

eHoshin

The Collaborative Hoshin Kanri Experiment



Pierre Masai, CIO Toyota Motor Europe

Lean Summit UK

16 November 2016



Agenda

- **PART 1:** Toyota Motor Europe and TME IT Context
- **PART 2:** Lean and TPS
- **PART 3:** What is Hoshin Kanri?
- **PART 4:** Hoshin Kanri in the Cultural Context
- **PART 5:** The eHoshin Experiment

Part 1

Toyota Motor Europe and TME IT Context

1.1 - Toyota – in Europe

- Began selling cars in **1963**
- **9** manufacturing plants in **7** countries
- Over **€9** billion invested since 1990
- More than **€4** billion spent with European-based suppliers per year
- **873,844** vehicles sold in CY2015
- Close to **1,500,000** hybrid vehicles sold in Europe [YTD August 2016]
- **4.6%** market share in CY 2015
- Employees (approx.): **20,000** (direct / including TPCA, 50/50 joint venture Toyota/PSA Peugeot Citroën)

1.2 - Manufacturing Facilities



TMUK – Engine Plant



TMUK – Auris (Hybrid), Auris Touring Sports (Hybrid) & Avensis



TMIP - Engine Plant



TMR – Camry & RAV4



TMMF – Yaris & Yaris Hybrid



TPCA - AYGO



TMMP - Engine & Transmission Plant



Toyota Caetano Portugal – Land Cruiser



TMMT – Corolla, Verso & C-HR

1.3 - National Marketing & Sales Companies

- **30** NMSCs
- **53** Countries
- **274** Lexus retailers
- **2,749** Toyota retailers



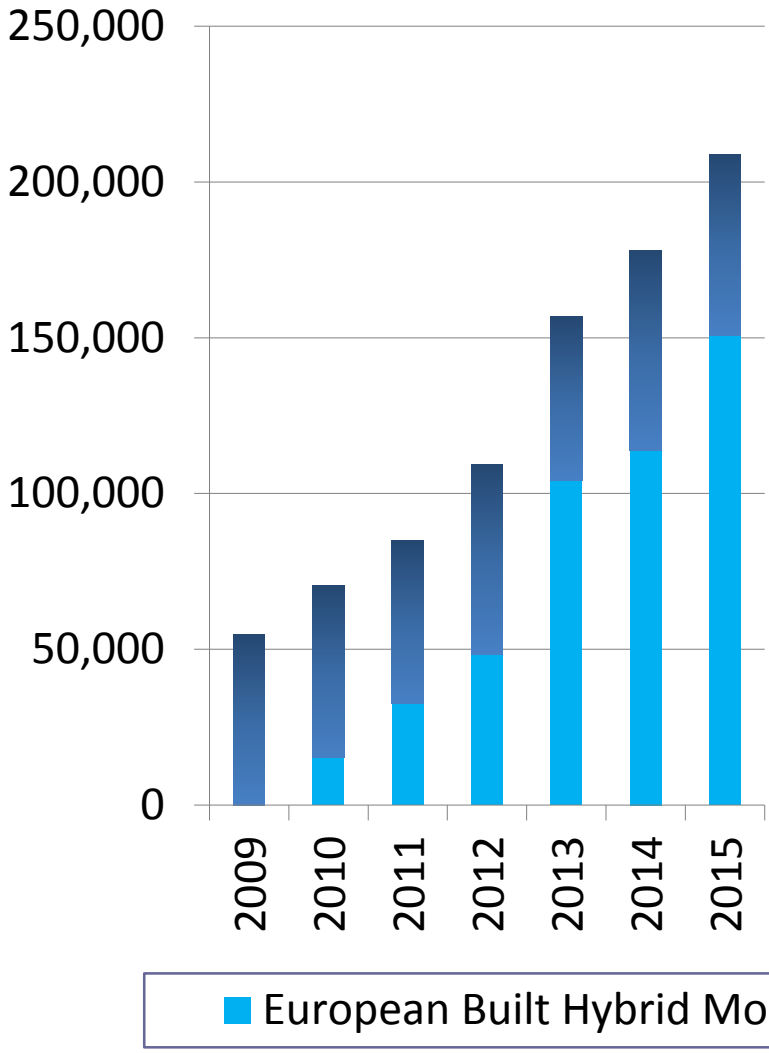
Not shown: Toyota Caucasus LLP, Union Motors Ltd (Israel), Toyota Motor Kazakhstan LLP and Toyota Canary Islands

1.4 – Head Office & Supporting Facilities



1.5 – Leader in Hybrid - Fuel Cell Vehicles

- European Hybrid sales growing year on year
- Hybrid sales contributing to approx. 24% of our European sales
- 14 Hybrid models available in Europe
- European-made hybrid models accounting for almost 3/4 of hybrid sales
- Hydrogen Fuel Cell cars: Toyota Mirai



1.6 - Toyota Motor Europe IT



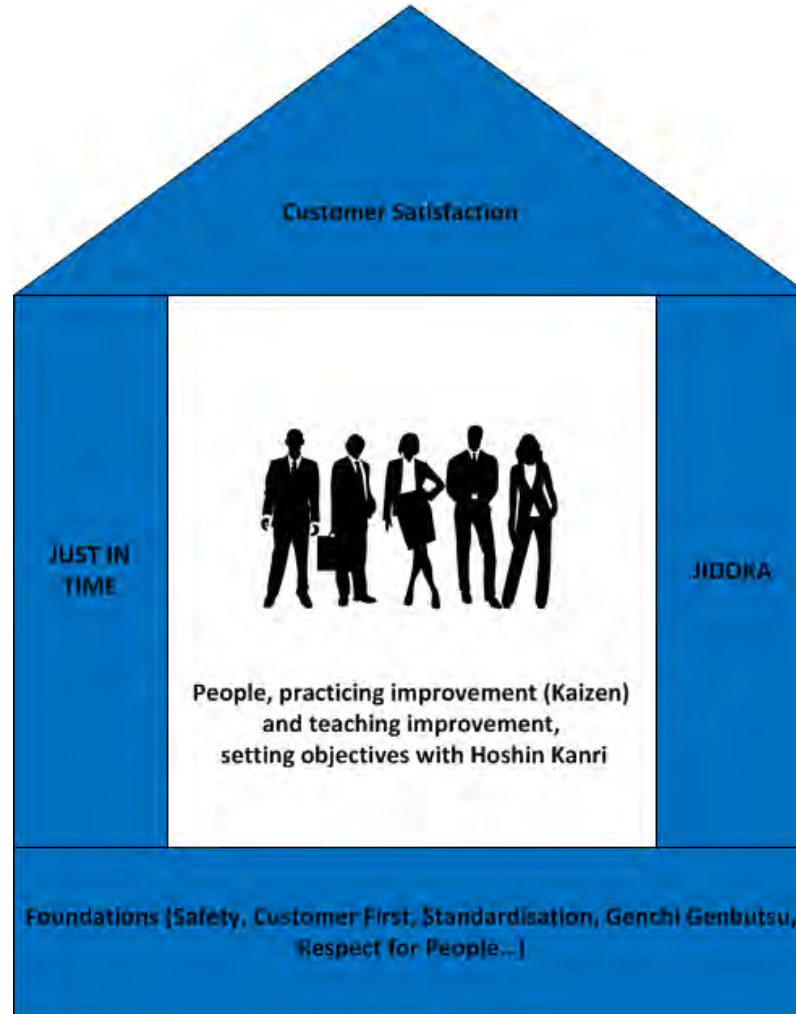
Part 2

Lean and TPS

2.1 - The house of TPS and its inhabitants

Just in Time Pillar
(Kiichiro Toyoda)

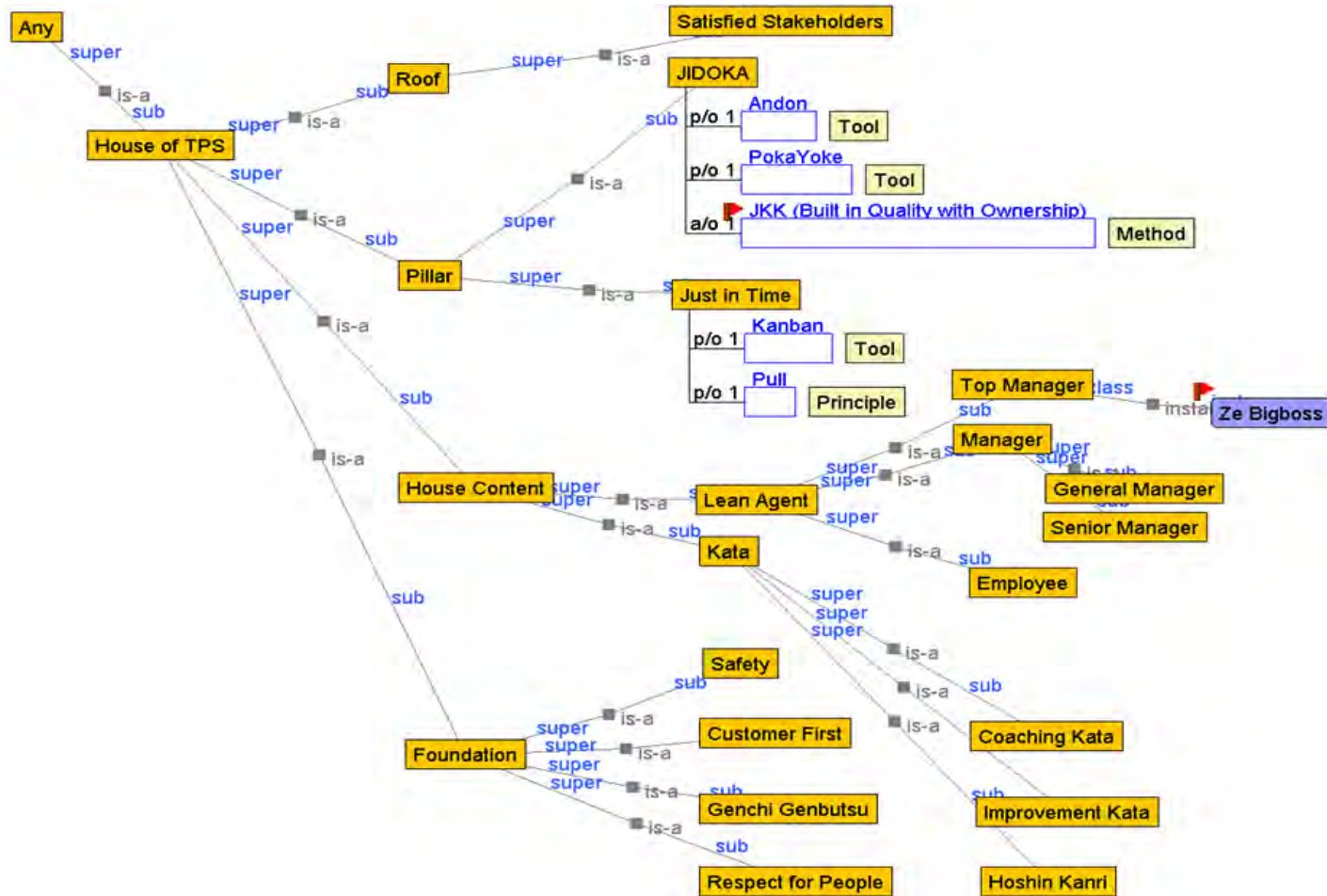
Pull from customer
Waste elimination
Flow



Jidoka Pillar
(Sakichi Toyoda)

Automation with
a human touch
Stop the flow
when problems occur
Solve problems deeply

2.2 – House of TPS Ontology



2.3 -The Toyota Kata (habits, practices)

- The individuals working in the company
 - interact to create an evolving system
 - improve continuously (Kaizen)
 - without strong top down directions
 - focus on delivering added value to the customer, while removing waste along the way.
- Two Kata (Rother): improvement and coaching
 - Agents (employees of the Lean organisation)
 - perform processes (like mounting a wheel on a car)
 - but also improvement processes (applying problem solving)
 - receive coaching on how to improve their skills
 - Management
 - Receive and give coaching on how to coach others.
- Third Kata: Hoshin Kanri: Do the right things

Part 3

What is Hoshin Kanri?

3.1 - Hoshin Kanri origin and meaning

- 方針 (Hoshin) means Compass (literally “Direction Needle”)
- 管理 (Kanri) means Management
- Originated in Japan in the 1960’s (Bridgestone, Komatsu, Toyota, ...)
- It is the Management of the Direction for an organisation
- Sometimes called Policy Deployment,
 - but bottom up and top down nature of this process
- It is a Countermeasure to
 - Mis-alignment between strategy and execution
 - Mis-alignment between employees and company
 - Missing objectives
 - Too many ongoing projects without clear contribution

3.2 - Purpose

What is the meaning of our work?

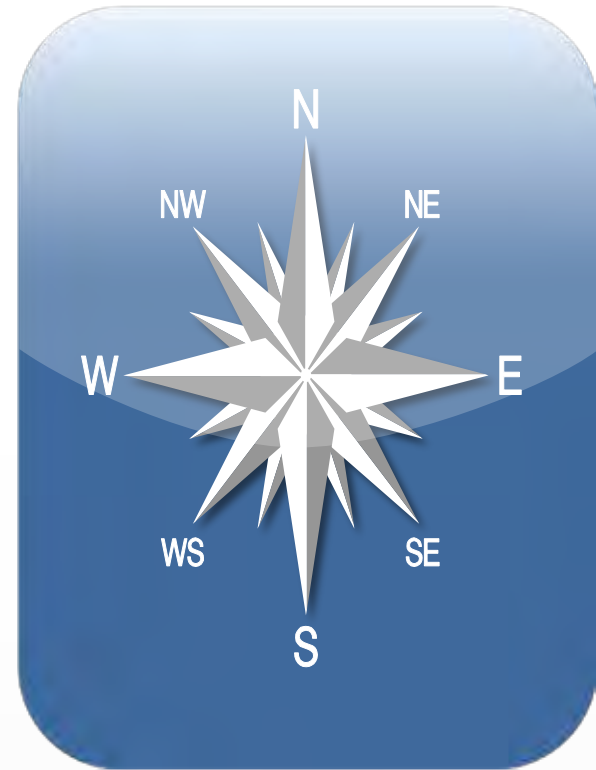
- Understand the essence of what we are trying to achieve.
- Use Hoshin Kanri and PDCA processes to achieve this.
- Engage all levels of the company to do this effectively – high level hoshin is not very prescriptive
- Give special attention to closing the loop with Check/Act Stages
- **DO THE RIGHT THINGS**



3.3 - Direction = Hoshin

Hoshin Kanri. Management of Direction

- Mid to Long Term Viewpoint.
- Vertical Alignment
- Horizontal Coordination
- Process and Results Management.
- Human Resource Development



3.4 - Hoshin Kanri Process

Company Vison	
Maximum Performance	Long Term Prosperity



3.6 - Standard Rules of the *hoshin kanri*

- Purpose of *hoshin kanri*: to generate a consensed view of company objectives for the next period (e.g. one fiscal year for a legal entity)
- The yearly process takes around 90 days (three months)
- The number of items to come up with is bounded (e.g. max 10 items)
- The process may be started by top management or start bottom-up
- The items proposed at operator level are consensed with peers, then submitted to management, consensed again (including the management ideas), and submitted to top management (including top management ideas).
- Every agent in the organization is allowed to contribute with ideas.
- Agents have seniority and expertise. The probability to see their proposed items accepted in the *nemawashi* process increases with their seniority and expertise
- We have shown that in mature organisation with the right level of seniority and expertise, the bottom up result equals the result with a seeding by top management
(In *Is the Lean Organisation a Complex System?*, see references slide)

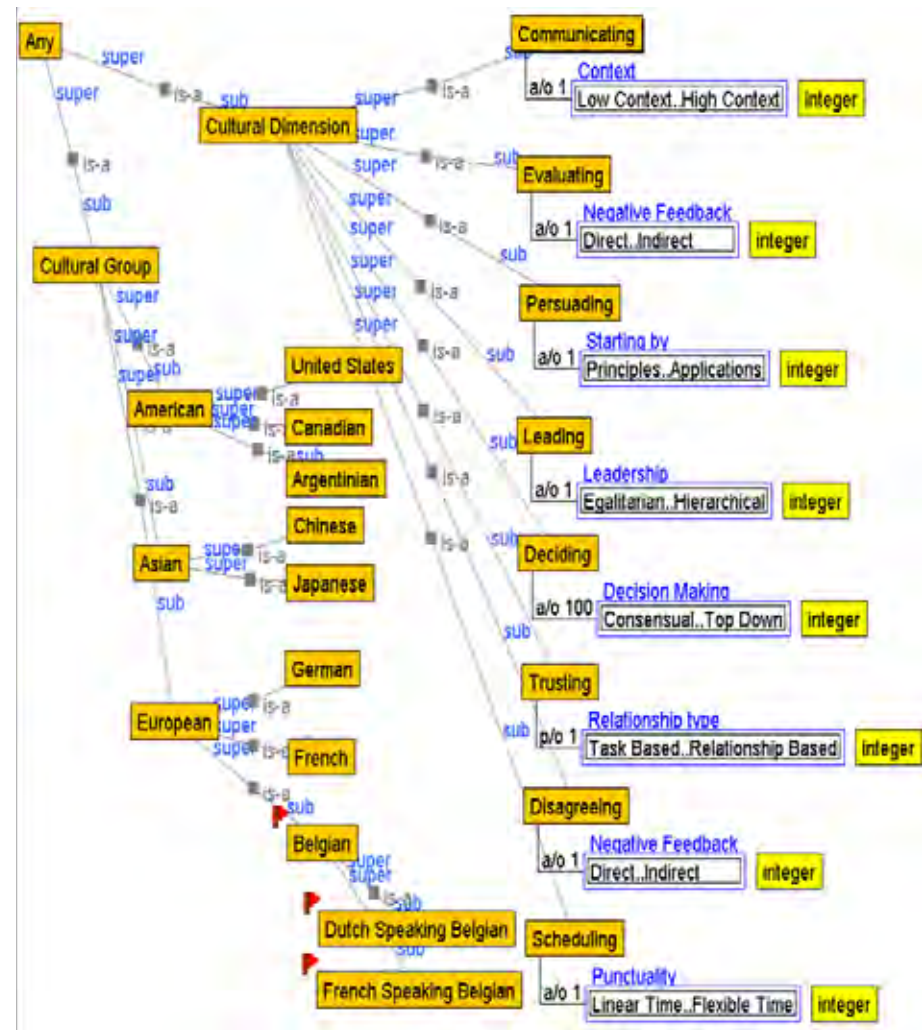
Part 4

Hoshin in the Cultural Context

4.1 - The Eight Cultural Dimensions

(from Erin Meyer, The Culture Map)

- Communicating: from Low Context to High Context
- Evaluating: from Direct to Indirect Negative Feedback
- Persuading: from Principles First to Applications First
- Leading: from Egalitarian to Hierarchical
- Deciding: from Consensual to Top Down
- Trusting: from Task-Based to Relationship-Based
- Disagreeing: from Confrontational to Avoiding Confrontation
- Scheduling: from Linear Time to Flexible Time.



4.2 - Modeling *hoshin kanri* Cultural Rules

- Relevant dimensions: Persuading (dimension #3), Leading (#4), Deciding (#5) and Scheduling (#8).
=> Culture-related rules from the meta-data layer, which all add a step before the execution of the *hoshin kanri* process:
- \forall agent, *if* culture(agent).persuading \in [0..50] 'Principles First' *then* add step 'explain *hoshin kanri* process'
- \forall agent, *if* culture(agent).leading \in [50..100] 'Hierarchical' *then* add step 'top management briefing' at start
- \forall agent, *if* culture(agent).deciding \in [50..100] 'Top Down' *then* add step 'explain the need for *nemawashi*'

- Assumes the existence of a function culture(agent).dimension returning the positioning of the agent's culture on a scale of 0 to 100 for the cultural dimension mentioned
- The two next rules are examples of periodical checks that can be added within the execution of the process, and not before the process as in the three rules above:
- *if* culture(agent).scheduling \in [0..50] 'Flexible Time' *then* perform 'progress check' weekly
- *if* culture(agent).leading \in [0..50] 'Top Down' \wedge (team_generated_items < threshold) *then* perform 'top management reminder' weekly

Part 5

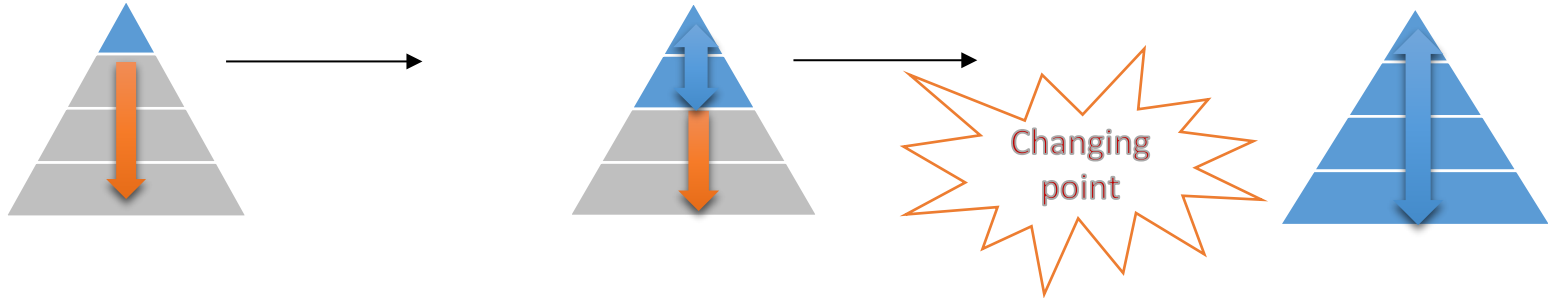
The eHoshin Experiment

5.1 - FY16 eHoshin experiment at TME

FY14: Hoshin was built by Gen.Mgr.+

FY15: Senior managers were involved in the preparation

FY16: Involve all members in the preparation



Hoshin : FY16 PanE IT Hoshin

Themes: [Give your comments on the Hoshin overall](#)

1. Deliver value in IT

Target: 1) Position IT Value clearly as part ACE1000 company profit management framework and delivers 10 M contribution.
2) Demonstrate Agile SCRUM value in Sales After sales area after FY15 Hoshin with measured velocity improvement of 10% by end of FY.
3) Expand Agile SCRUM to Manufacturing and define guidelines to select Agile SCRUM or plan driven Waterfall.

Leader: Peter Devel

References: [FY16 PanE IT Hoshin](#)

2. IS Fixed Costs

Target: 1) Direct target, comply with A&F requests for G&A budgets FY16 (33.67M, plus 1M for IMS).
2) Improve G&A cost control, considering "real fixed" costs, not-capitalized project costs, impact of increased scope (Pan-E) and of strengthening of IT itself (e.g. cybersecurity), cost decreases due to efficiency improvements.
3) Effective tools for cost monitoring and reporting, for IT managers and executives.

Leader: Marc Vansteelandt

References: [FY16 European Regional Hoshin](#)

Hoshins list

- FY16 PanE IT Hoshin
- FY15 PanE IT hoshin
- FY16 European Regional Hoshin
- FY16 Global Hoshin

FY16 PanE IT Hoshin export

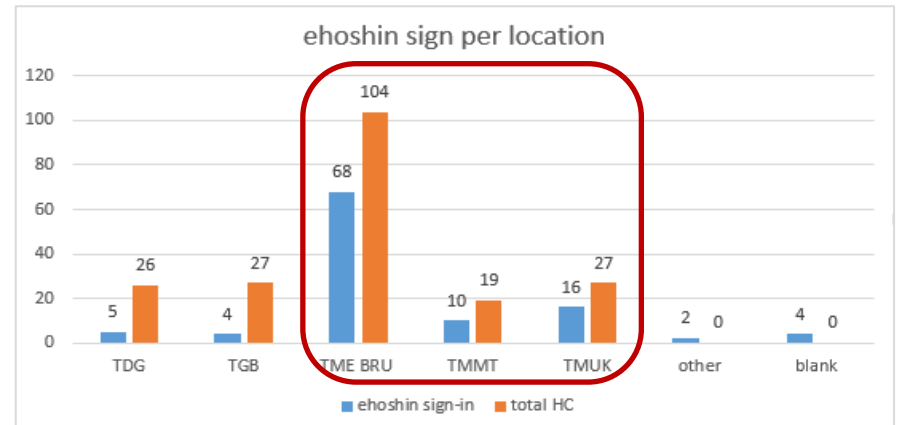
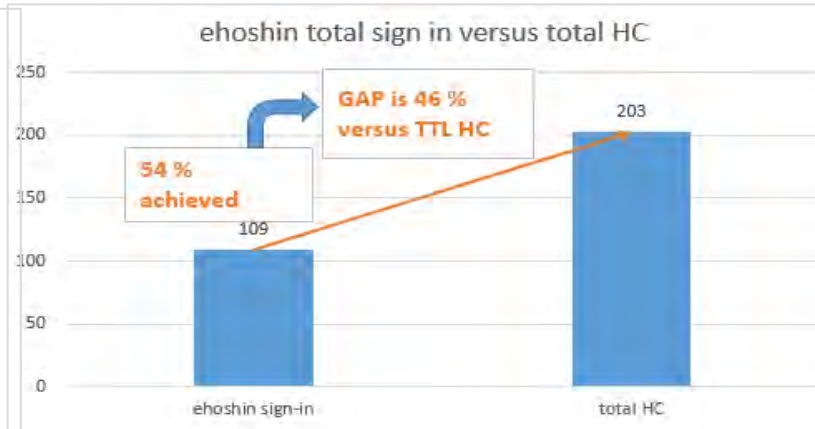
Download as csv file

To achieve this objective, we decided to use an online application, called eHoshin, developed to allow:

- TME IS executives to share original ideas on functional Hoshin
- TME IS members to comment on Hoshin themes & targets, propose ideas
- TME IS Leaders to adjust Hoshin themes based on members feedback

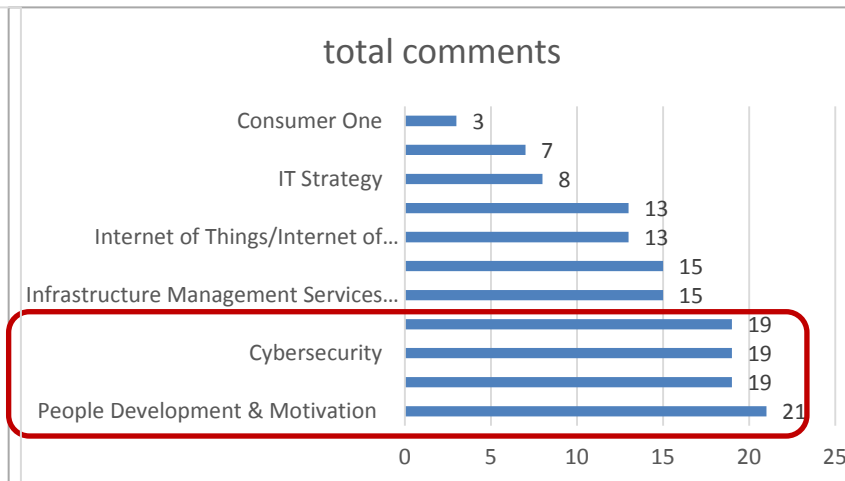
5.2 – eHoshin results analysis

USERS



- The participation to eHoshin was not mandatory
- **54 %** of members signed from the target audience

COMMENTS



- **152 comments entered**, of which 19 on Hoshin overall and 133 on the 10 Hoshin themes
- **15 members have commented once**
- **38 members have commented more than once**
- Most popular hoshin theme => People Development & Motivation

5.3 – eHoshin project reflection

Intensive User testing before release

- Good way to grasp improvement points & implement them (more user-friendly, right sequence, better layout)

Tool usage

- User friendly & easy to use
- Served the purpose to collect comments during preparation phase & improve Hoshin buildup
- Allowed interaction between leaders and members

Program Management

- The training and change management is key to the success. This is a challenge with remote users of the application (an online course should be developed)
- Naming conventions are important to understand and respect

Security & Access

- Security and access management within the company can be developed in house
- The user database as well as the user store can be kept in house



example

Peter Dehoel

@Ioannis: - correct, criteria are for all, the wording was a bit misleading a dedicated team for SCRUM will be difficult with our current headcount, let's try to roll out first to Manufacturing area and train as many as possible.

@ John, Chris, Lukasz, Liz: wording was misleading, will correct this.

@ Yves: yes, we should look end to end

@ Steve: impact On approval, Ringi, is already being looked at in current Hoshin item. Updates will be shared later on.

@ Alperen: yes, reflected in the wording,

@ Klaus/ agree with your comment about involving all stakeholders as much as possible. Business departments will be involved when rolling out SCRUM further. Maybe clarify further in the concrete actions.

Open source version (www.ehoshin.org)

- Enter via www.eHoshin.org Wordpress site
- Directs to commonehoshin.herokuapp.com
- Hosted on Amazon Web Services
- Developed in Python language with the Django Framework in collaboration with Strasburg University
- Open source code in Github

5.4 – eHoshin management reflection

- Manage the transition for those involved
 - The open collaboration platform is not automatically appreciated by all at first:
 - It challenges the previous ‘top down’ way of working
 - The Hoshin item leader does not control the complete definition of his items, he/she is accountable to others
- The usage of eHoshin increases the buy in of all
 - ✓ It applies real “Catch Ball”, top down and bottom up
 - ✓ It is better, but more demanding in the first phase.
 - The buy in of the participants makes the difference

5.5 – Lean2040 Example (next 25y of Lean)

The screenshot shows a web application interface for Hoshin Kanri management. The main content area displays a theme titled "Hoshin : Lean 2040". Below the title, there are sections for "Target", "Leader", and "References". The "Target" section lists four bullet points: "Create a catalogue of applications of Lean", "Create a model to apply Lean to new organisation types", "Demonstrate the model with new organisation types", and "Make improvement suggestions on existing implementations of Lean based on the model". The "Leader" section lists "Pierre Masai".

The right sidebar contains several sections: "Leader synthesis export" with a red button "Download the excel version"; "Hoshin list" with a dropdown menu showing "Lean 2040" and a "Save" button; "Reference documents" with a red button "Download the excel version"; "Lean 2040 export" with a red button "Download the excel version"; and "Lean 2040 information" with a table of statistics.

Lean 2040 information	
Themes	1
Concrete actions	0
Comments	1
Users	10
Users who commented once	1
Users who commented more than once	0

5.6 – Your turn to experiment!

- Using the application on www.eHoshin.org
 - You can create your own teams
 - They can be public, like Lean2040
 - Or you can make them private for your organisation
 - You can then ask colleagues to join them
 - You can all work as moderators or have two levels of contribution (moderators and contributors)
 - You can even improve the application itself by becoming a contributor to the open source code

5.7 - References

- **Masai, P., Zanni-Merk, C. (2016). Formalization of a Framework for Cultural Translation in Global Collaboration. The case of the Lean Organisation.** *Procedia Computer Science, 96*, 375-384.
- **Masai, P., Parrend, P., Toussaint, N., & Collet, P. (2015) Is the Lean Organisation a Complex System?** *First Complex Systems Digital Campus World E-Conference.* In Springer book available on Amazon as of Dec.2016
- **Masai, P., Parrend, P., & Zanni-Merk, C. (2015). Towards a formal model of the lean enterprise.** *Procedia Computer Science, 60*, 226-235
- Parrend, P., **Masai, P.**, Zanni-Merk, C., & Collet, P. (2014). **Swarm Projects: Beyond the Metaphor.** In *International Conference on Swarm Intelligence Based Optimization* (pp. 131-138). Springer International Publishing.
- Videos from Lean IT Summit (Paris, 2012, 2014) and Lean Summit UK (2013) on YouTube (search « Pierre Masai »)
- To stay tuned on next publications and presentations, **@pierremasai** on Twitter



*“There is nothing so useless as
doing efficiently that which
should not be done at all”*

Peter Drucker

THANK YOU