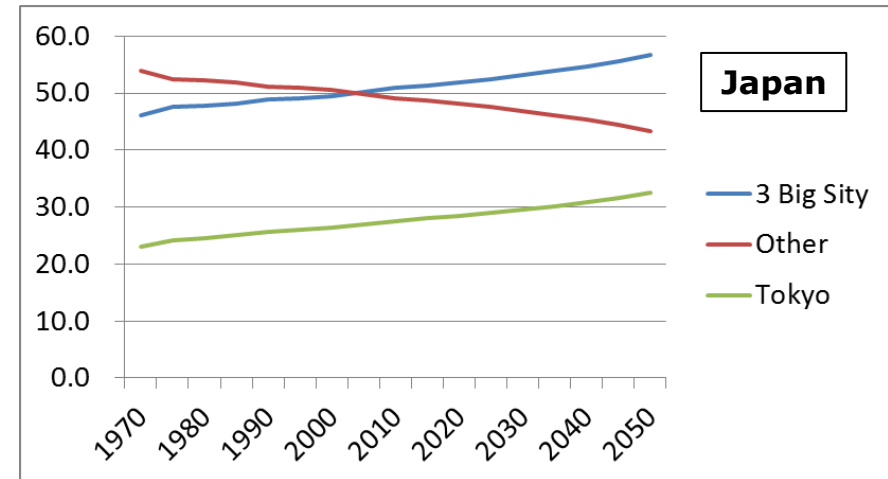
World Urbanization Prospects

The wave of urbanization is increasing and the population in three major metropolitan areas of Japan already is in the majority.

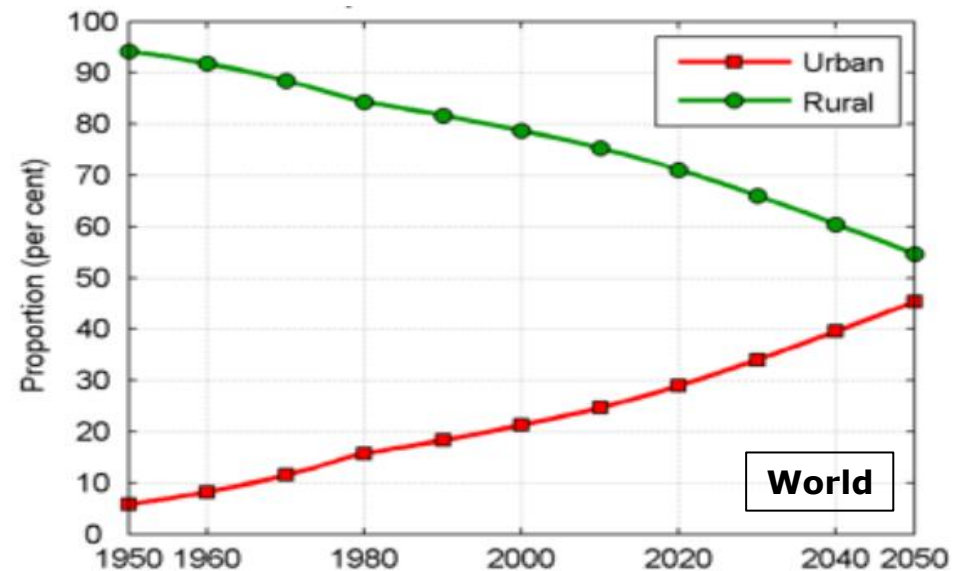
In 2035, the population of the district of Tokyo will be more than 30 percent .

In addition, people of about half in the world in 2050 will live in the city.

Therefore, the major changes of the society are expected.



(出典)国土交通省国土審議会政策部会長期展望委員会「国土の長期展望」中間とりまとめ



Source: United Nations, Department of Economic and Social Affairs, Population Division (2014): World Urbanization Prospects: The 2014 Revision.

Change in society

The change in society becomes necessary against the concentration of population in the city.

One of them is the urban transport system.

(1) urban transport

In the Finnish capital Helsinki, has been repeatedly introduced test of unmanned bus by automatic operation for practical use than last year.

The unmanned bus without the driver finally on public roads began to run.



<https://techcrunch.com/2016/08/17/autonomous-buses-take-to-the-busy-streets-of-helsinki/>

(2) the public and private sectors ITS initiative roadmap 2016 (draft)

In Japan, plan to build the world's most secure road traffic society in 2020 has been submitted.



<http://www.kantei.go.jp/jp/singi/it2/dai69/sankou2.pdf>
官民 ITS 構想・ロードマップ2016(案)

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▪ **Blockbuster Inc.**

In 2004 : 9000 stores. Reigning in the rental video chain.

In 2007 : **Netflix Inc.** began the DVD rental by mail and changed streaming delivery

The number of users of Netflix is more than 50 million.

In 2014 : Blockbuster Inc. was bankruptcy.

▪ **Borders, Inc.**

In 2010 : 511 superstores and 175 stores. the second largest bookstore in US.

In 2011 : bankrupt because of **Amazon's** net selling book or DVD.

Barnes & Noble, Inc. bought it. (Amazon established in 1994.)

In 2014 : Barnes & Noble, Inc. also has partnered with **Google**.

▪ **Wal-Mart Stores Inc.**

In 2011 : 4300 stores in US. \$419B Sales. world's largest retailers.

In 2016 : 269 stores because of **Amazon's** net selling the goods of retail industry.

⇒ **The business is made active by developing the software.**
The business has combined with the software.

Transformation of the company by ICT

In the automotive industry, car company also has cooperation of the IT companies or becoming software company.

Toyota has teamed with Microsoft. GM has teamed with Google and Ford has partnered with Amazon.

Not limited to the automotive industry, the conversion of all industries to ICT company or, is active in cooperation with ICT companies.

❑ TOYOTA-Microsoft

<http://newsroom.toyota.co.jp/en/detail/11611570/>

❑ FCA-Google

<http://www.wsj.com/articles/google-fiat-chrysler-begin-work-on-self-driving-minivans-1464200180>

❑ Ford-Amazon

<https://media.ford.com/content/fordmedia/fna/us/en/news/2016/01/05/smart-cars-meet-smart-homes.html>

Ford said to be “Auto Mobility Company” in North American International Auto Show in this January.

□ Innovator in combination with things

20161004 Fujitsu Limited and QD Laser, Inc. announced that their Retinal Imaging Laser Eyewear has received the Minister of Economy, Trade and Industry Award. Positioned as the highest award of CEATEC Award.



Retinal Imaging Laser Eyewear

This is a technology that projects the Video directly from a micro projector that applies the laser technology to the retina.

The digital Information to which taking picture with the onboard camera and the external are input can be seen.

The utilize by many fields like an advanced use etc. of sight support and AR (augmented reality)/VR (virtual reality) is expected.

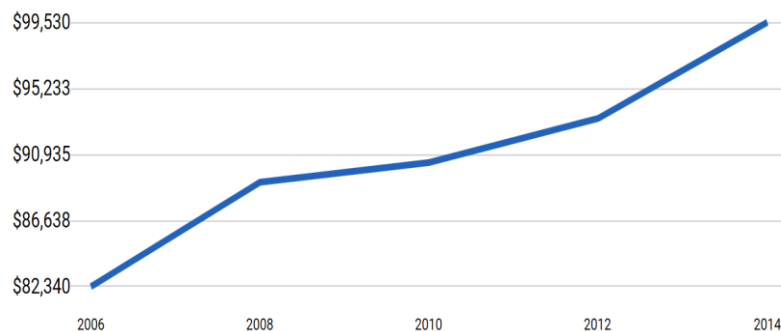
The review of the existing system is necessary for the future of social change.

At that time, software including embedded software in the hardware becomes important.

According to US News, the need for software developers already increased in the United States.

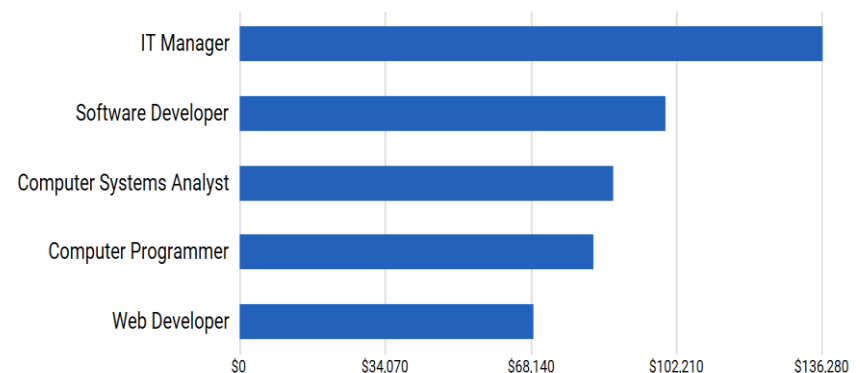
The software development has become the 2-position in the Best Job of the Technology sector and it has increased sharply in salary.

Increasing salary



<http://money.usnews.com/careers/best-jobs/software-developer/salary>

List of Technology Job

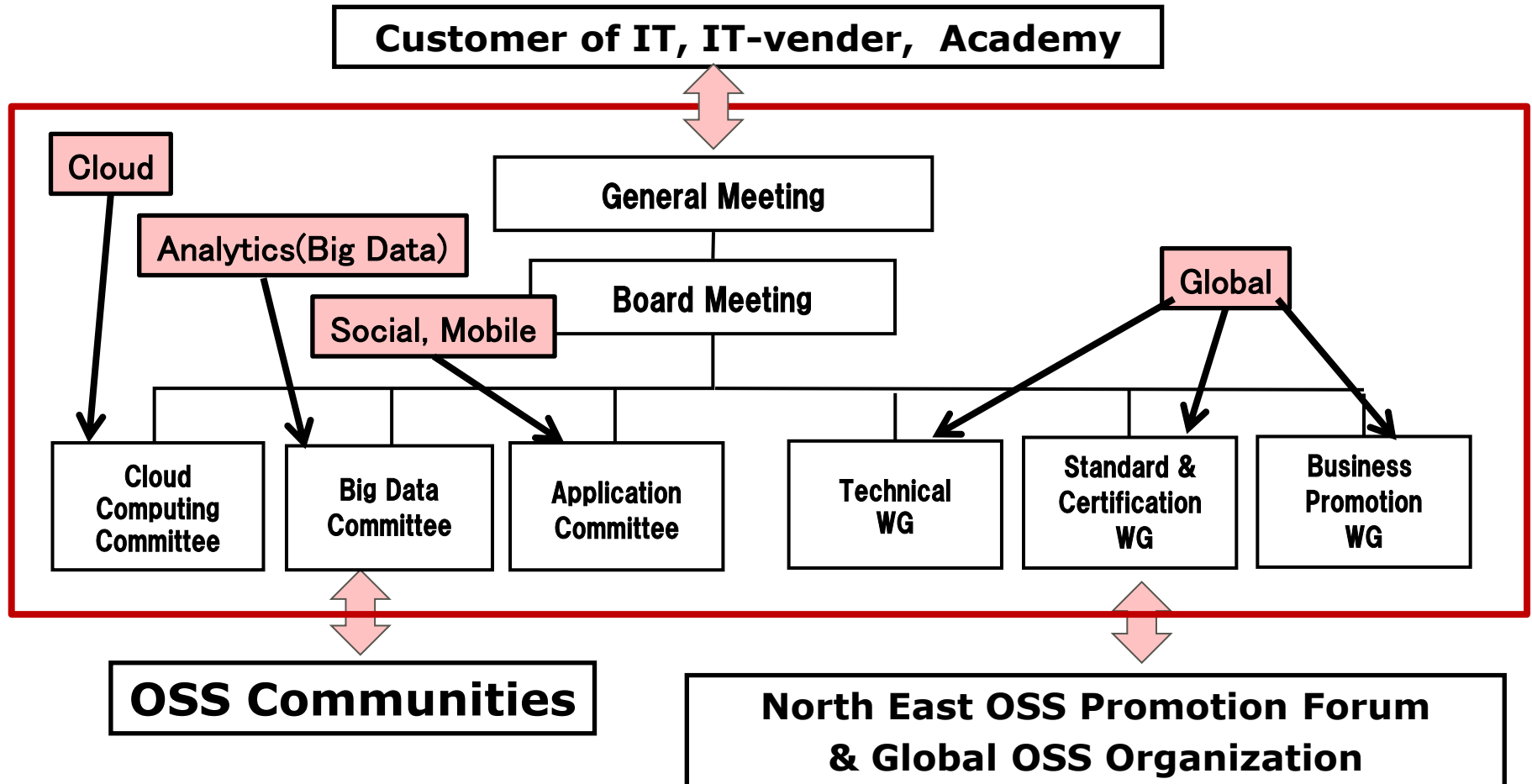


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Policy and Structure of JOPF

■ Our current activities

- ✓ 3 committees are organized to study SMAC(Social, Mobile, Analytics, Cloud) and IoT.
- ✓ 3 WG are organized to study global activities.



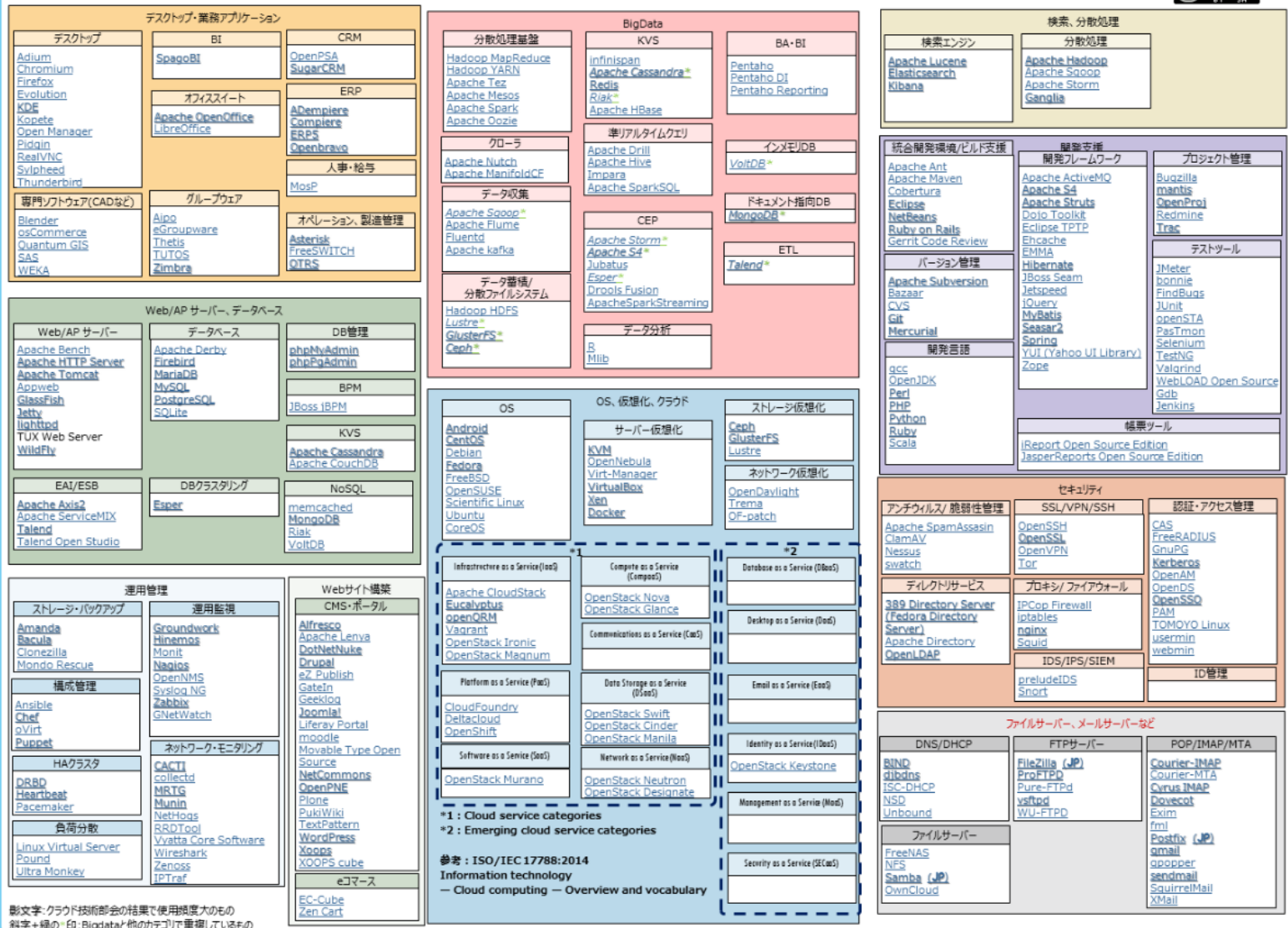
Cloud Computing Committee

Public of OSS bird's eye view 2015 edition

<http://www.ossforum.jp/node/1332>

OSS鳥瞰図 2015

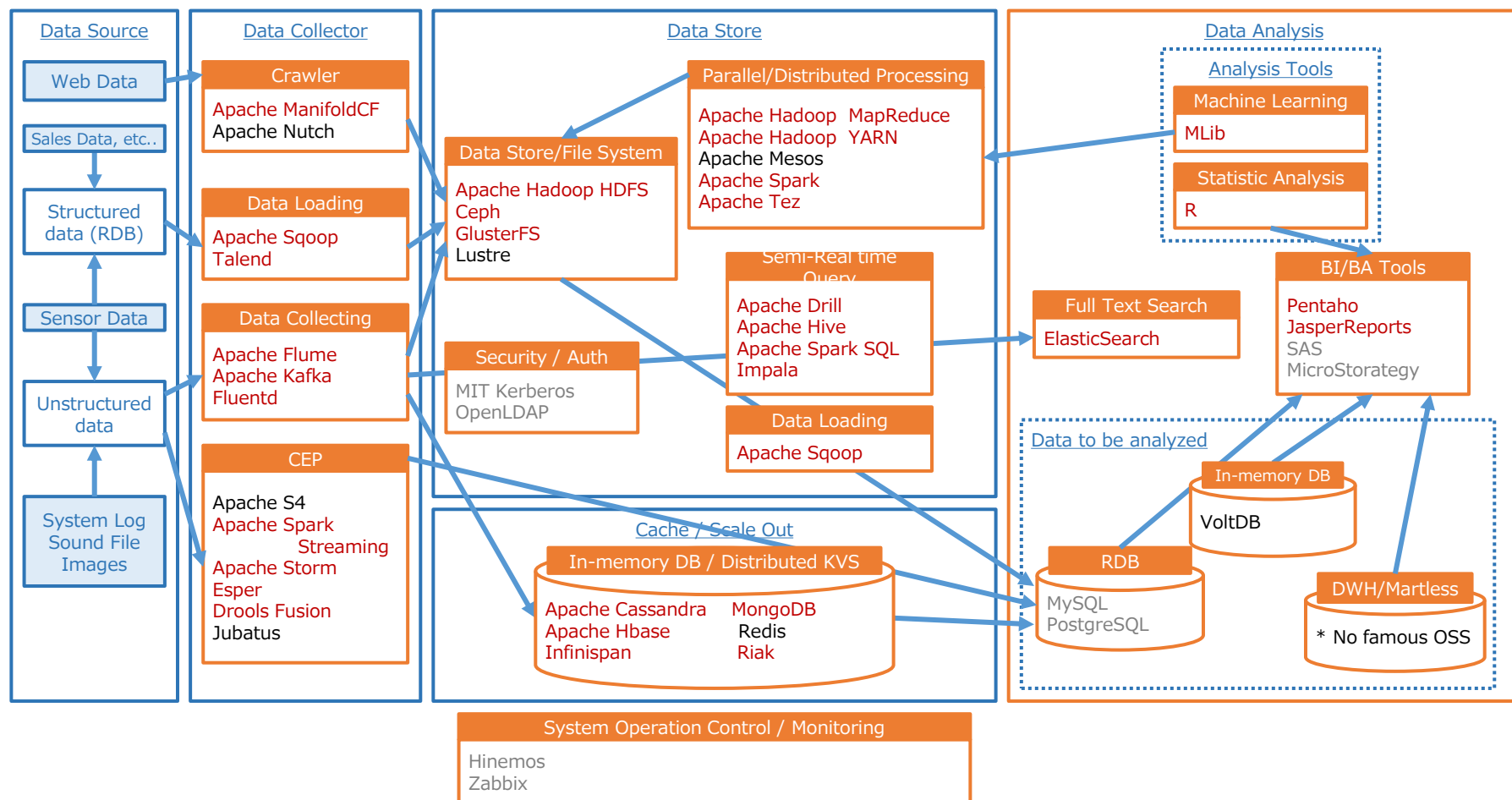
© インプレスIT Leaders、日本OSS推進フォーラム



■ Lightning Talks in Cloud Computing Committee



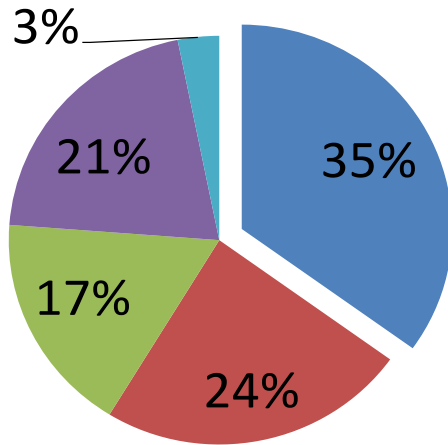
- We can receive Enterprise Support for software in **red letters** in Japan
 - We can build the Big Data Platform only with Enterprise supported OSS
 - Some software are provided as a service in Cloud (e.g. Jubatus)



■ Results of question to analysis of need

Which Data is need?

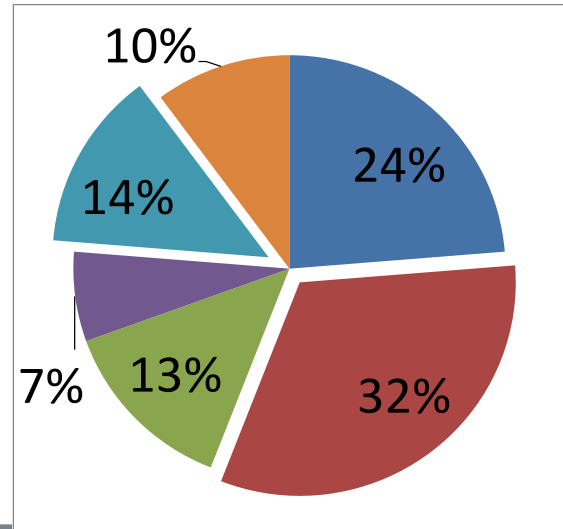
- Client Information
- Production-related Information
- Sales Information
- Social Situation
(SNS, Weather, Energy etc.)
- Other



The difference is seen, and the analysis Target is squeezed and it does not cut.

What is issue at introduction ?

- Learning skills
- Clarification of the effect
- Cooperation with existing systems
- Maturity of the product
- No recognition of the need
- No data



Half is without the clarification of the introduction effect and the recognition of the necessity, and the effect of the big data analysis system is not clear.

Application Committee

■ Participate in the various conference

● Ruby business seminar

- <https://rubyassociation.doorkeeper.jp/events/25363> (2015/6/24)

- Recommended technology : mruby

- Mr. Sekiguchi from Fujitsu Advanced Technologies

● Ruby World Conference 2015

- <http://2015.rubyworld-conf.org/> (2015/11/12-13)

- Recommended technology : Ruby

- Mr. Tomita from Fujitsu Systems East

- Mr. Hirota from Computer Engineering & Consulting

● Embedded Technology 2015

- <http://www.jasa.or.jp/expo/> (2015/11/18-20)

- Recommended technology : mruby

- Mr. Sekiguchi, Mr. Tasaka and Mr. Mizuta from Fujitsu Advanced Technologies

- Mr. Nakamura from HTK Engineering

- Ms. Nagahama

from Cypress Semiconductor Corp.

- Mr. Hirota

from Computer Engineering & Consulting

- Mr. Ogawa and Ms. Iwaki

from LSI R&D Labs

- Mr. Hara from Fujitsu

Pamphlet at ET2015



<- Demo Unit

Commentator ->
Mr. Hirota from
Computer
Engineering &
Consulting



■ Skill Up of Ruby related technology

“Comparison of the Crystal and Ruby” Mr. Tomita from Fujitsu Systems East

● What is Crystal

- ✓ Statically typed compiled language of the Ruby style. Running on the Linux and OS X. Version is 0.11.1 and it is still before of official release at 2016/1/26.
- ✓ Crystal is written in Crystal itself. License is Apache

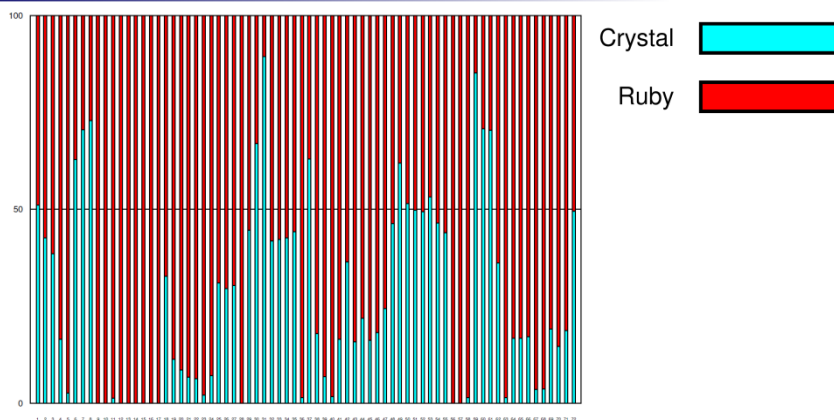
● Feature Comparison of Crystal and Ruby

Crystal	Ruby
Static	Dynamic
Manifest	Inferred
Compiled	scripting

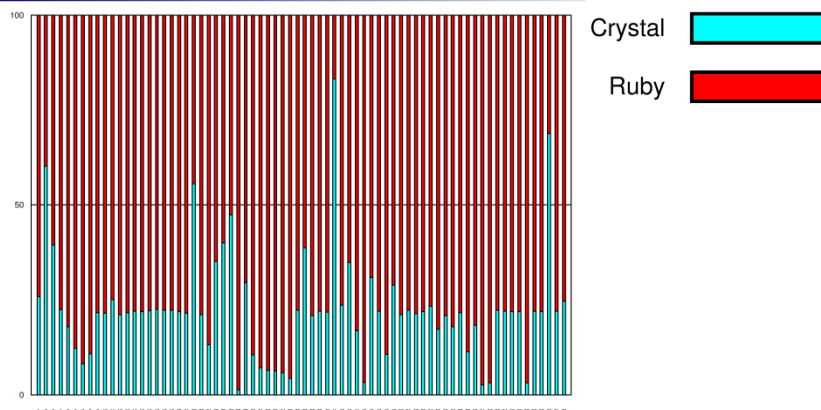
● Performance comparison of Crystal and Ruby

Crystal is faster on average, the memory is also small.

Measurement result : Times



Measurement result : Memory Usage



Thank you very much

谢谢

감사합니다

ありがとうございました