

# **The Auto Industry Implementation of “Open Source Software Supply Chain Management (OSSSCM)”**

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# Introduction

## Background



## Responsibilities



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# The History of SCM



**Industry**

**Automotive**

**Apparel**

**Computer**

**ALL**

**ALL**

**Keywords**

**JIT**  
(Just In Time)

**Informatization**

**BTO**(Build To Order)  
**TOC**  
(Theory Of Constraints)

**CPFR**  
(Collaborative Planning,  
Forecasting and  
Replenishment )

**BCP**  
(Business Continuity  
Planning)

# The concept of SCM

## WHY?

**For improving customer's experience**  
**For maximize effectiveness**

## HOW?

**Realizing Total Optimization**  
**Breaking down the intra- and inter-organizational barriers**

## WHAT?

**Collaboration with supply chain partners**  
**Managing bottlenecks**

# The Concept of OSSSCM

## WHY?

**Respecting the intention of community engineers**  
Maximizing effectiveness

## HOW?

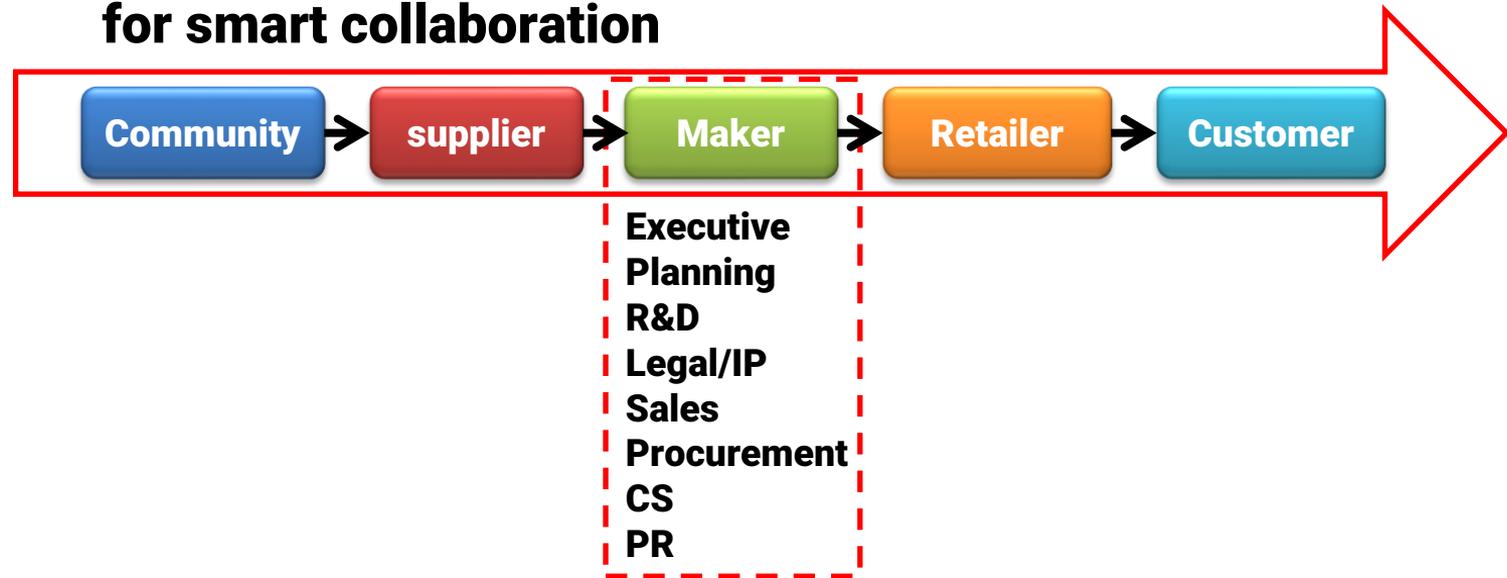
**Realizing Total Optimization**  
Removing intra / inter-organization barriers

## WHAT?

**Collaboration between supply chain partners and community**  
Managing bottlenecks

# Collaboration

## 2. Standardization of methods for smart collaboration



## 1. Developing an OSS governance structure to promote collaboration

# Governance of Each Organization

## w/Community

**Building out self-certification, Audited Certification and formal standardization**



**Platinum Members:**  
 Adobe/Arm/CISCO/COMCAST/GitHub/  
 HARMAN/HITACHI/QUALCOMM/SIEMENS  
 Sony/TOSHIBA/TOYOTA/Western Digital  
**New Platinum Members announced Today:**  
 Facebook/Google/Uber

## In TOYOTA SC

**Building an official group to manage OSS risks and community contributions**

### Companywide Group



# Standardization of Methods

## w/Community

**Building out approaches such as SPDX and tools for smart collaboration**



**OPENCHAIN**

- **JAPAN WORK GROUP Info Sharing Sub-WG**

**DENSO TEN/Fujitsu/  
HITACHI/Panasonic/  
Pioneer/RENESAS/  
RICOH/Sony/TOSHIBA  
/TOYOTA**

## In TOYOTA SC

**Discussing Information Sharing Guidelines via OpenChain to address licensing information challenges**



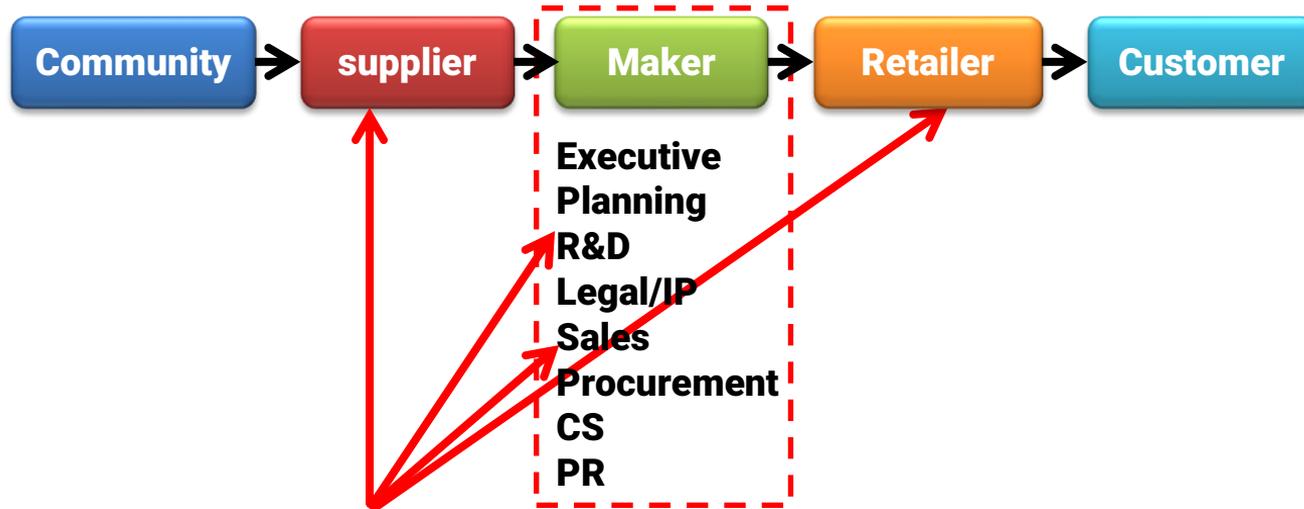
**Information Sharing Guidelines**



# Managing Bottlenecks

1. Decreasing Patent Risks 2. Decreasing License Risks

## Infrastructures of OSS

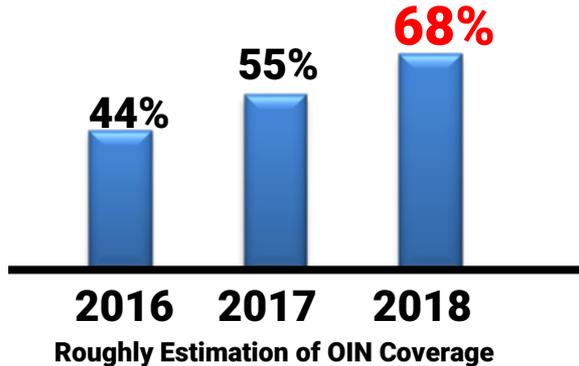


3. Promote Internal and External Understanding OSS Compliance

# Decrease Patent Risks

## w/Community

The expansion OIN Community resulted in a continuous reduction of OSS patent risks.



**New Major Licensees OIN : HITACHI/KDDI/Microsoft**

## In TOYOTA SC

TOYOTA promoted its inclusion in the OIN Patent Non-Aggression Community. As a result, AGL technology has become part of this community.

openinventionnetwork  
Linux System Definition



**OIN Board Members**  
Google/IBM/NEC/PHILIPS/  
Red Hat/Sony/SUSE/TOYOTA



# Decrease License Risks

## w/Community

**GPL Cooperation Commitment (GPLCC) introduces a cure opportunity for GPLv2 and LGPLv2.**

**This community is expanding rapidly.**

Nov.2017	Red Hat/Facebook/Google/IBM
Mar.2018	CA Technologies/Cisco/Hewlett Packard Enterprise/Microsoft/SAP/SUSE
Jul.2018	Amazon/Arm/Canonical/GitLab/Intel/Liferay/Linaro/MariaDB/NEC/Pivotal/Royal Philips/SAS/TOYOTA/VMware
Nov.2018	Adobe/Alibaba/Amadeus/Ant Financial/Atlassian, Atos/AT&T/Bandwidth/Etsy/GitHub/Hitachi/ NVIDIA/Oath/Renesas/Tencent/Twitter

## In TOYOTA SC

**TOYOTA became the first automotive company to join GPLCC.**

[https://www.toyota.co.jp/jpn/sustainability/governance/compliance/Toyota\\_GPL\\_Commitment.pdf](https://www.toyota.co.jp/jpn/sustainability/governance/compliance/Toyota_GPL_Commitment.pdf)

**The eight board members of OIN announced that they had unanimously adopted GPLCC.**

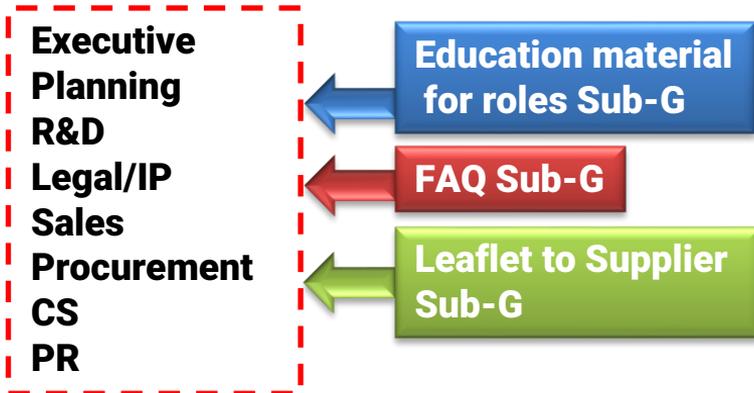
[https://www.openinventionnetwork.com/pressrelease\\_details/?id=88](https://www.openinventionnetwork.com/pressrelease_details/?id=88)

**TOYOTA is introducing GPLCC at community events such as the AGL All Members Meeting.**

# Promote Understanding

## w/Community

The OpenChain Japan WG is identifying bottlenecks caused by lack of understanding around compliance and building Sub-Groups for each bottleneck.



## In TOYOTA SC

TOYOTA introduced an OSS license manual on the employees intra-net and is sharing information with subsidiaries all over the world.



Outside professionals are delivering lectures for our engineers to further develop internal OSS culture.

# Level of Understanding



# Discussion

**How do we reach people  
who doesn't recognize OSS compliance?**