



33rd Annual **INCOSE**
international symposium

hybrid event

Honolulu, HI, USA
July 15 - 20, 2023



A Social Enterprise Approach for Parenting in the Japanese Society

Research talks – a bit of context



Hanami (花見), Nagoya 2022



Tell me
about your
research



Ana Maria Bori

Systems Engineer,
Master of International
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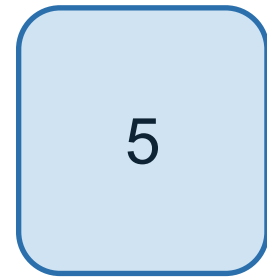
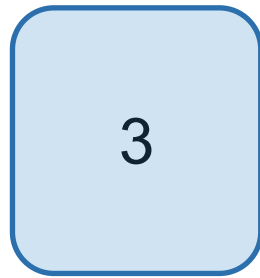
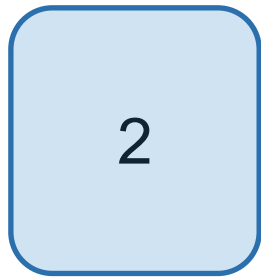


Raquel Hoffmann



Systems Engineer,
Systems Engineering
PhD student,
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Agenda



The Japanese
Case

Understanding the
problem

Solution
Strategy

Strategic
and
Operational views

Preparing for
Society 5.0

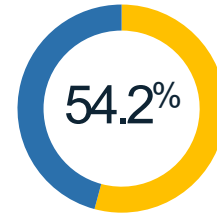
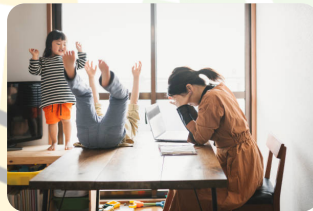
The Japanese Case



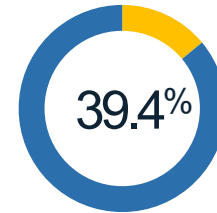
- 30.4 weeks of paid leave policy
- Both men and women can stay home until the baby turns one year old while still receiving 50% to 67% of their monthly wages⁽¹⁾



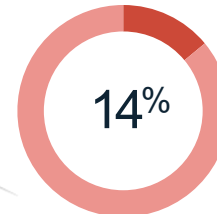
Imbalance



Fathers want to be more involved in child rearing⁽²⁾

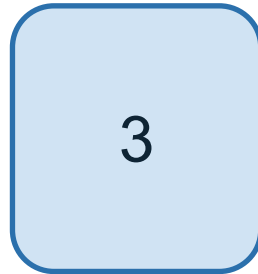
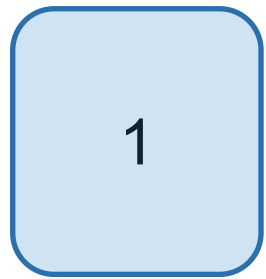


Married fathers declared the intention to take paternity leave in 2021⁽³⁾



Fathers took paternity leave in 2021⁽³⁾

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Cultural Challenges in Japan



Corporate Culture

- corporate loyalty
- personal life is not priority
- values long-hour shifts
- karoshi - 過労死

Society Values

- strong hierarchy structure
- shouganai - しょうがない
- conflict-averse

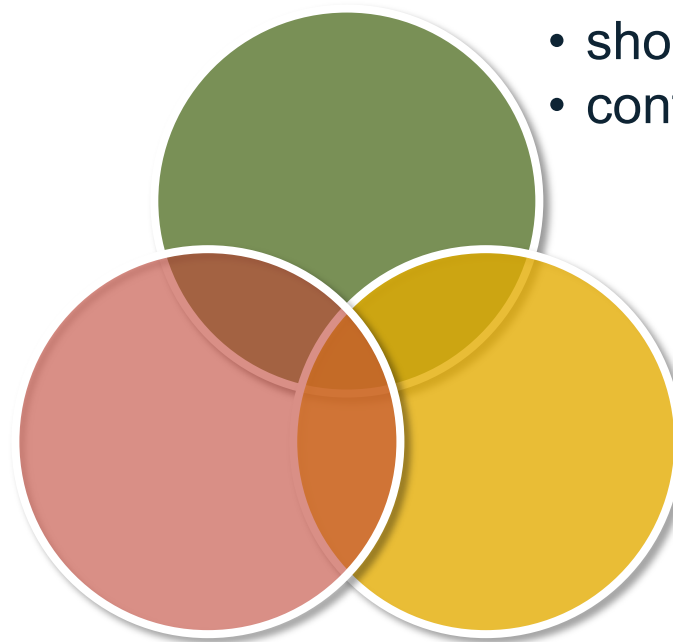


Gender Roles



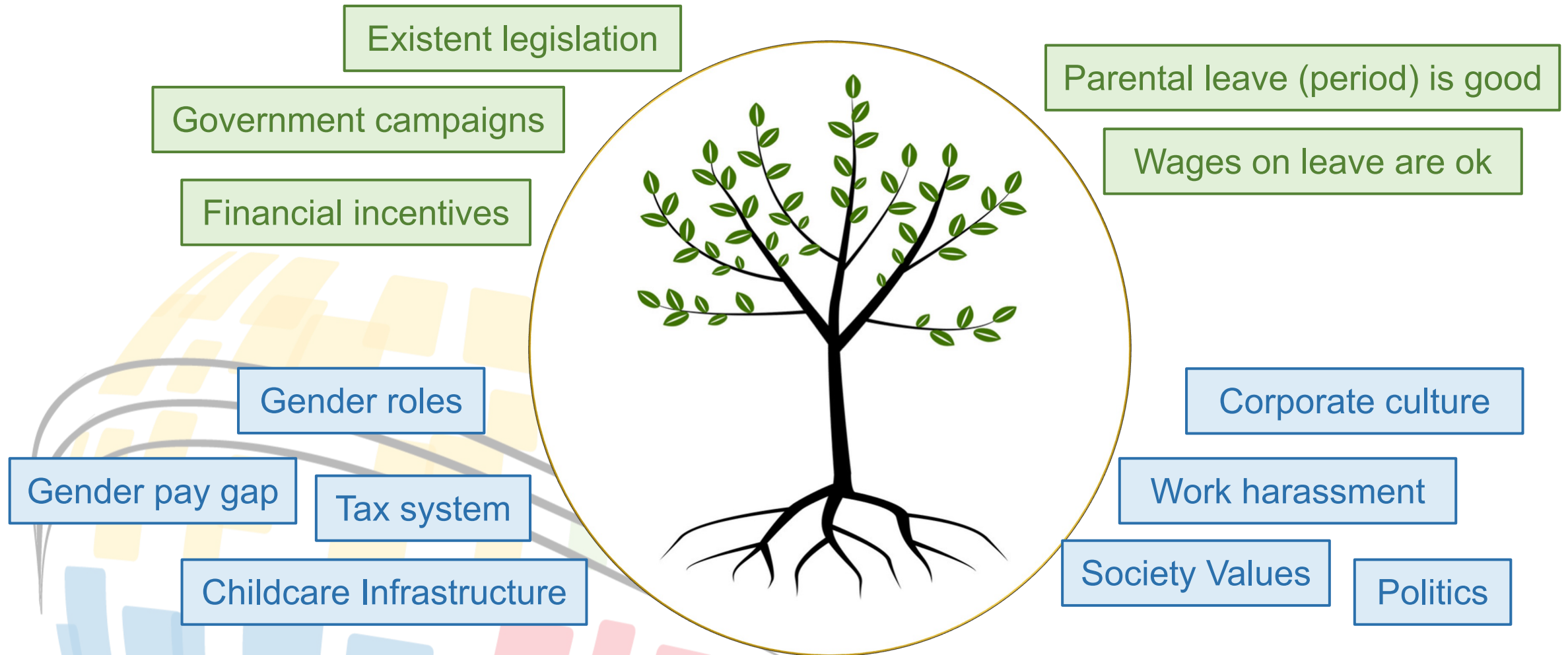
- provider
- social pressure for career success & leadership

- responsible for the house and kids
- family dedication is expected

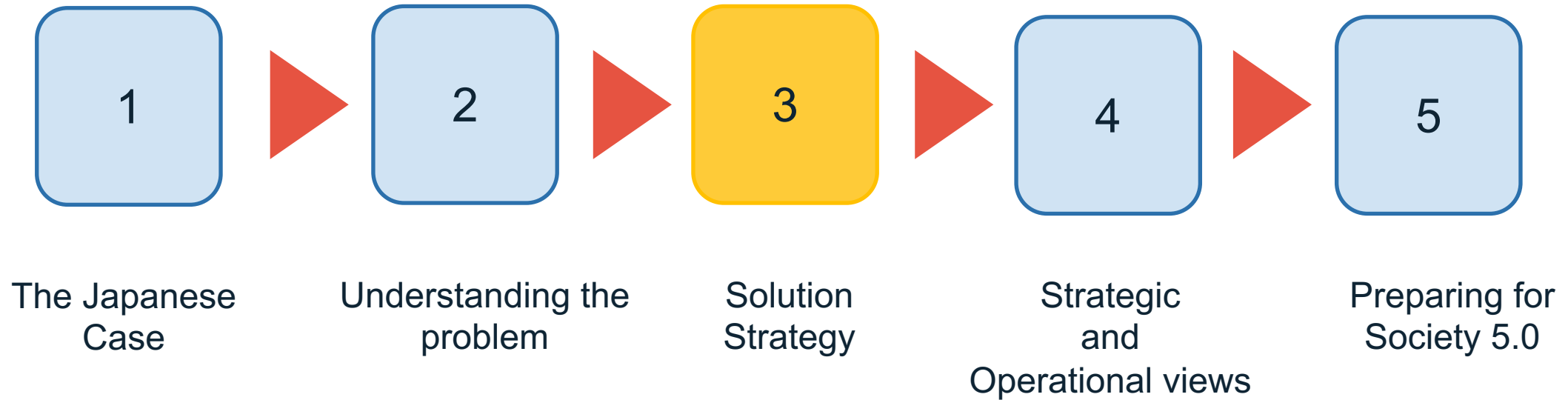


matahara & patahara

Understanding the problem



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Solution Strategy

Enterprise Architecture (EA) frames the problem space and provides multiple perspectives to envision the solution space.

Strategy: **Social Enterprise architecture** elaboration combining collective vision, goals, constraints, conditions, challenges & other concerns of stakeholders.



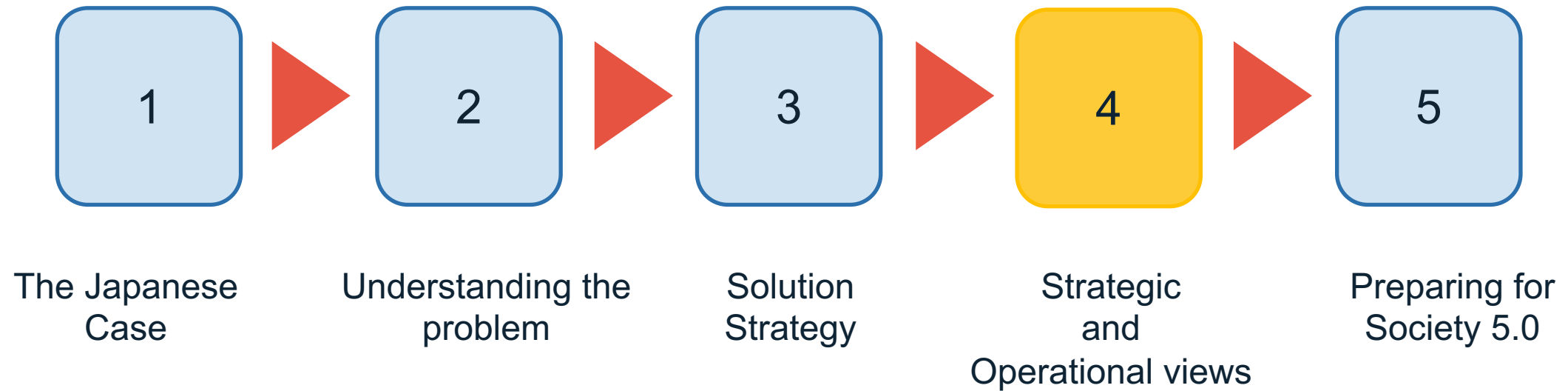
Framework, language and workflow



Solution Strategy – UAF Grid

UAF UNIFIED ARCHITECTURE FRAMEWORK	Motivation Mv	Taxonomy Tx	Structure Sr	Connectivity Cn	Processes Pr	States St	Sequences Sq	Information ^c If	Parameters ^d Pm	Constraints Ct	Roadmap Rm	Traceability Tr
Architecture Management ^a Am	Architecture Principles Am-Mv	Architecture Extensions Am-Tx ^e	Architecture Views Am-Sr	Architecture References Am-Cn	Architecture Development Method Am-Pr	Architecture Status Am-St		Dictionary Am-If	Architecture Parameters Am-Pm	Architecture Constraints Am-Ct	Architecture Roadmap Am-Rm	Architecture Traceability Am-Tr
Summary & Overview Sm-Ov												
Strategic St	Strategic Motivation St-Mv	Strategic Taxonomy St-Tx	Strategic Structure St-Sr	Strategic Connectivity St-Cn	Strategic Processes St-Pr	Strategic States St-St		Strategic Information St-If	Environment En-Pm-E and Measurements Me-Pm-M and Risks Rk-Pm-R	Strategic Constraints St-Ct	Strategic Deployment, St-Rm-D Strategic Phasing St-Rm-P	Strategic Traceability St-Tr
Operational Op	Requirements Rq-Mv	Operational Taxonomy Op-Tx	Operational Structure Op-Sr	Operational Connectivity Op-Cn	Operational Processes Op-Pr	Operational States Op-St	Operational Sequences Op-Sq	Operational Information Op-If		Operational Constraints Op-Ct		Operational Traceability Op-Tr
Services Sv		Services Taxonomy Sv-Tx	Services Structure Sv-Sr	Services Connectivity Sv-Cn	Services Processes Sv-Pr	Services States Sv-St	Services Sequences Sv-Sq			Services Constraints Sv-Ct	Services Roadmap Sv-Rm	Services Traceability Sv-Tr
Personnel Ps		Personnel Taxonomy Ps-Tx	Personnel Structure Ps-Sr	Personnel Connectivity Ps-Cn	Personnel Processes Ps-Pr	Personnel States Ps-St	Personnel Sequences Ps-Sq			Personnel Availability Ps-Rm-A Competence, Drivers, Performance Ps-Ct Personnel Evolution PS-Rm-E Personnel Forecast Ps-Rm-F		
Resources Rs		Resources Taxonomy Rs-Tx	Resources Structure Rs-Sr	Resources Connectivity Rs-Cn	Resources Processes Rs-Pr	Resources States Rs-St	Resources Sequences Rs-Sq	Resources Information Rs-If		Resources Constraints Rs-Ct	Resources evolution Rs-Rm-E Resources forecast Rs-Rm-F	Resources Traceability Rs-Tr
Security Sc	Security Controls Sc-Mv	Security Taxonomy Sc-Tx	Security Structure Sc-Sr	Security Connectivity Sc-Cn	Security Processes Sc-Pr					Security Constraints Sc-Ct		Security Traceability Sc-Tr
Projects Pj		Projects Taxonomy Pj-Tx	Projects Structure Pj-Sr	Projects Connectivity Pj-Cn	Projects Processes Pj-Pr						Projects Roadmap Pj-Rm	Projects Traceability Pj-Tr
Standards Sd		Standards Taxonomy Sd-Tx	Standards Structure Sd-Sr								Standards Roadmap Sd-Rm	Standards Traceability Sd-Tr
Actual Resources Ar			Actual Resources Structure, Ar-Sr	Actual Resources Connectivity, Ar-Cn	Simulation ^b					Parametric Execution/ Evaluation ^b		

Agenda



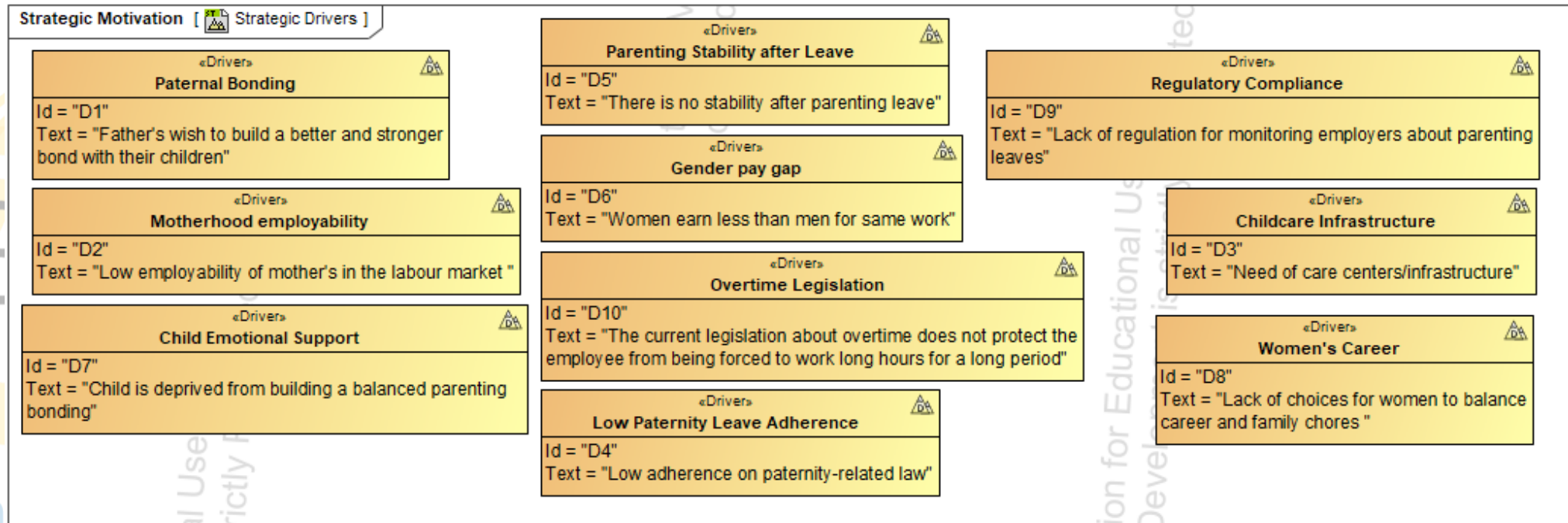
Enterprise Motivation

1. Drivers
2. Vision, Mission & Goals
3. Strategic Motivation

DRIVERS

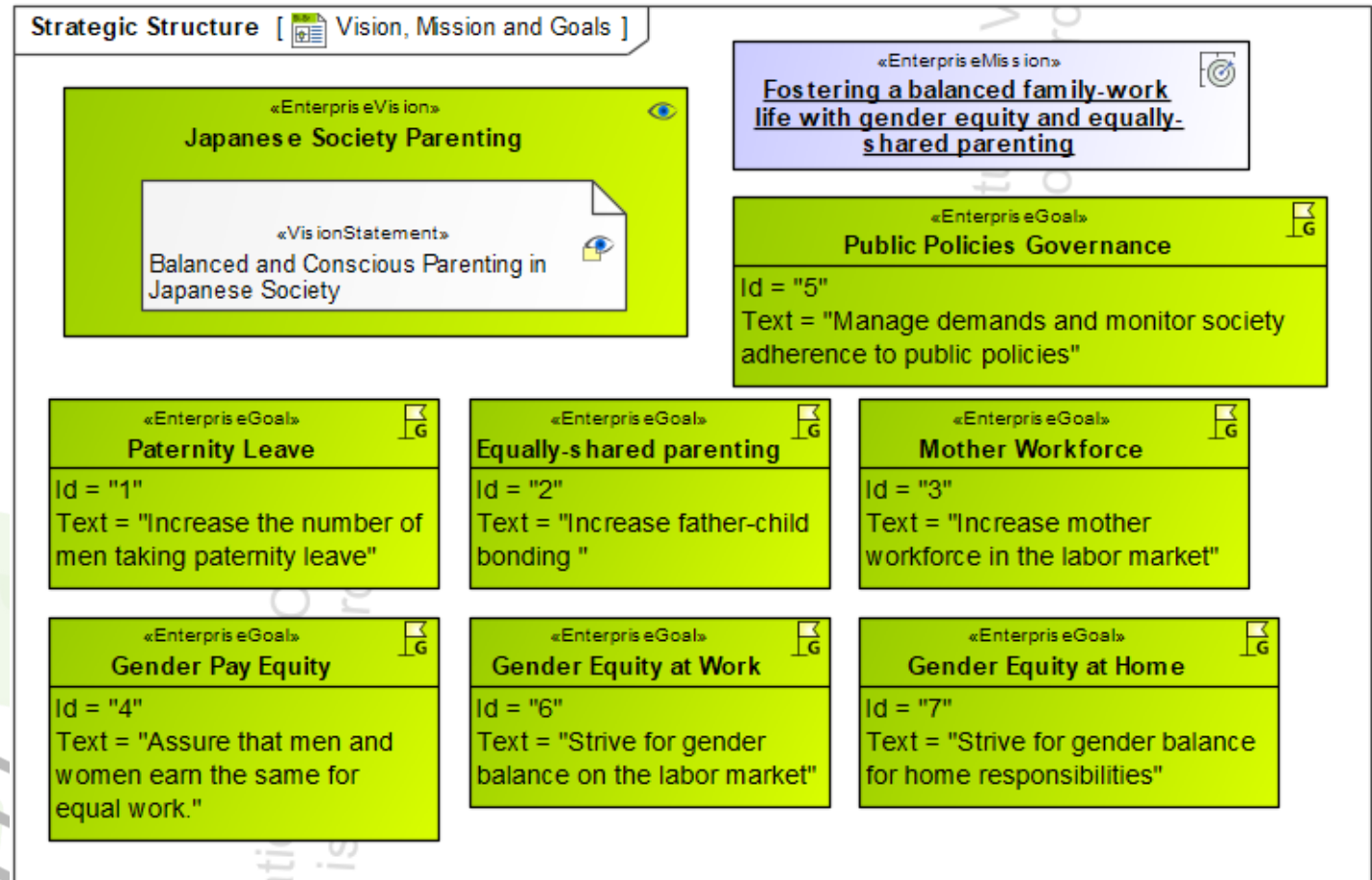
ENTERPRISE

OUTCOMES



Enterprise Motivation

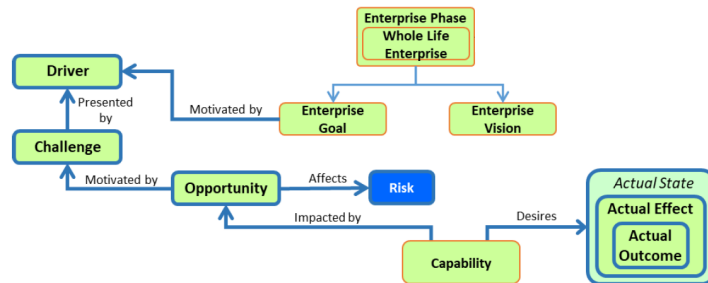
1. Drivers
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3. Strategic Motivation



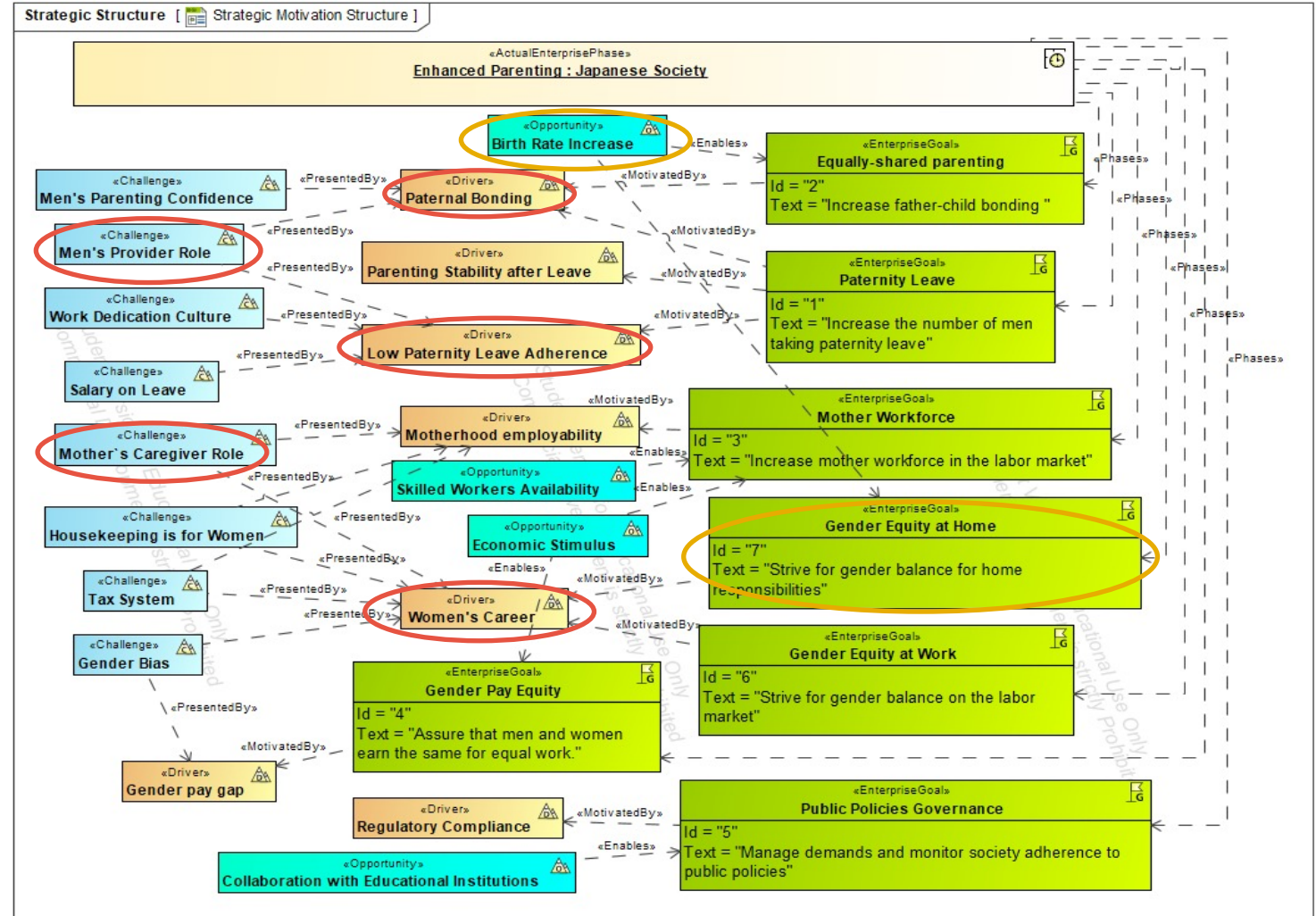
Enterprise Motivation

1. Drivers
2. Vision, Mission & Goals
3. Strategic Motivation

Challenge is presented by Driver;
Enterprise Goal is motivated by Driver;
Opportunity enables Enterprise Goal;



UAF Domain Metamodel



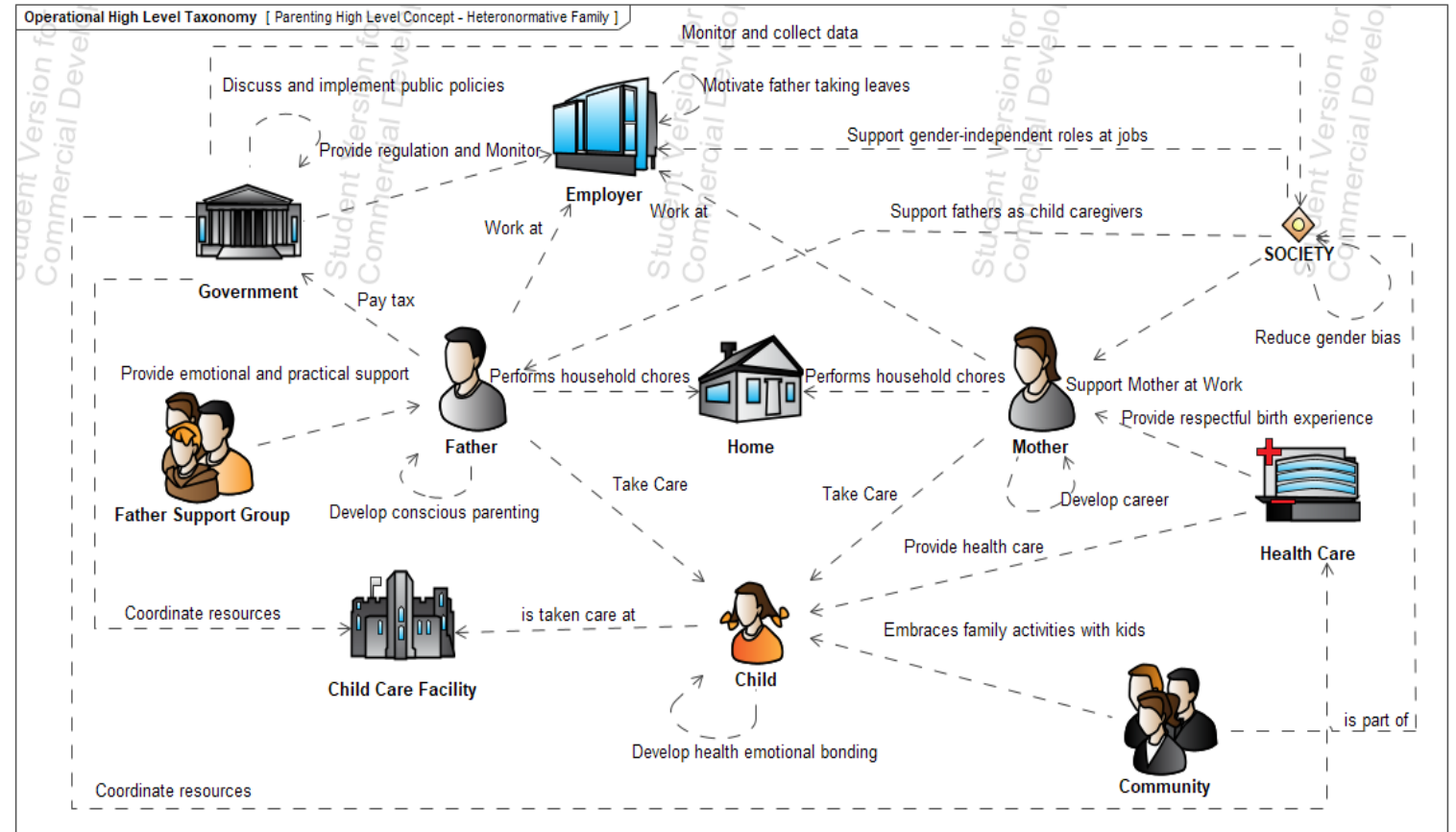
High Level Concept



- How should be a balanced parenting ecosystem?
- What are the main agents and their relationships?

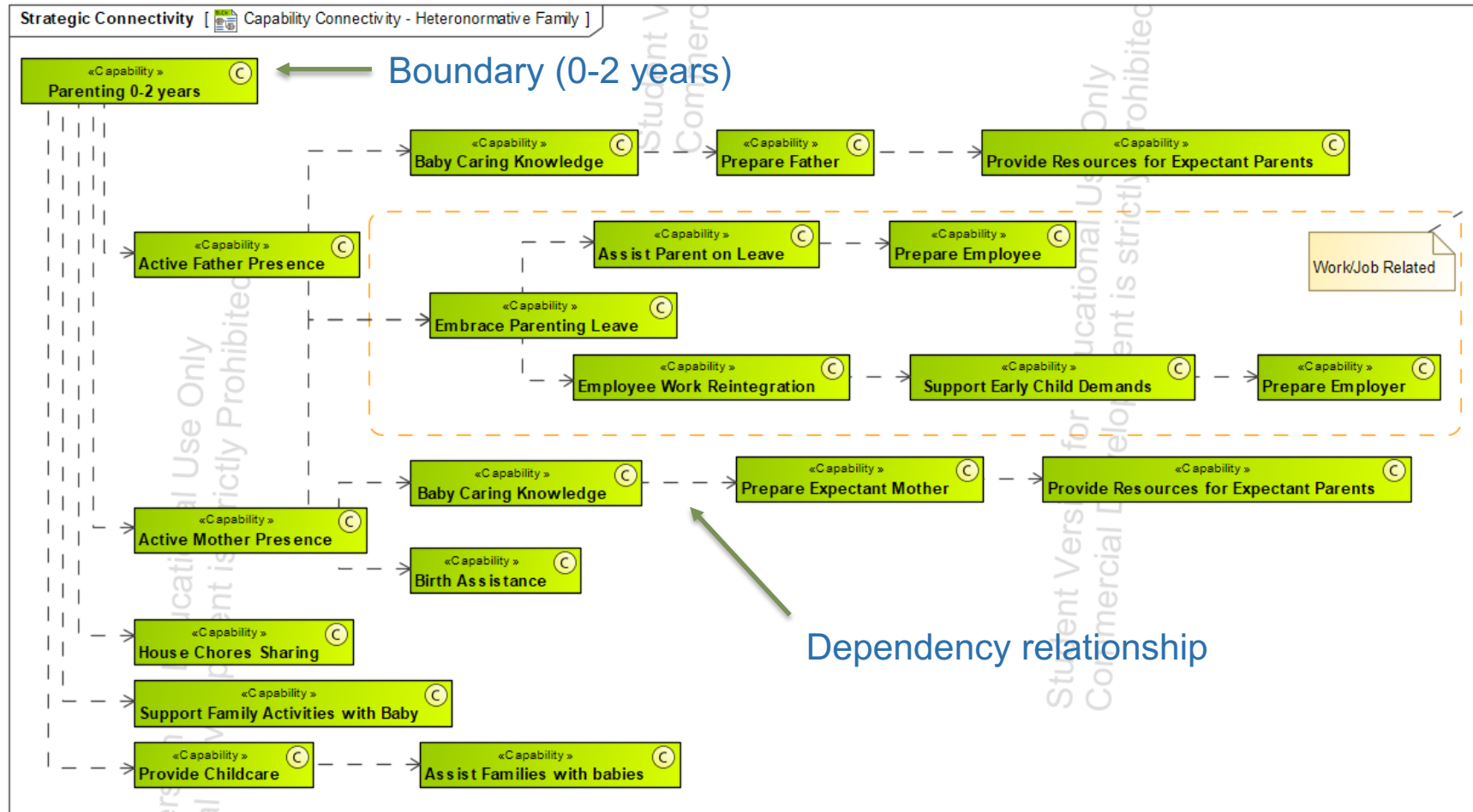


- Family/House
X
Work
- Gender roles



Family + Corporate + Social + Infrastructure + Government

Strategic Capabilities



Capability: An enterprise's ability to achieve a desired effect;

Capabilities for mother and father are **different** when preparing for the birth.

Capabilities for mother and father are **the same** when they are employees.

Operational Process Flow



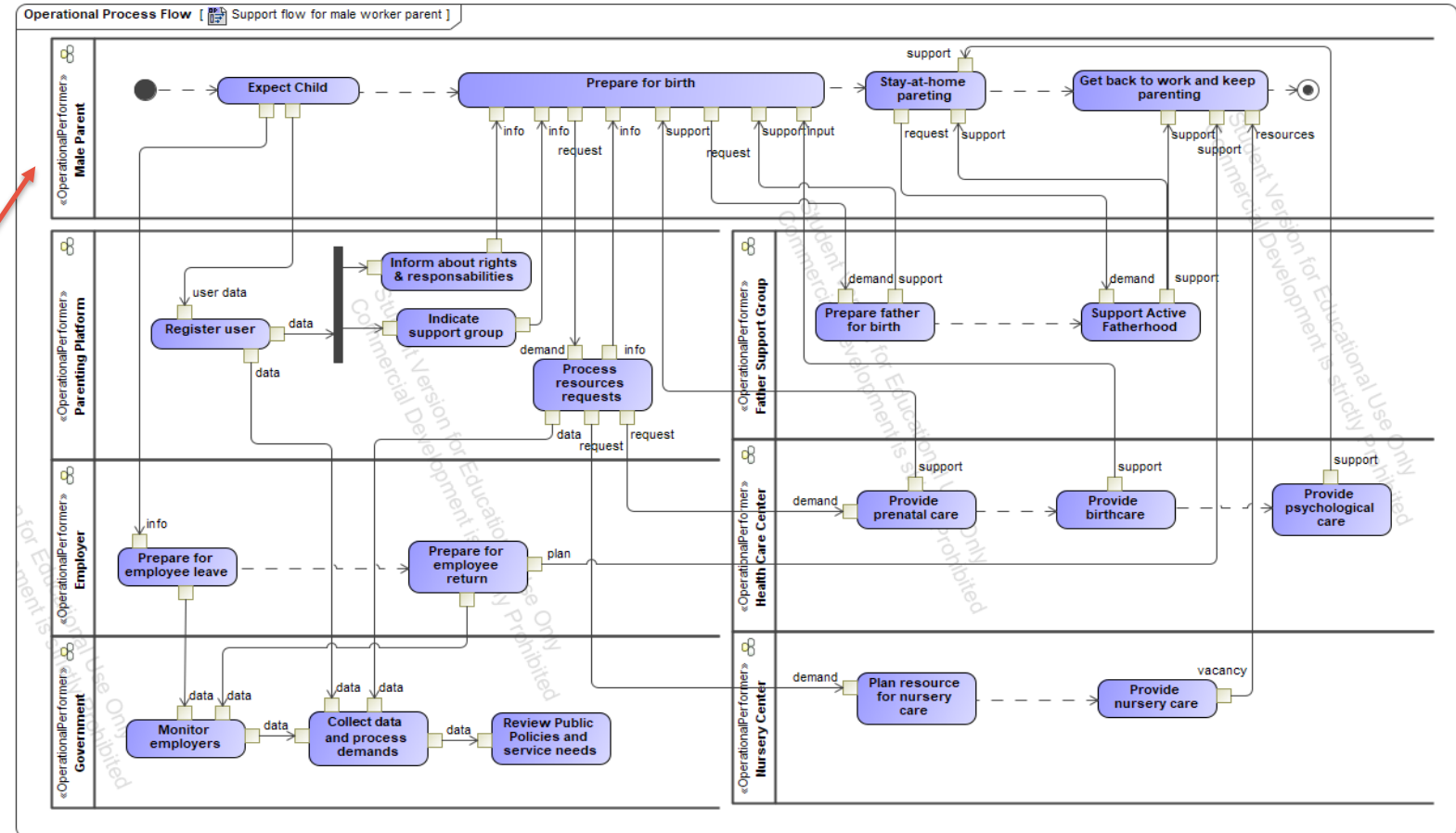
The narrative from expecting a child to active parenting (stay at home during paid leave and returning to work)



The father's viewpoint

Who (operational performer) supports the flow?

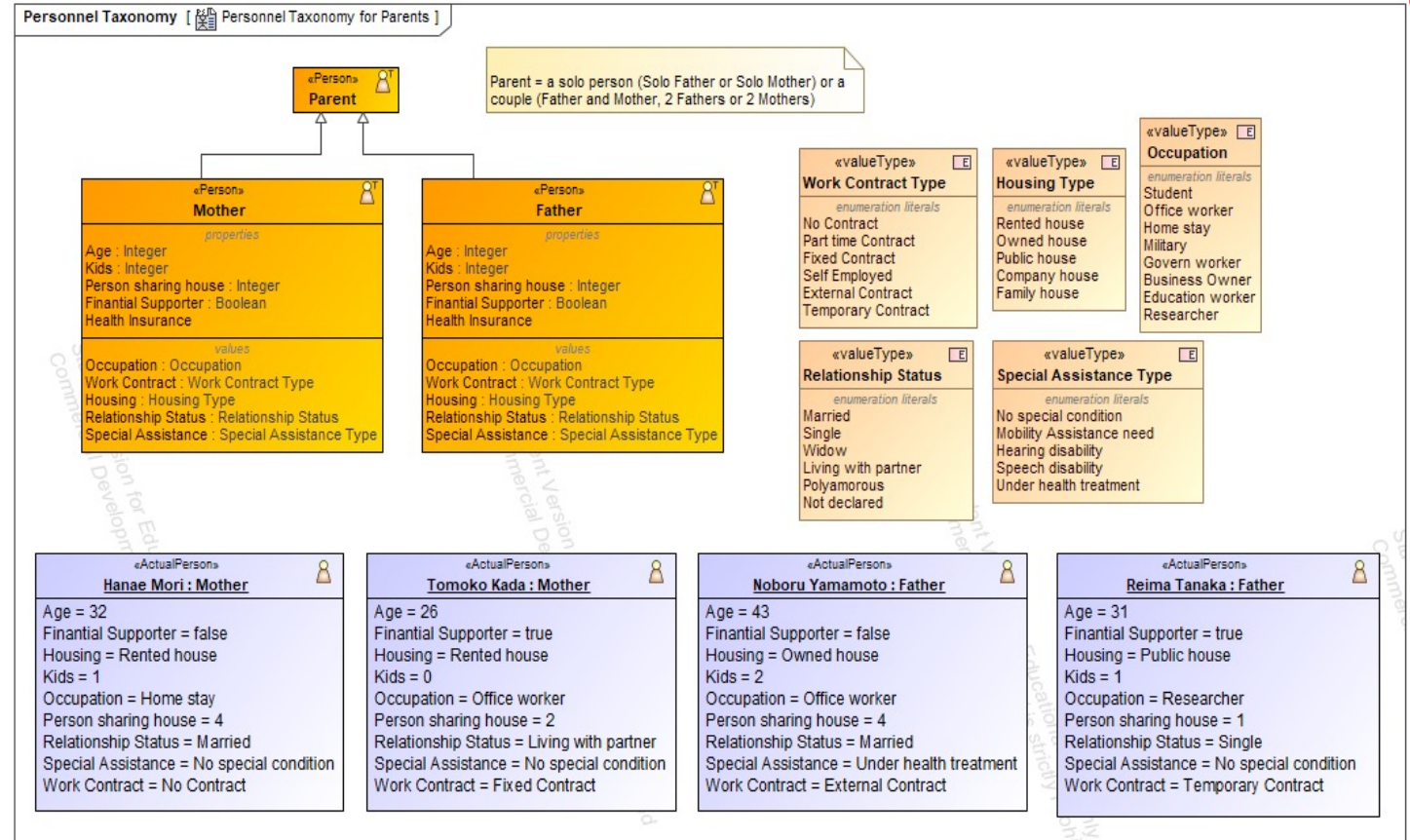
How (operational activity) is this support?



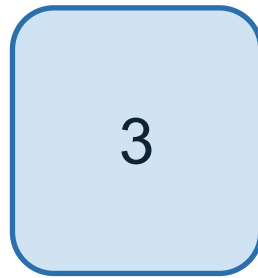
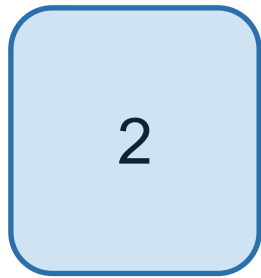
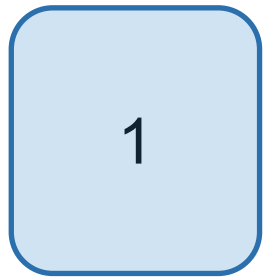
The parent box



- People have **different demands**, families have **different configurations** and experience **different realities**.
- How to customize the entity **Parent** to represent the human complexity?
- What are the **attributes** that impact on the parenting experience of a father?
- Can we use individual's data to better understand society's **behavior and needs**?



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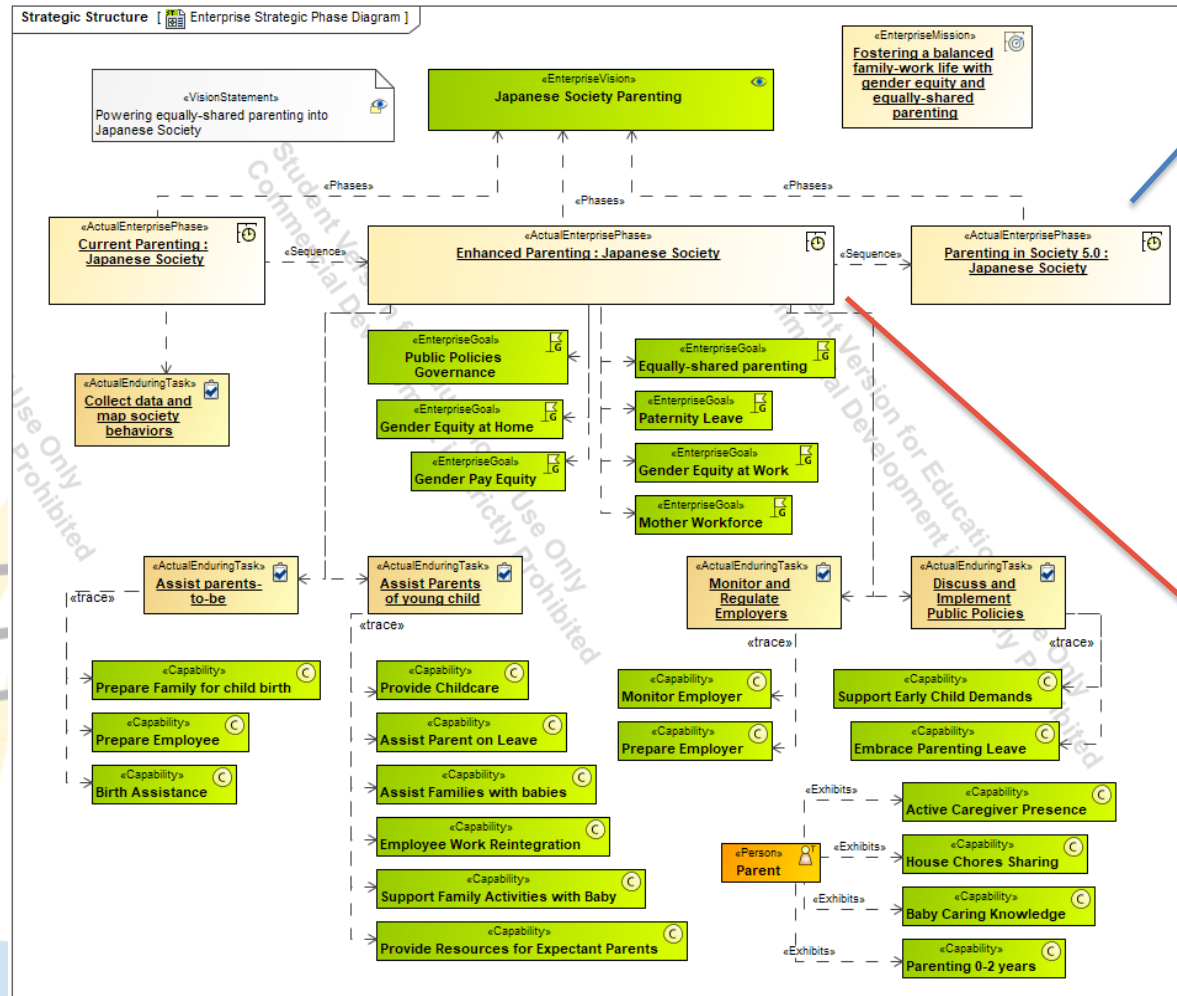
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Enterprise phase strategy: preparation for the Society 5.0



Society 5.0 is a human-centered society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space.

A society in which all kinds of people can readily obtain high-quality services, overcome differences of age, gender, region, and language, and live vigorous and comfortable lives" (Government of Japan, 2016).

Enterprise Strategic phase view

Preparation for the enterprise to meet the subsequent phase's capabilities.

Summary



- Regulation might not be enough to change a society's behavior.
- UAF has views that provide perspectives to address social problems.
- Social enterprise architecture can integrate capabilities and propose solutions to societal issues.
- Desired outcomes for sociological transformation must incorporate multiple perspectives and center the solution on human subjectivity.
- Systems engineering processes can bridge the problem and solution space of societal problems.

Questions?





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