Make Your Team's Domain Language Truly Ubiquitous with Concept Maps

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envato

Agenda

- Concept Maps 101
- Concept Maps in a Software Domain
- Concept Maps in a Software Team

Concept Maps

101

a simple example

let’s connect…

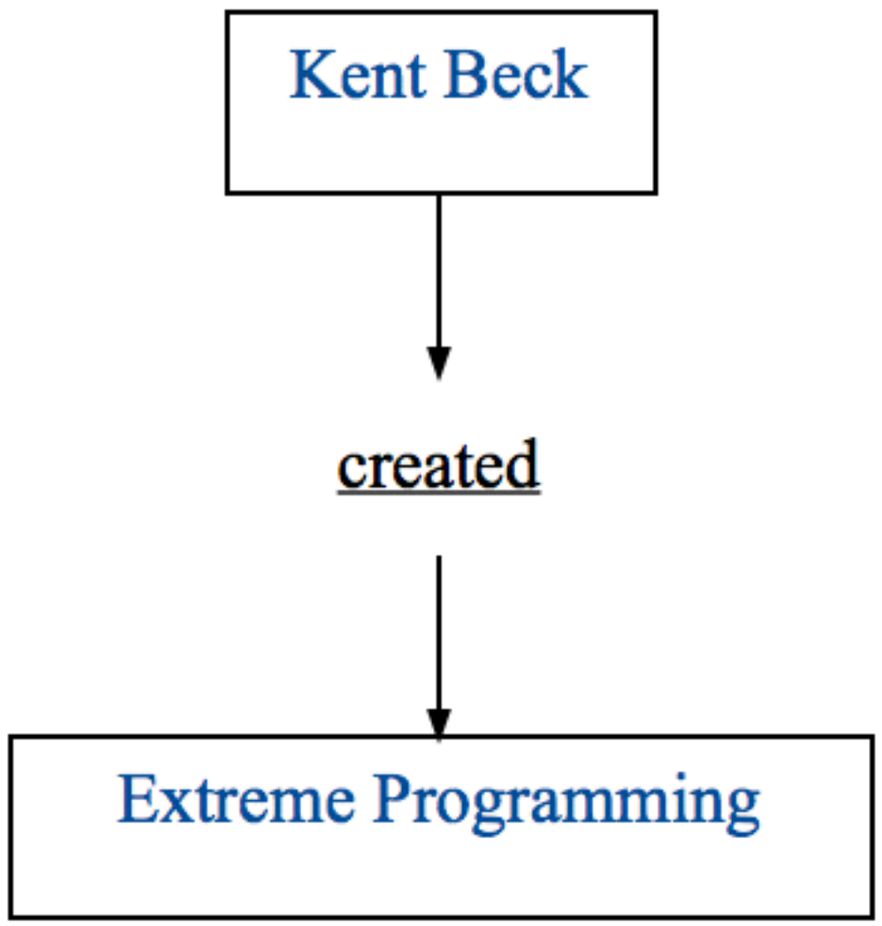
Kent Beck

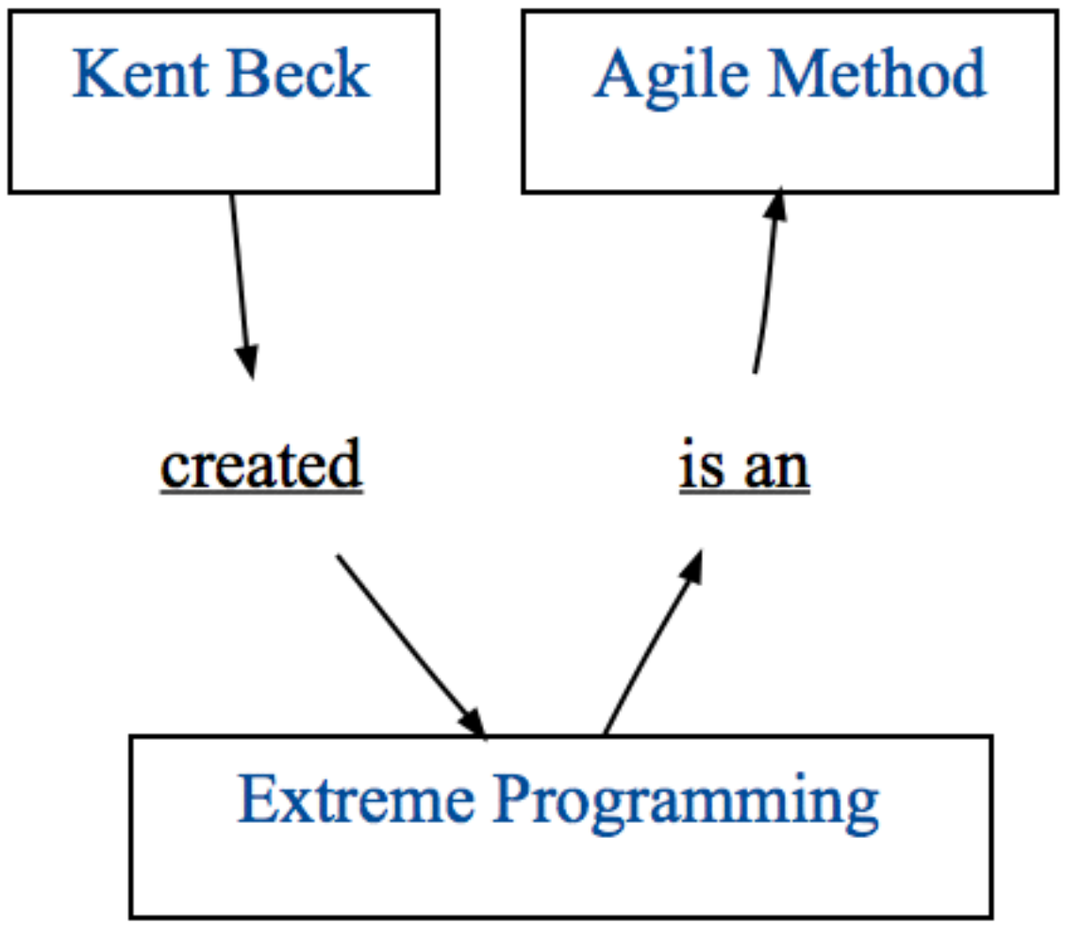
….and

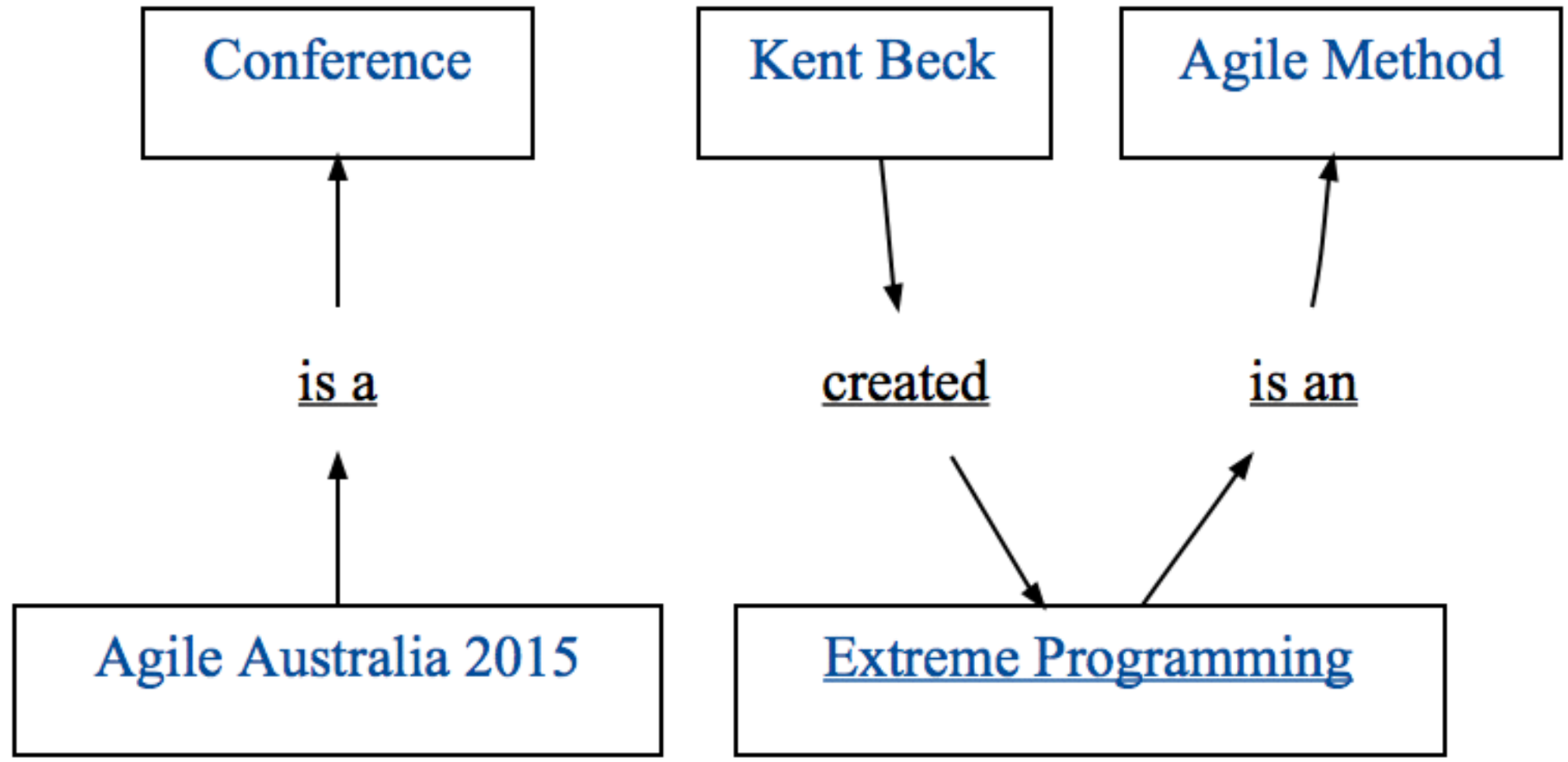
Paris Hilton

….in your first

Concept Map


Kent Beck
created
Extreme Programming


Kent Beck
Agile Method
created
is an
Extreme Programming


Conference
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Agile Method
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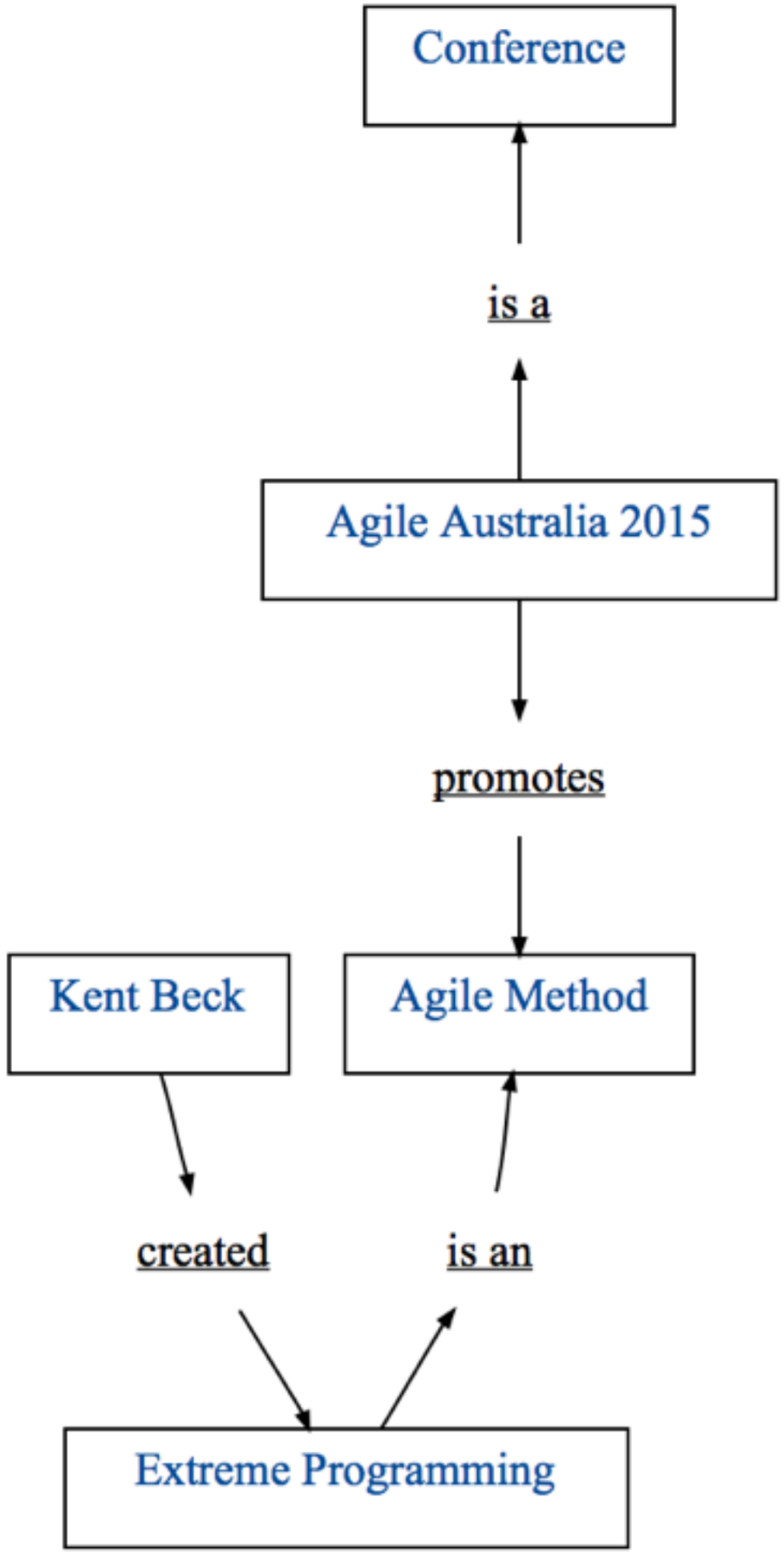
Agile Australia 2015
Extreme Programming


Conference
is a
Agile Australia 2015
promotes
Kent Beck
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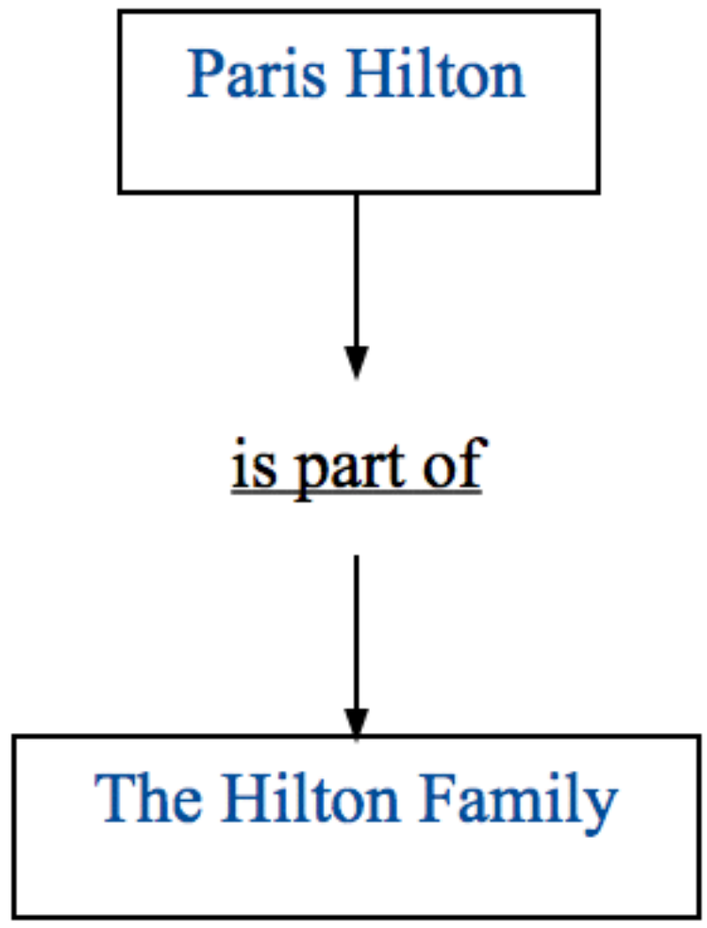
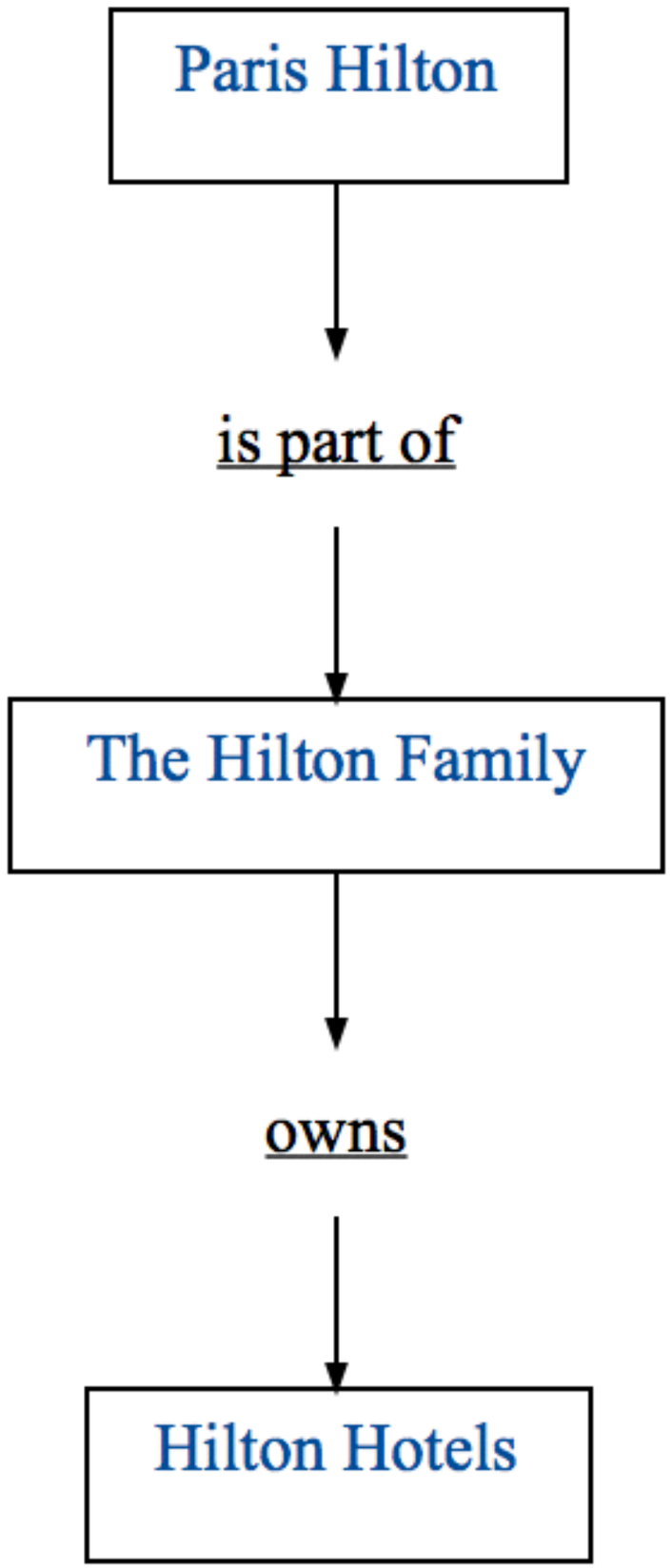
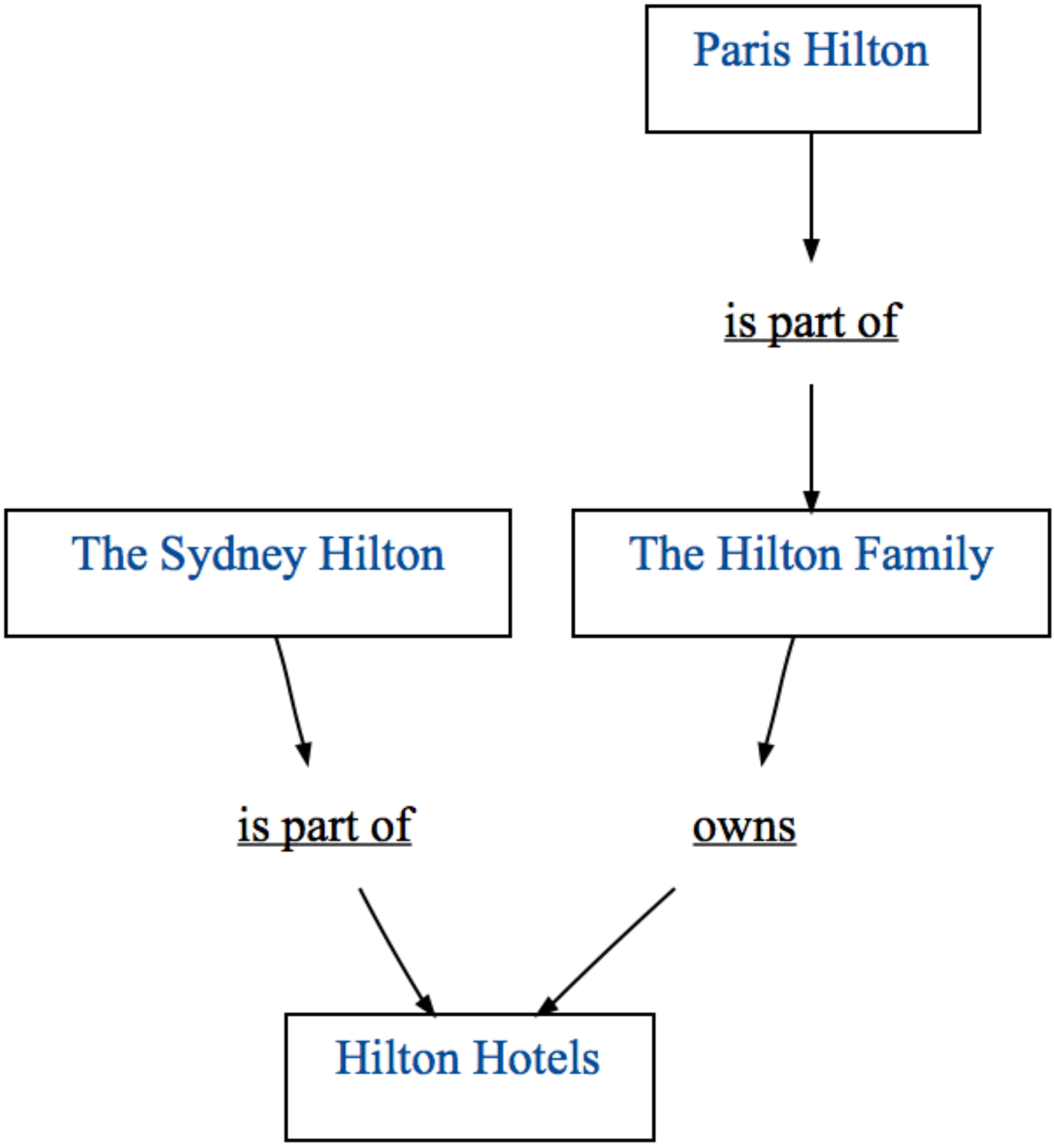
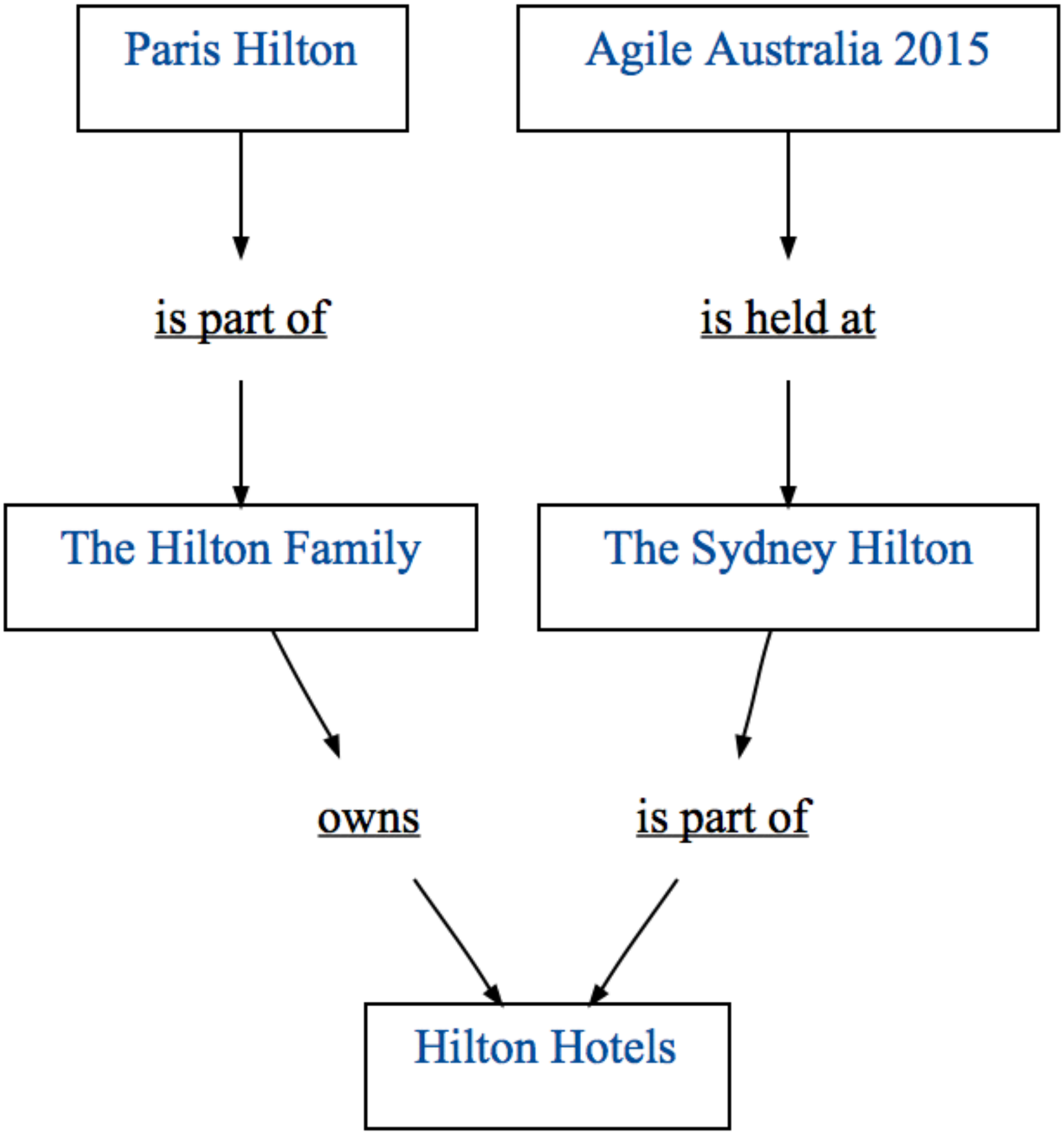
Extreme Programming


Paris Hilton
is part of
The Hilton Family


Paris Hilton
is part of
The Hilton Family
owns
Hilton Hotels


Paris Hilton
is part of
The Sydney Hilton
The Hilton Family
is part of
owns
Hilton Hotels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Agile Australia 2015
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is held at
The Hilton Family
The Sydney Hilton
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is part of
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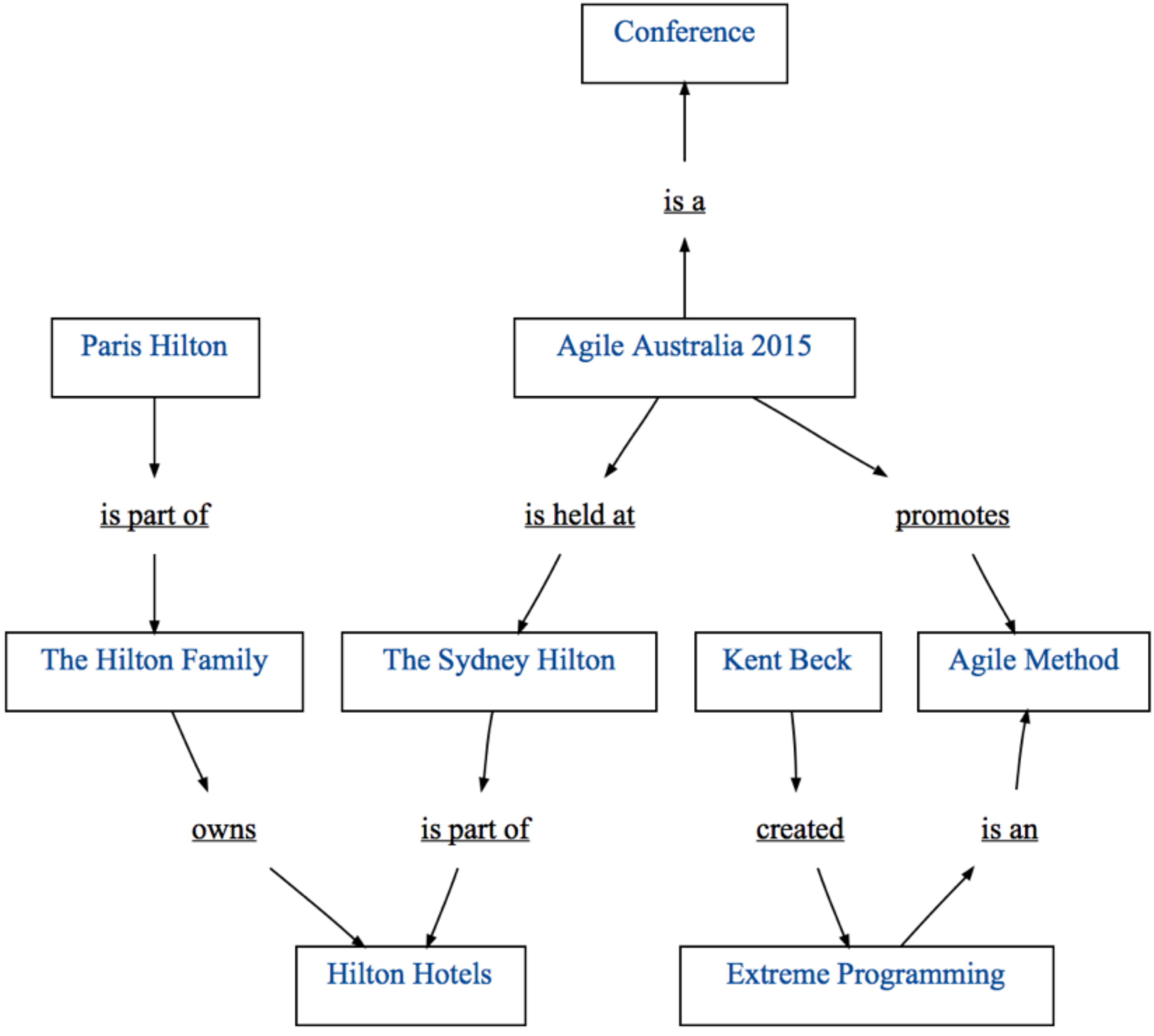
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Hilton Hotels
Extreme Programming

Concepts
Predicates
and
Propositions

Concepts

Kent Beck created Extreme Programming

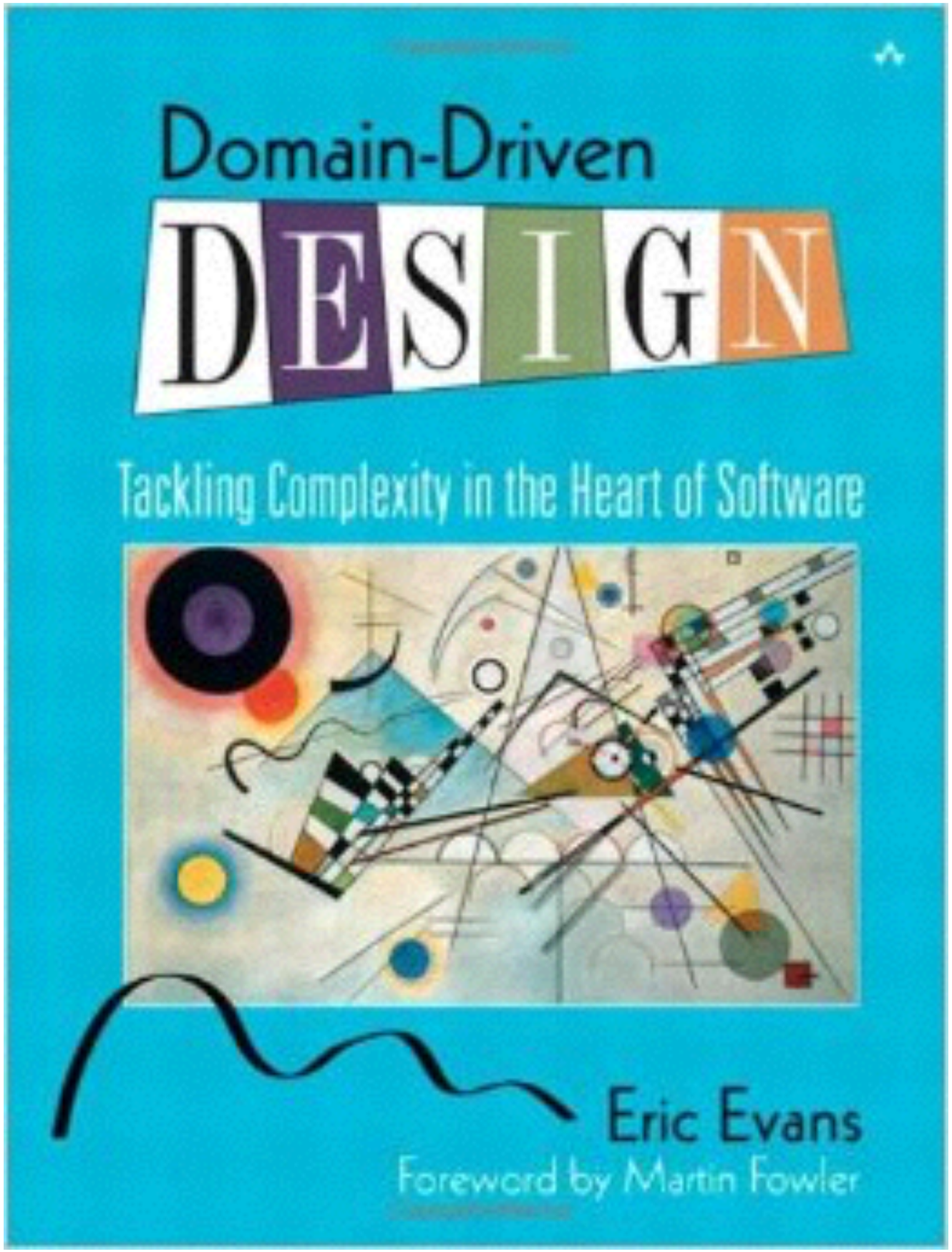
Predicates

Kent Beck created Extreme Programming

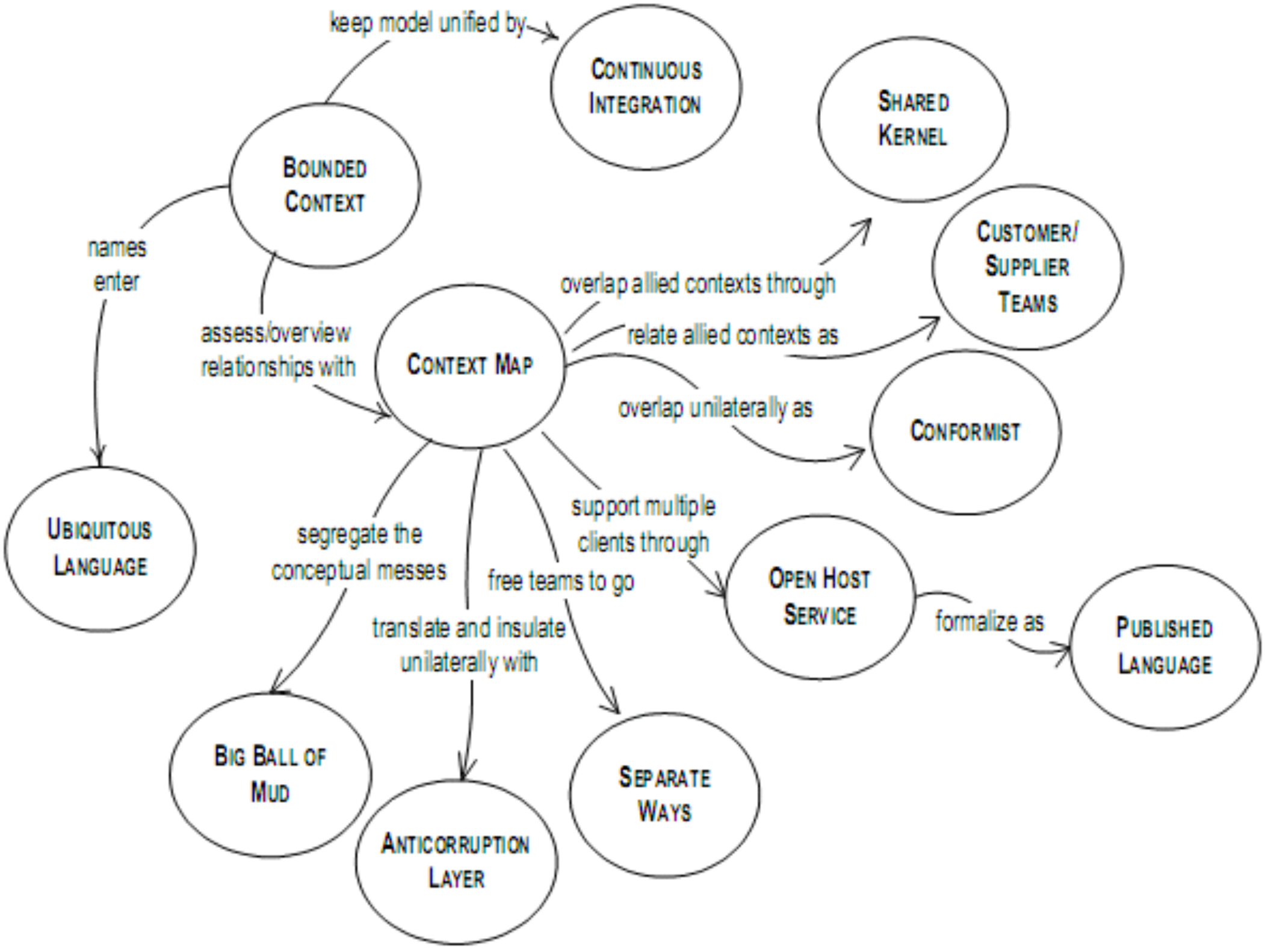
Propositions

Kent Beck created Extreme Programming

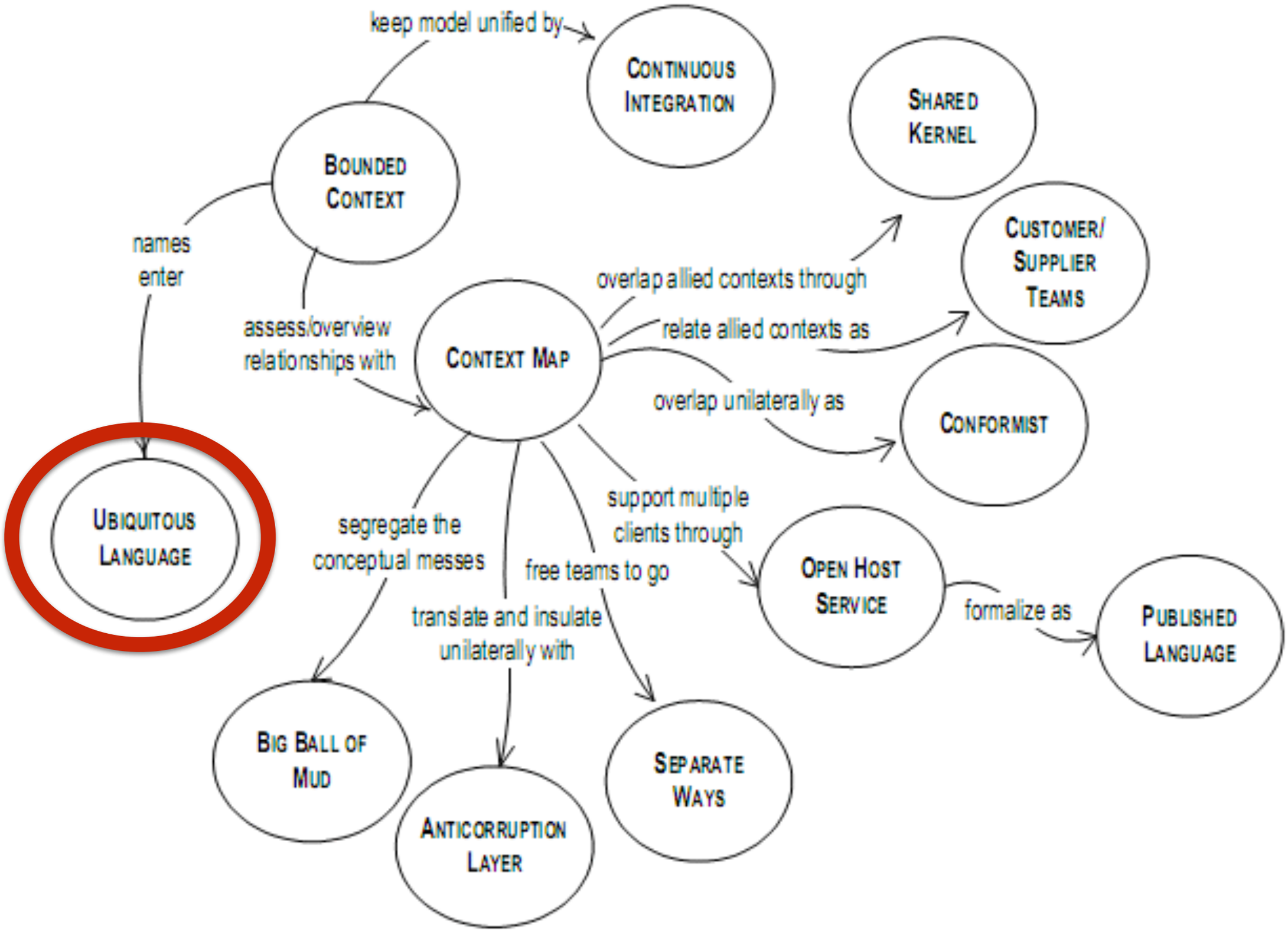
A little background


Domain-Driven
DESIGN
Tackling Complexity in the Heart of Software
Eric Evans
Foreword by Martin Fowler

Maintaining Model Integrity



Maintaining Model Integrity



Business Rule Concepts

Getting to the Point of Knowledge

Fourth Edition

Interactions
Processes
Rules
Concepts

LEARNING HOW TO LEARN

Joseph D. Novak
D. Bob Gowin

Concept Maps

In a Software Domain

imagine it’s

Day 1

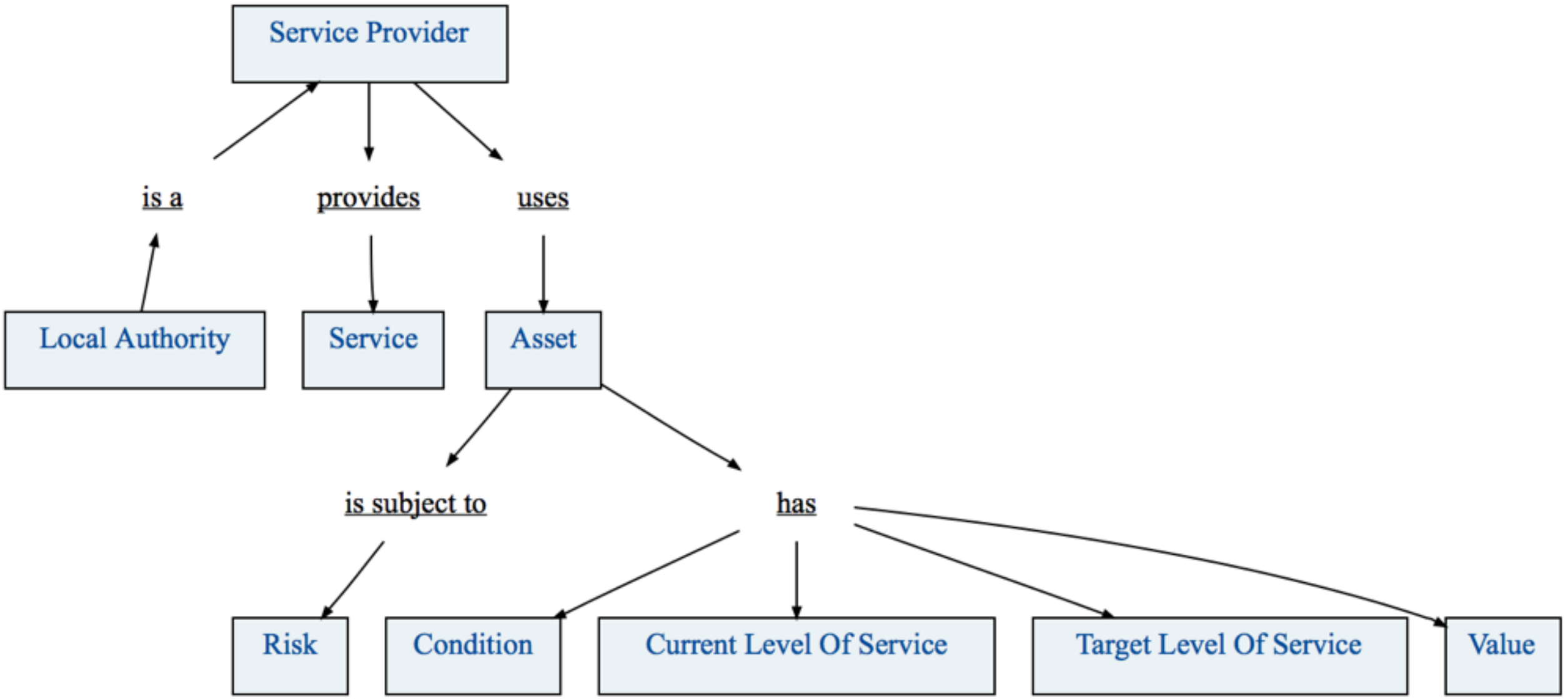
In your new team

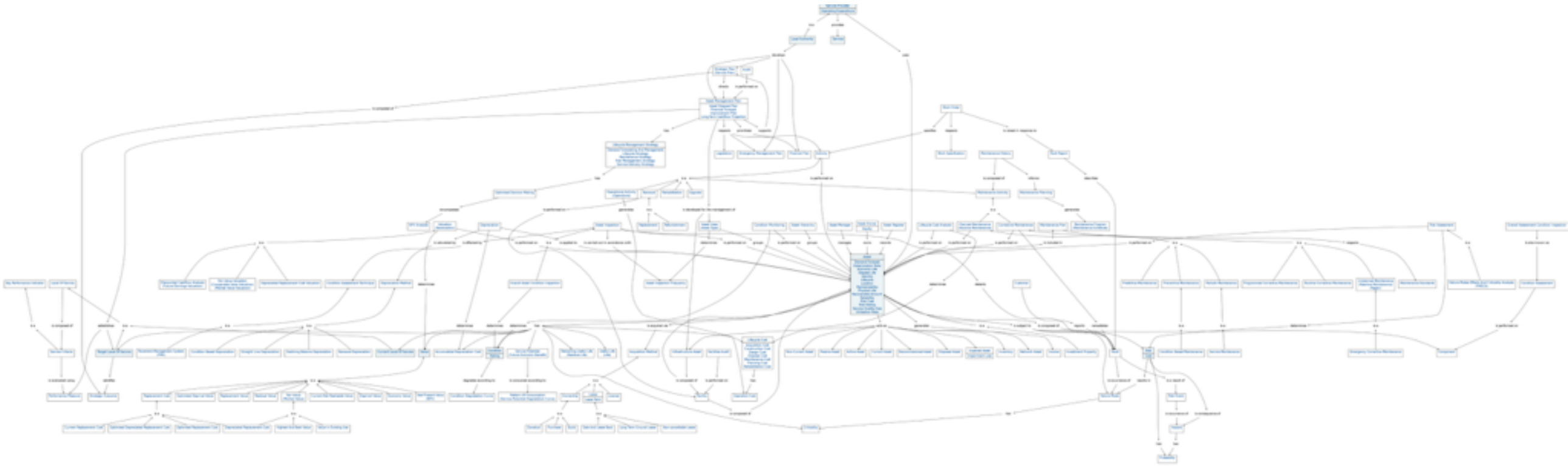
and the domain is

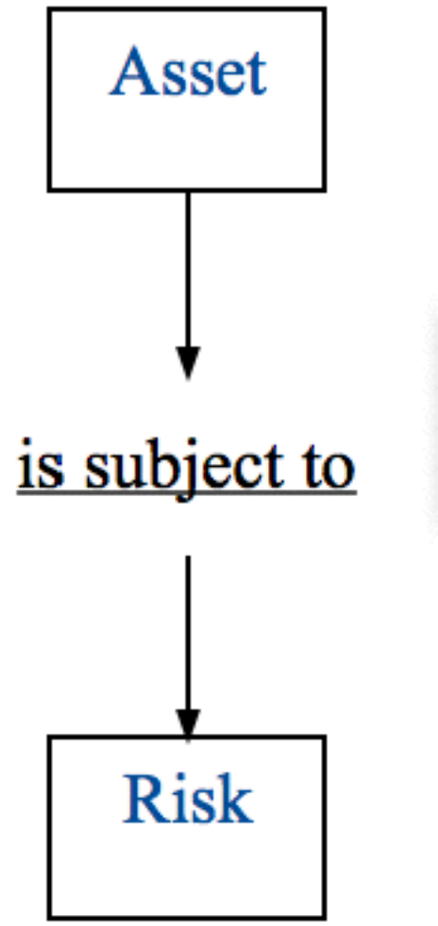
Infrastructure Asset Management

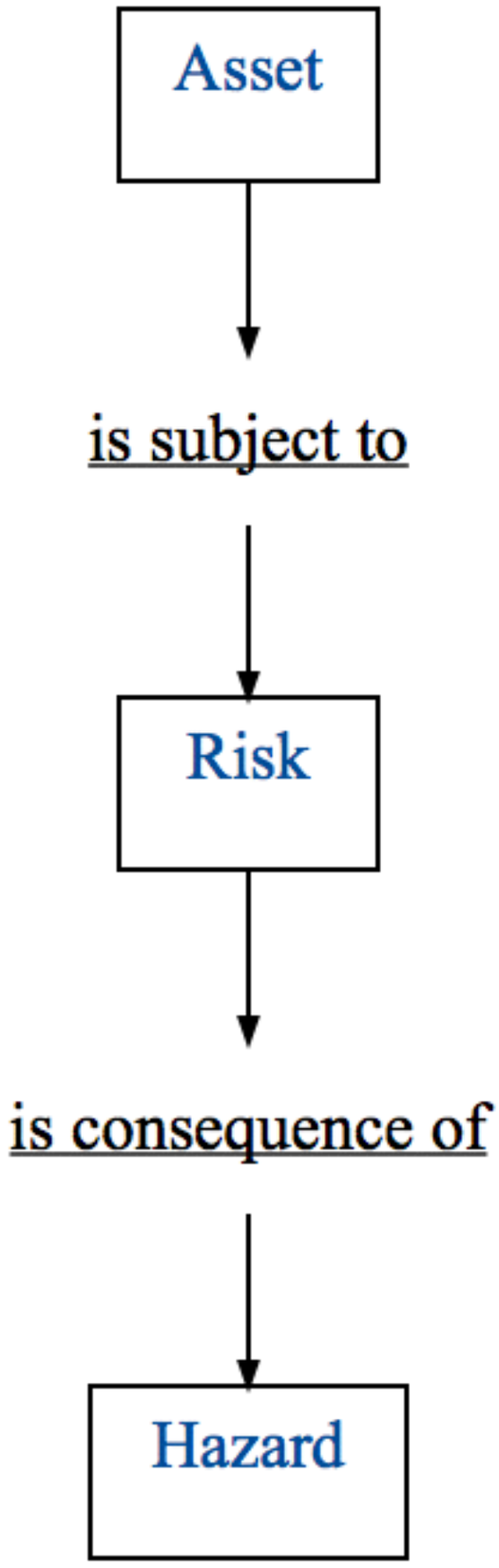
and you don’t have a clue :)

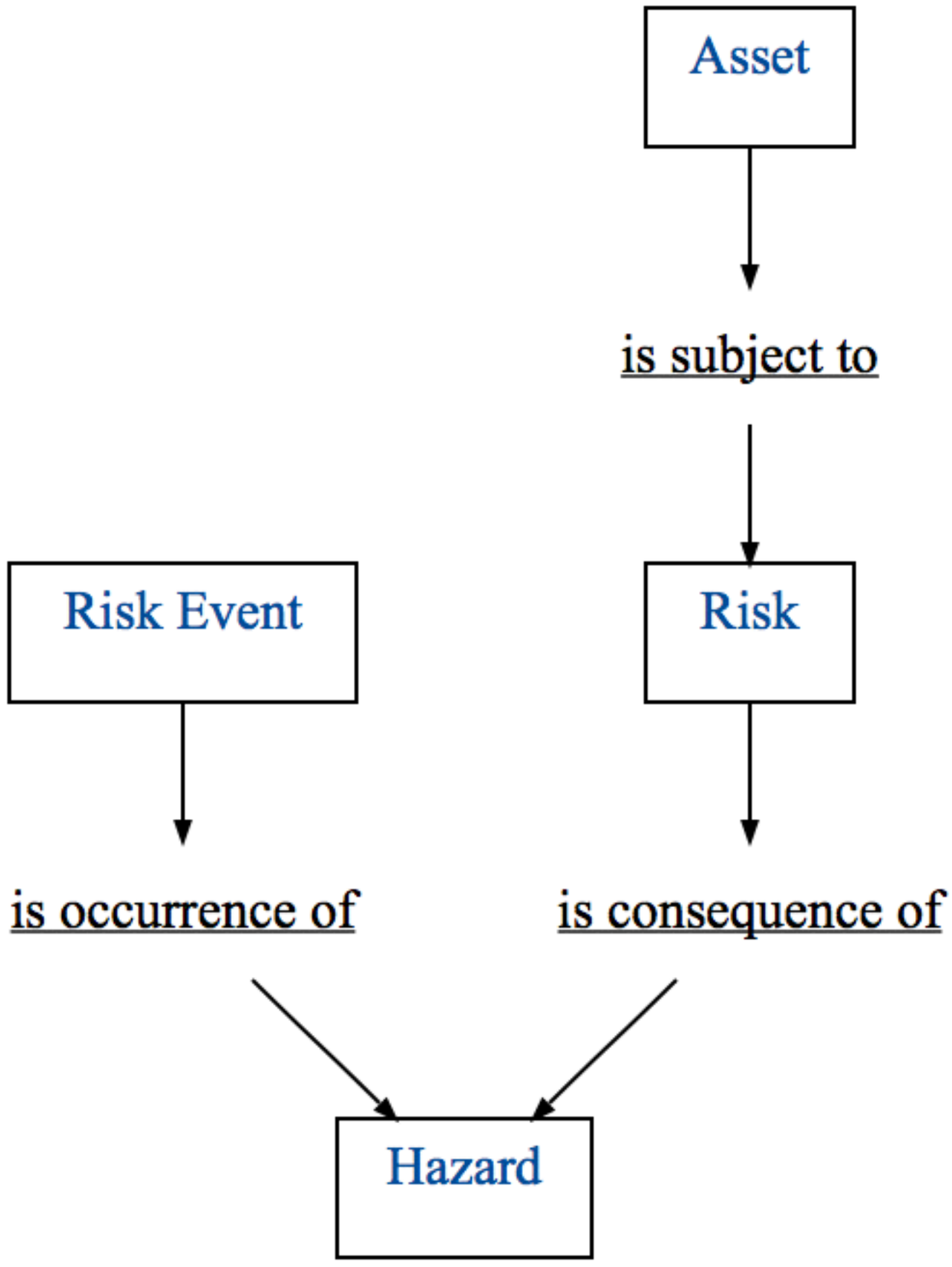

3.3
Figure 3.3.15 Front setbacks are to be compatible with the existing streetscape
2.8.2 Side setbacks
Objectives
Controls

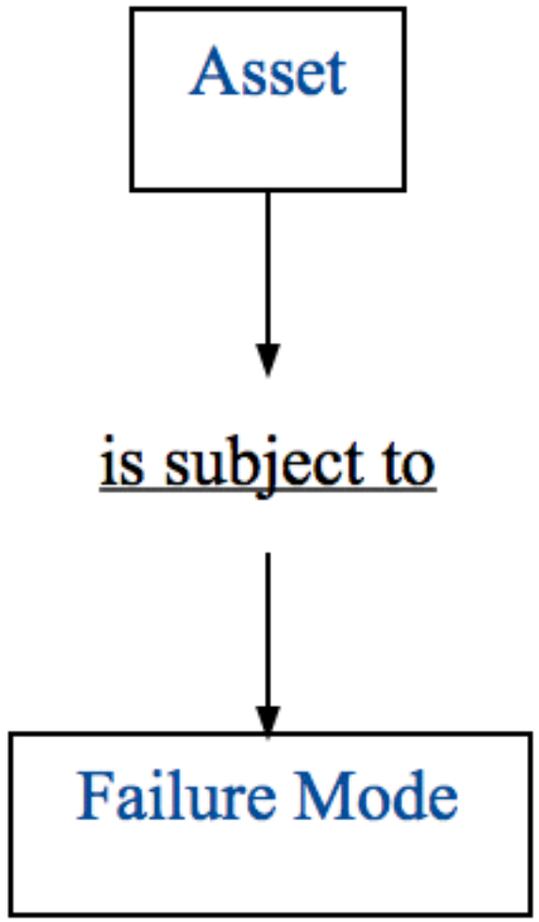

Service Provider
is a
provides
uses
Local Authority
Service
Asset
is subject to
has
Risk
Condition
Current Level Of Service
Target Level Of Service
Value

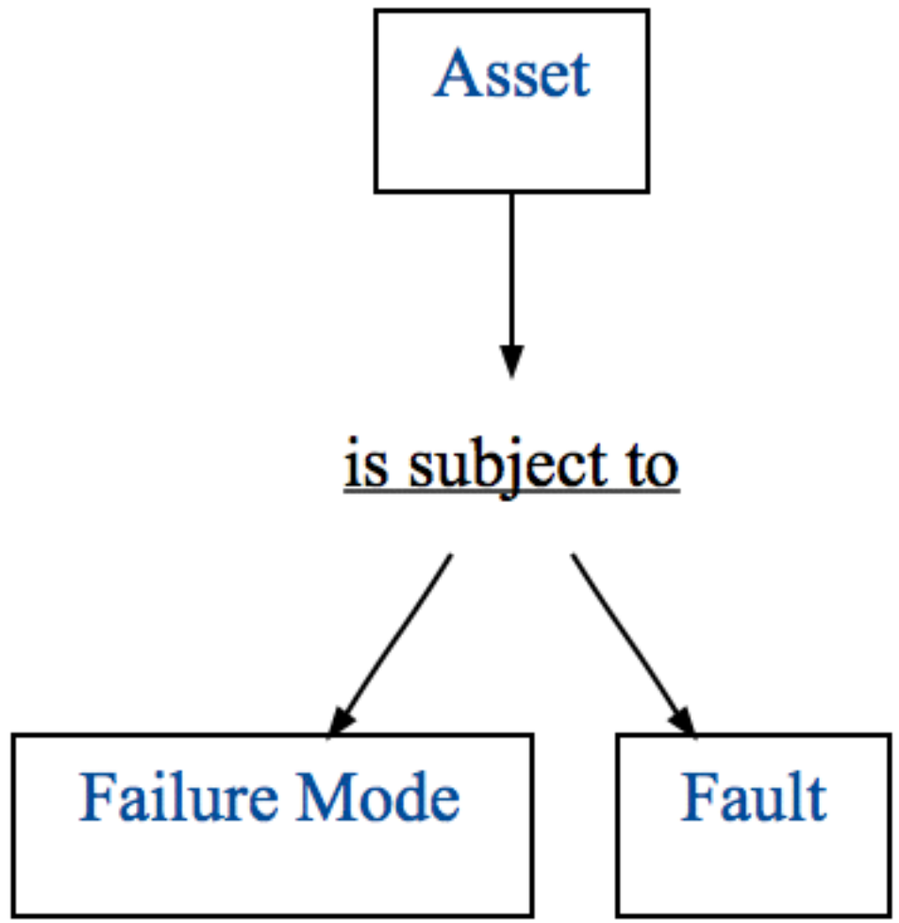


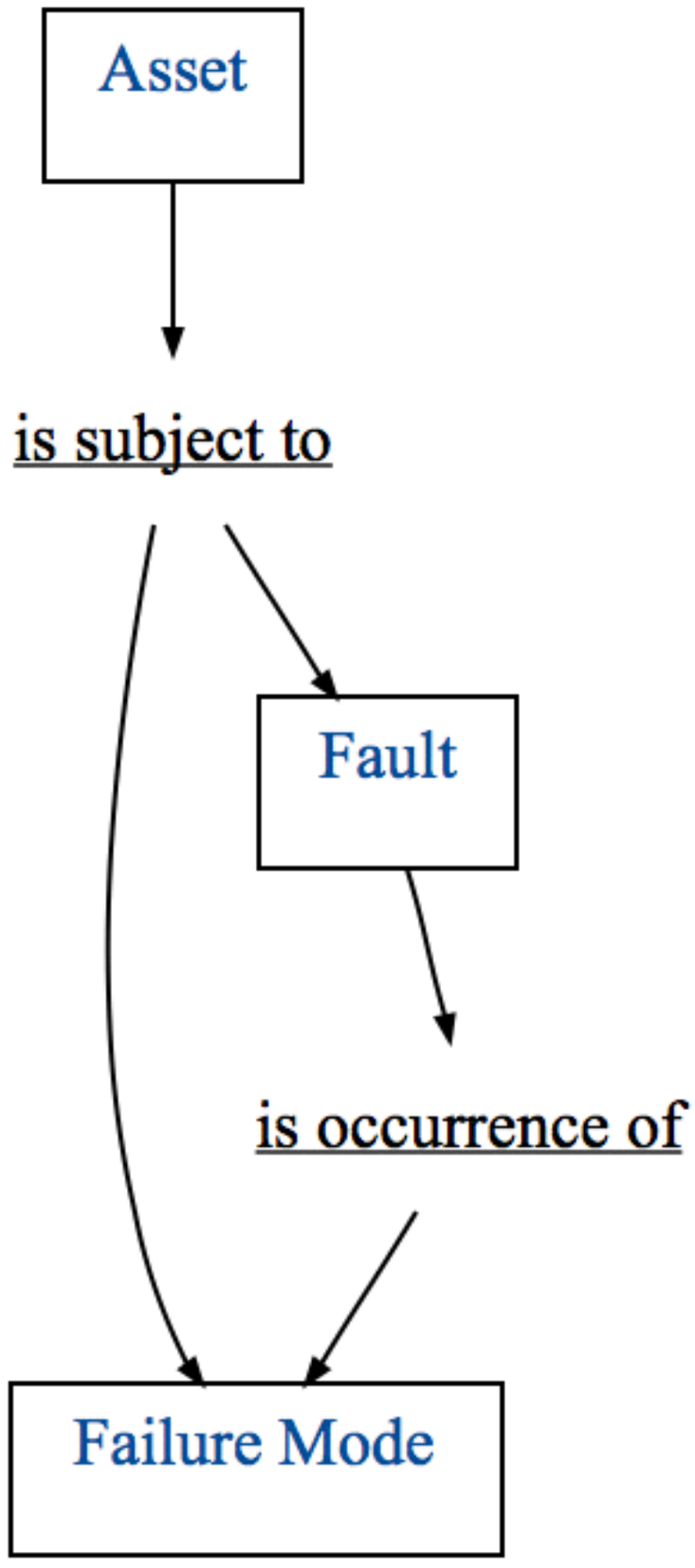

Asset
is subject to
Risk

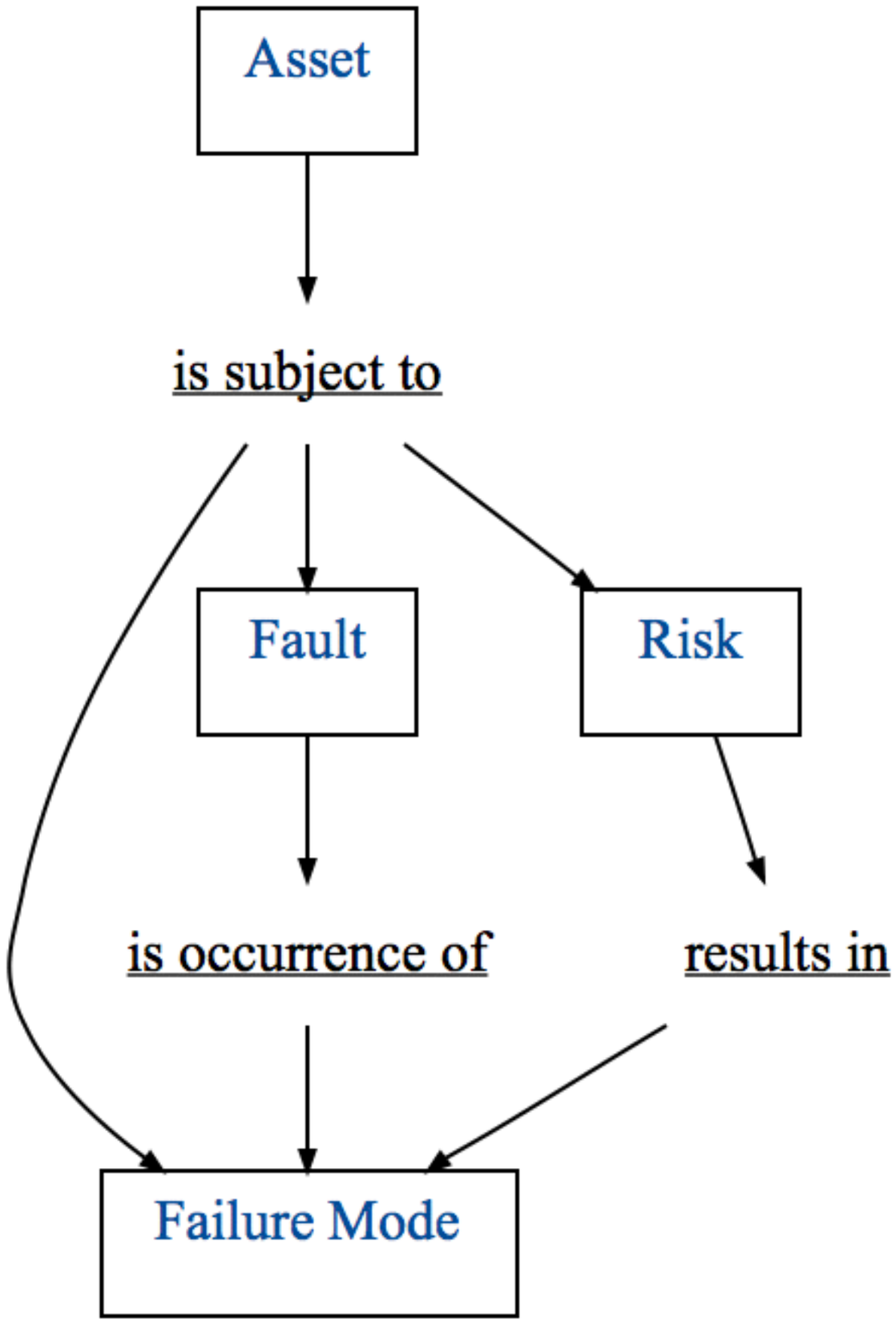

Asset
is subject to
Risk
is consequence of
Hazard


Asset
is subject to
Risk Event
Risk
is occurrence of
is consequence of
Hazard


Asset
is subject to
Failure Mode


Asset
is subject to
Failure Mode
Fault


Asset
is subject to
Fault
is occurrence of
Failure Mode


Asset
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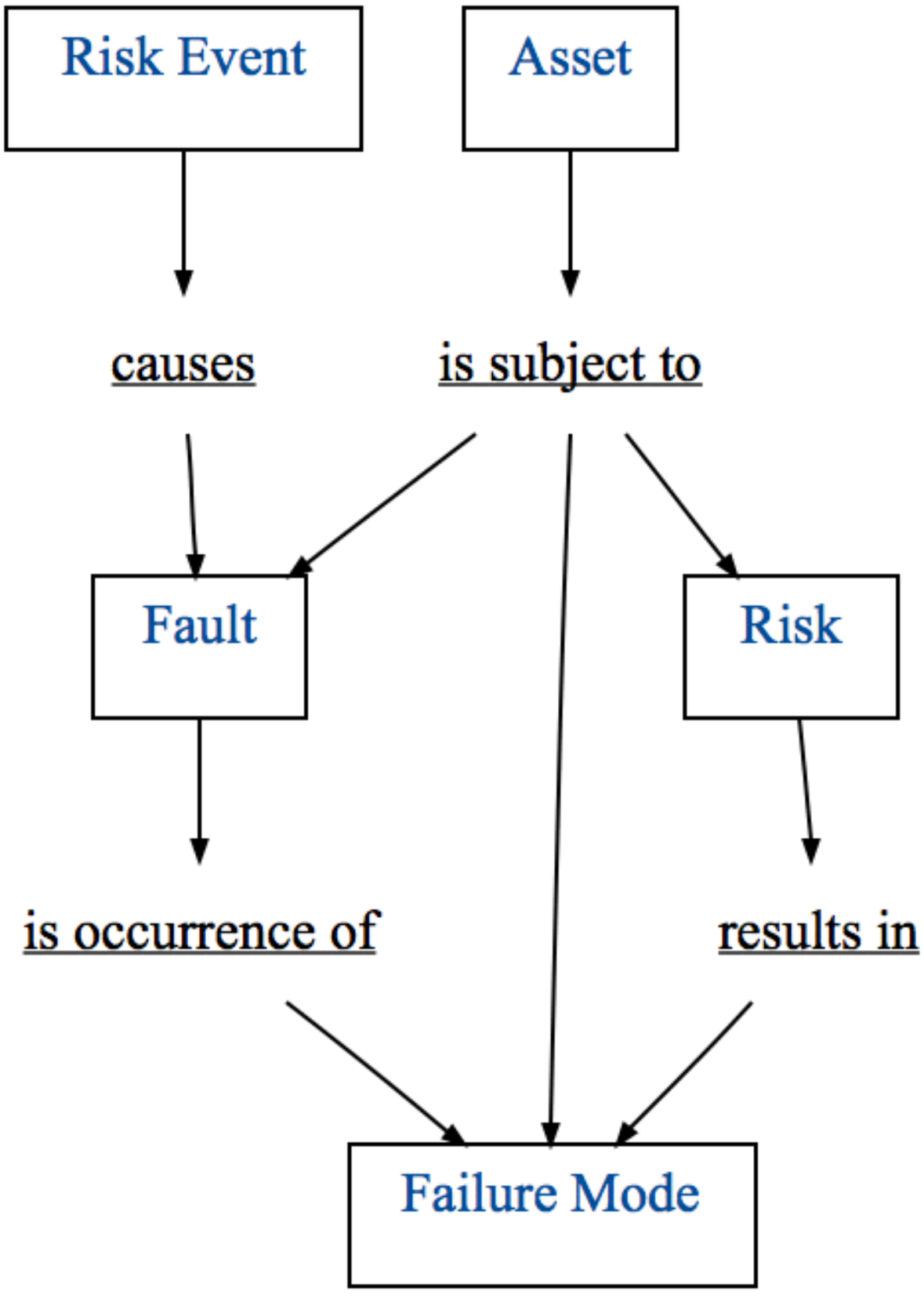
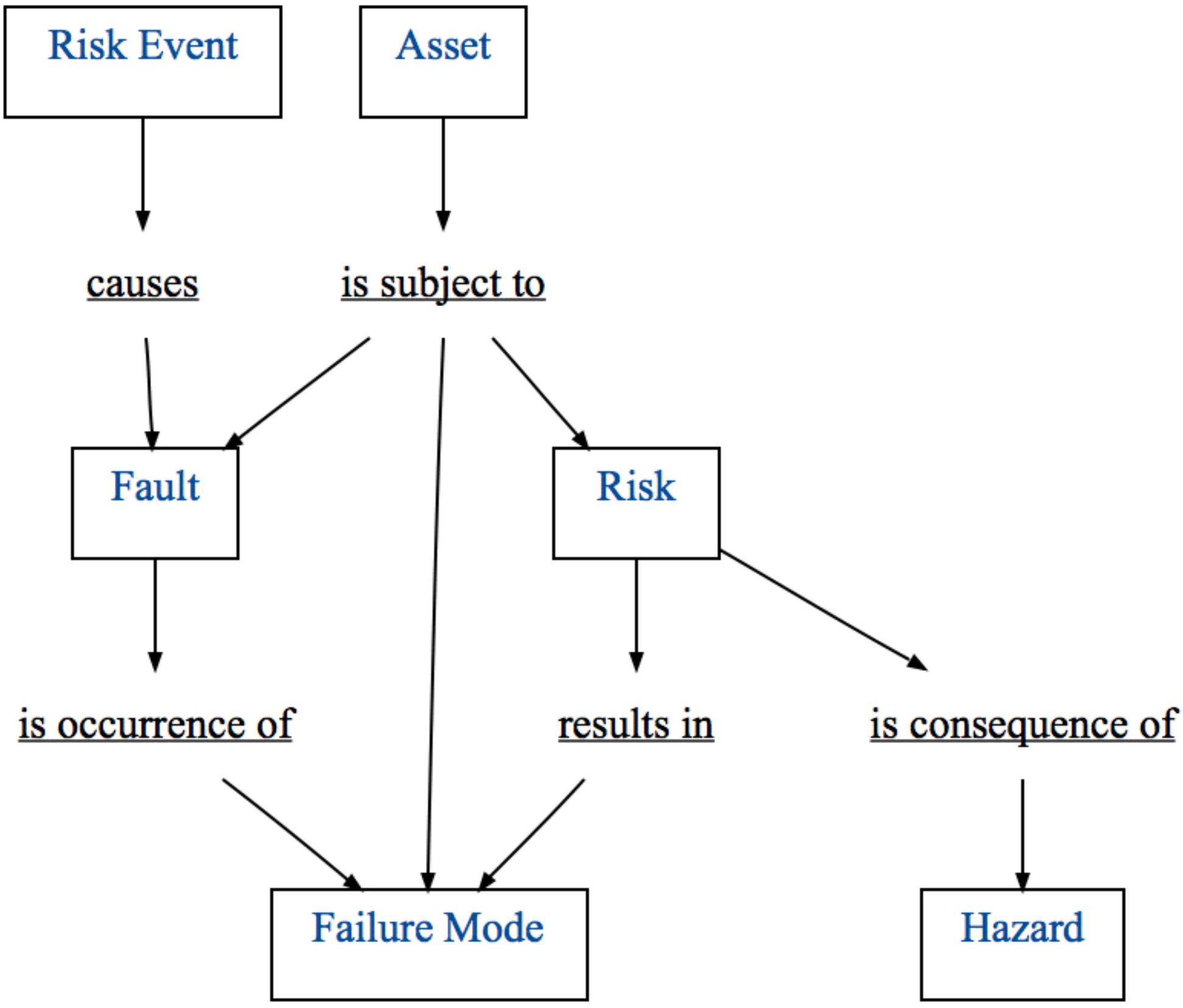
Fault
Risk
is occurrence of
results in
Failure Mode


Risk Event
Asset
causes
is subject to
Fault
Risk
is occurrence of
results in
Failure Mode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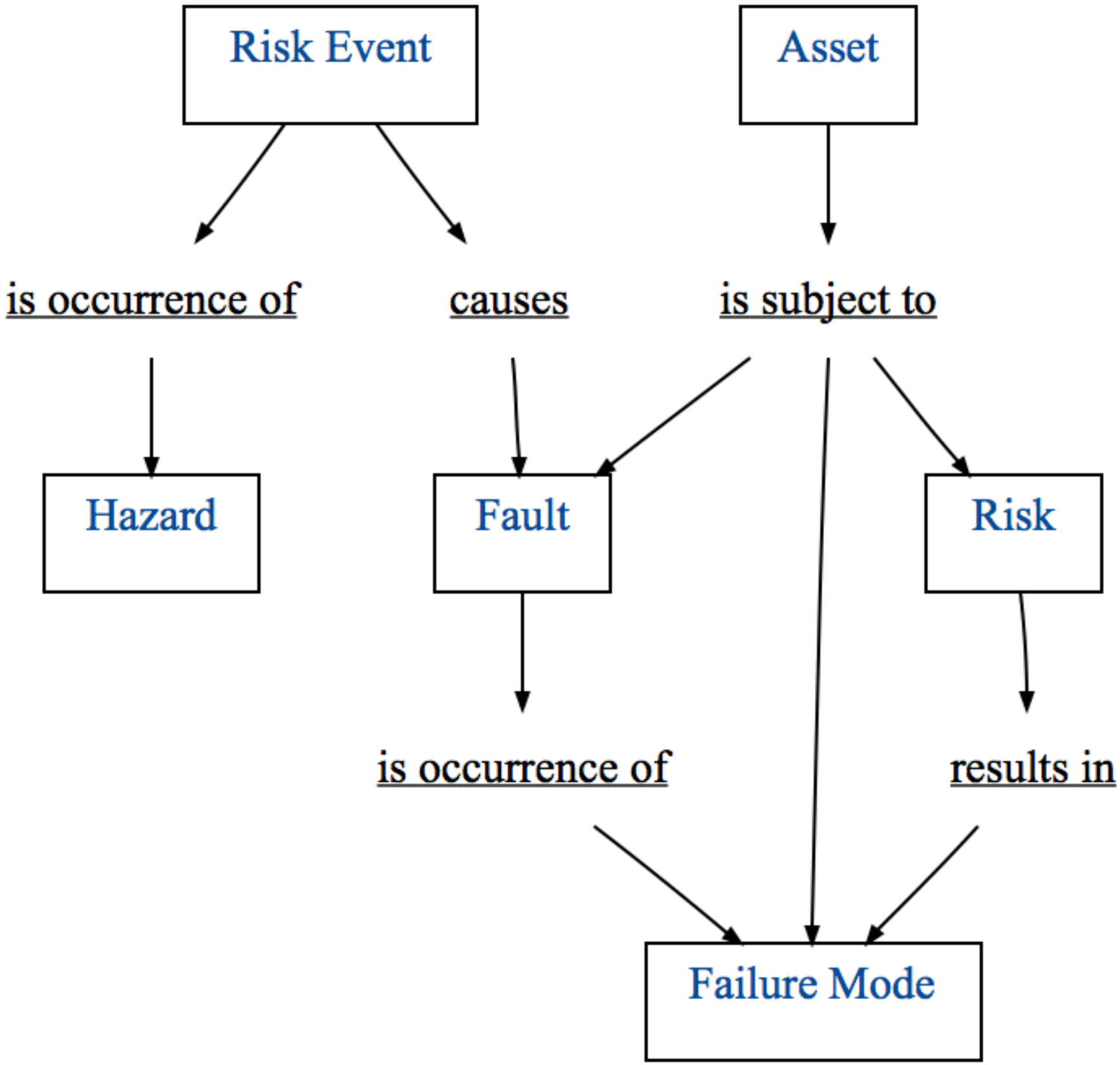
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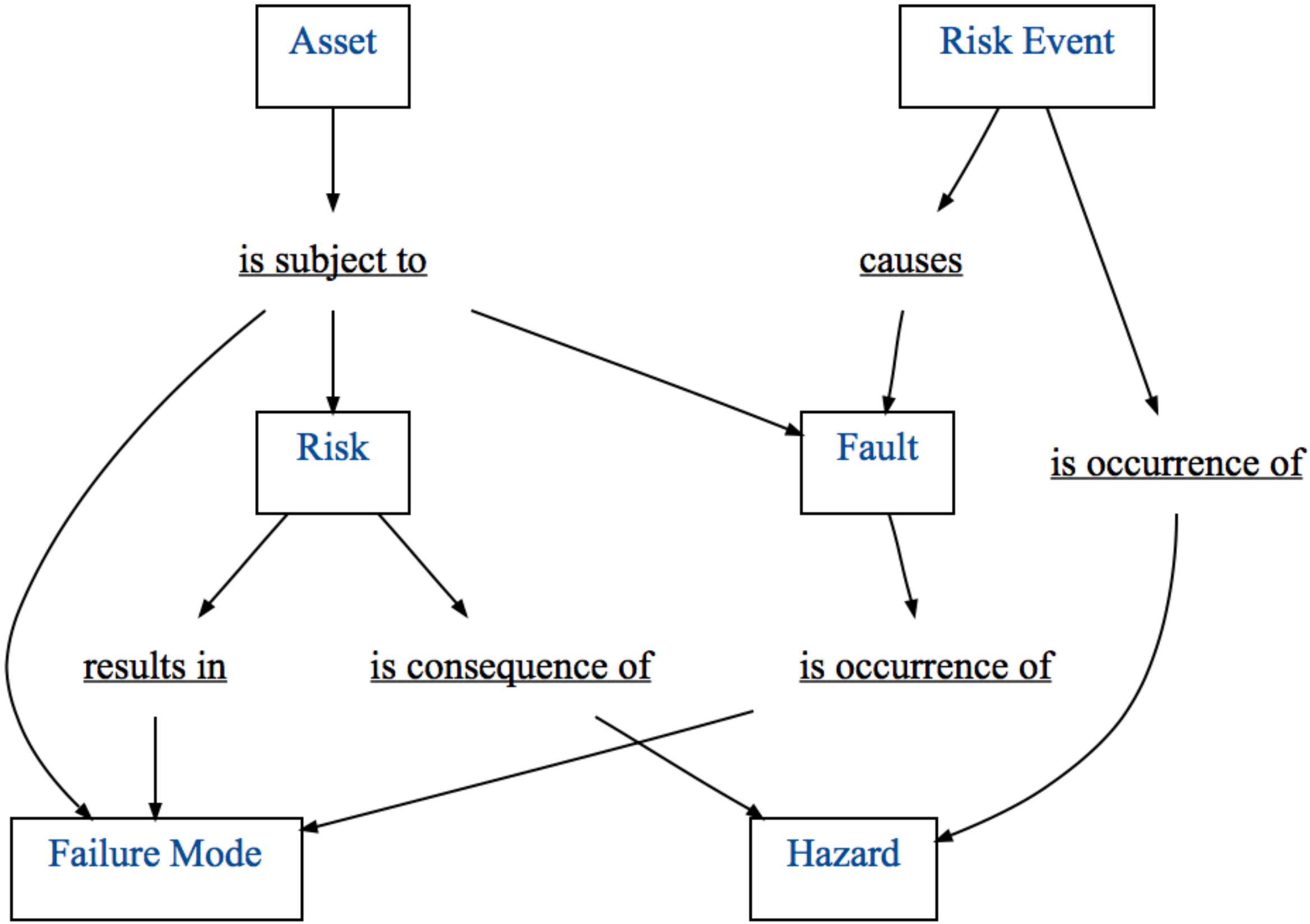
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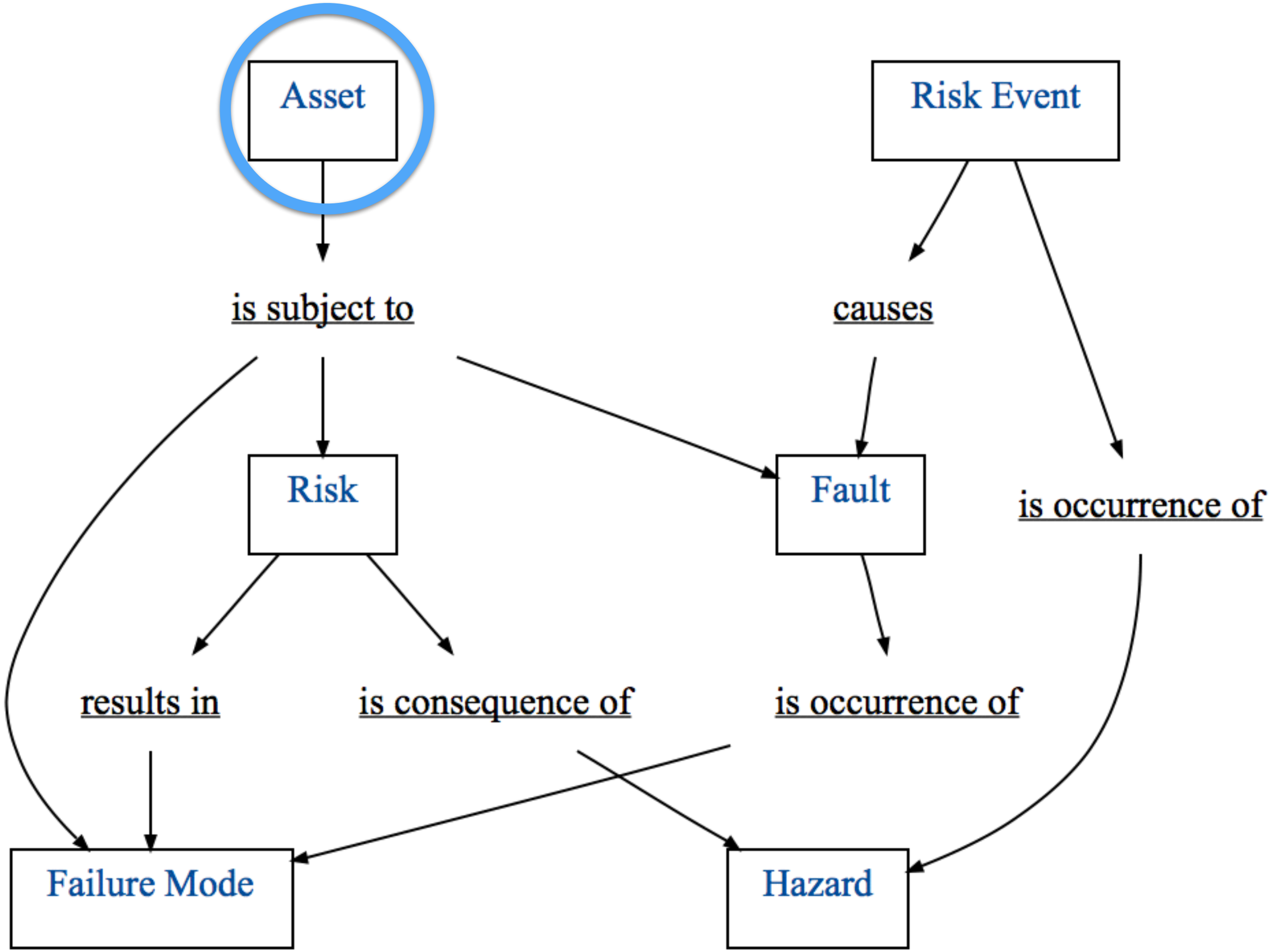
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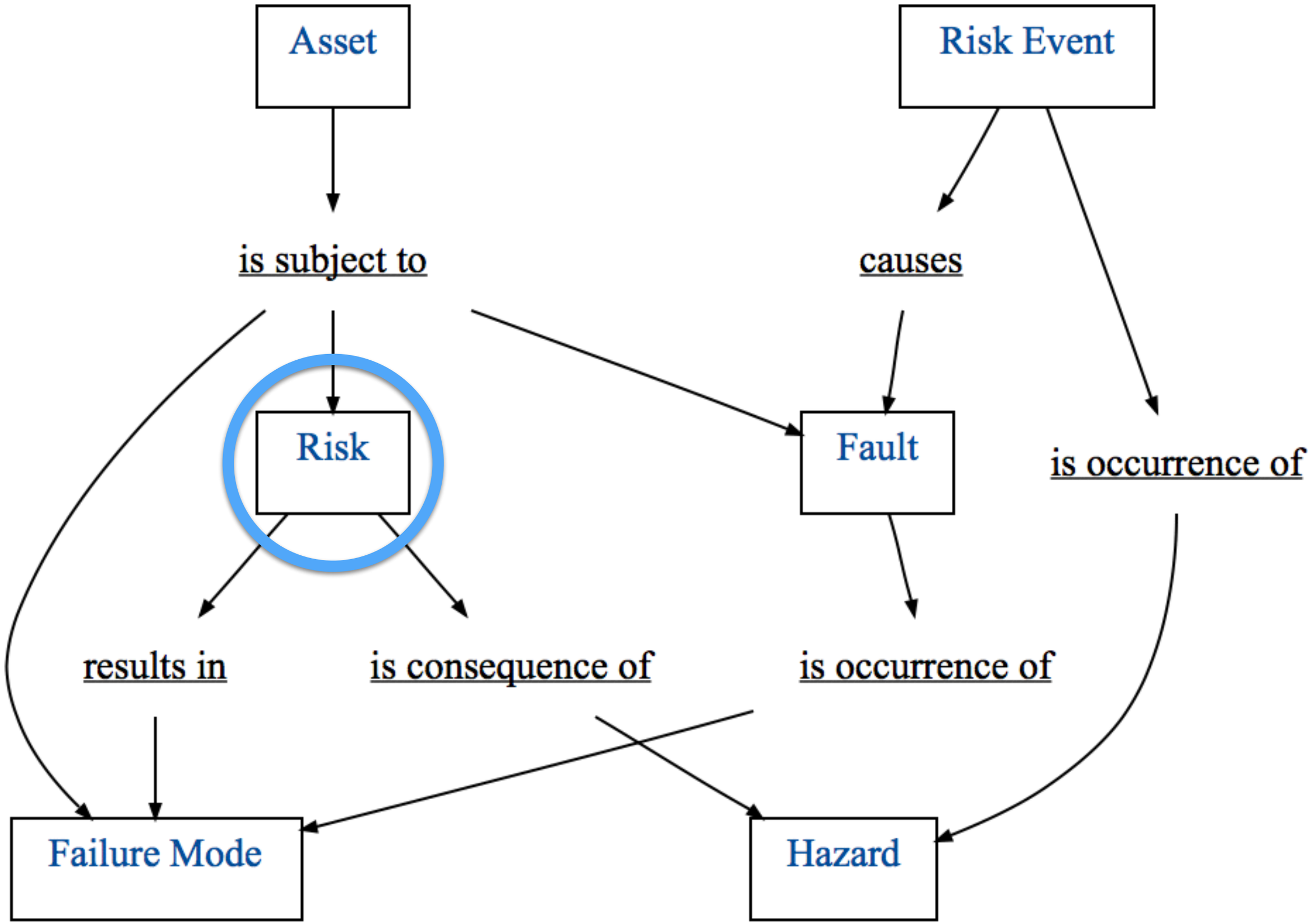
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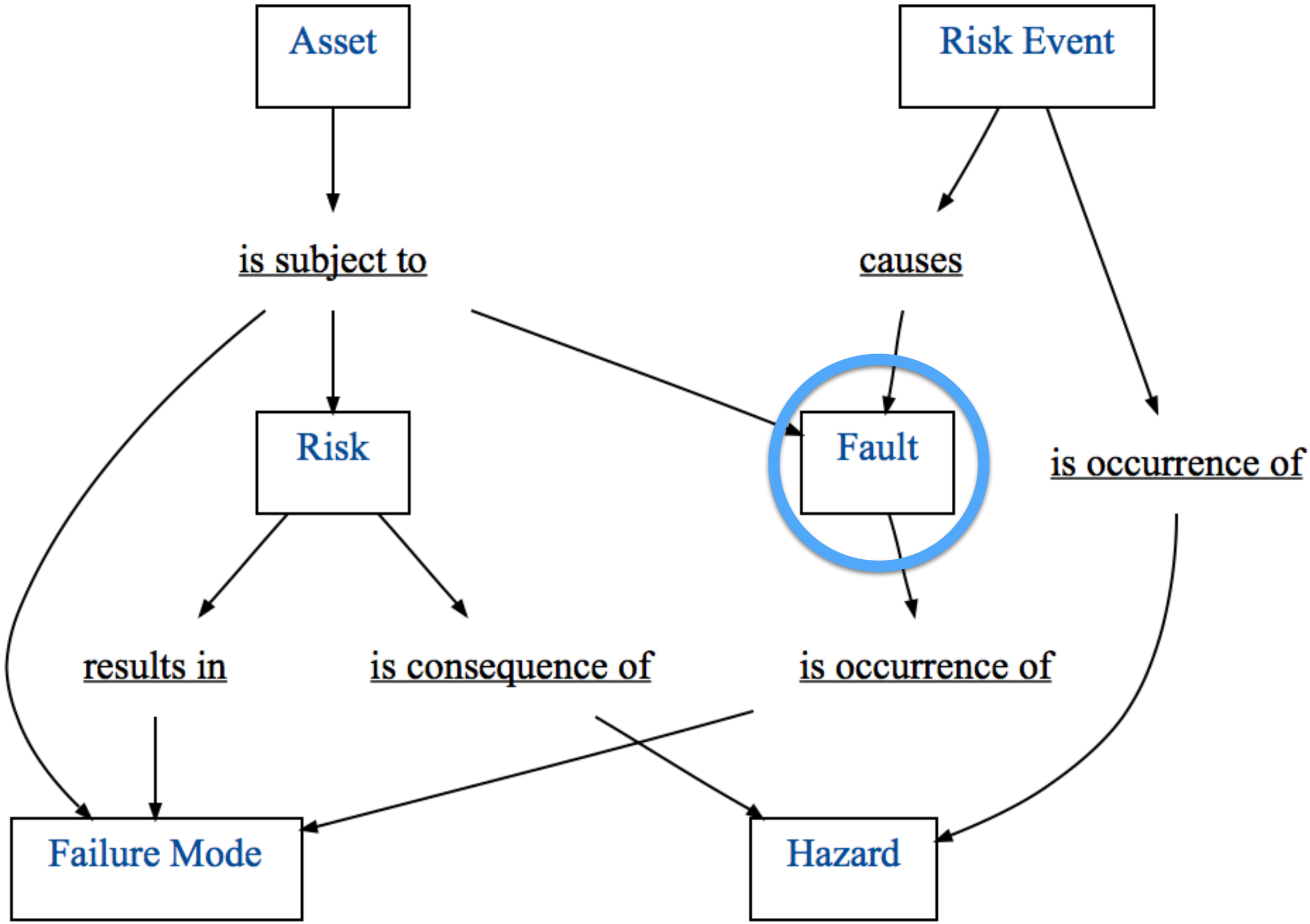
Asset
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is consequence of
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Failure Mode
Hazard

Concept Maps

In a SoftwareTeam

“This same model should supply the language for the developers and domain experts to communicate with each other, and for the domain experts to communicate among themselves about requirements, development planning, and features. The more pervasively the language is used, the more smoothly understanding will flow.”

— Eric Evans, Domain Driven Design

You might think
your team has
a ubiquitous language

You might want to check :)

COMMERCIAL TRANSACTION

COMMERCIAL DOCUMENT

STATEMENT

INVOICE

CREDIT NOTE

V.A.T.

G.S.T.

RWHT

DEPOSIT

WITHDRAWAL

EARNINGS

PAYPAL

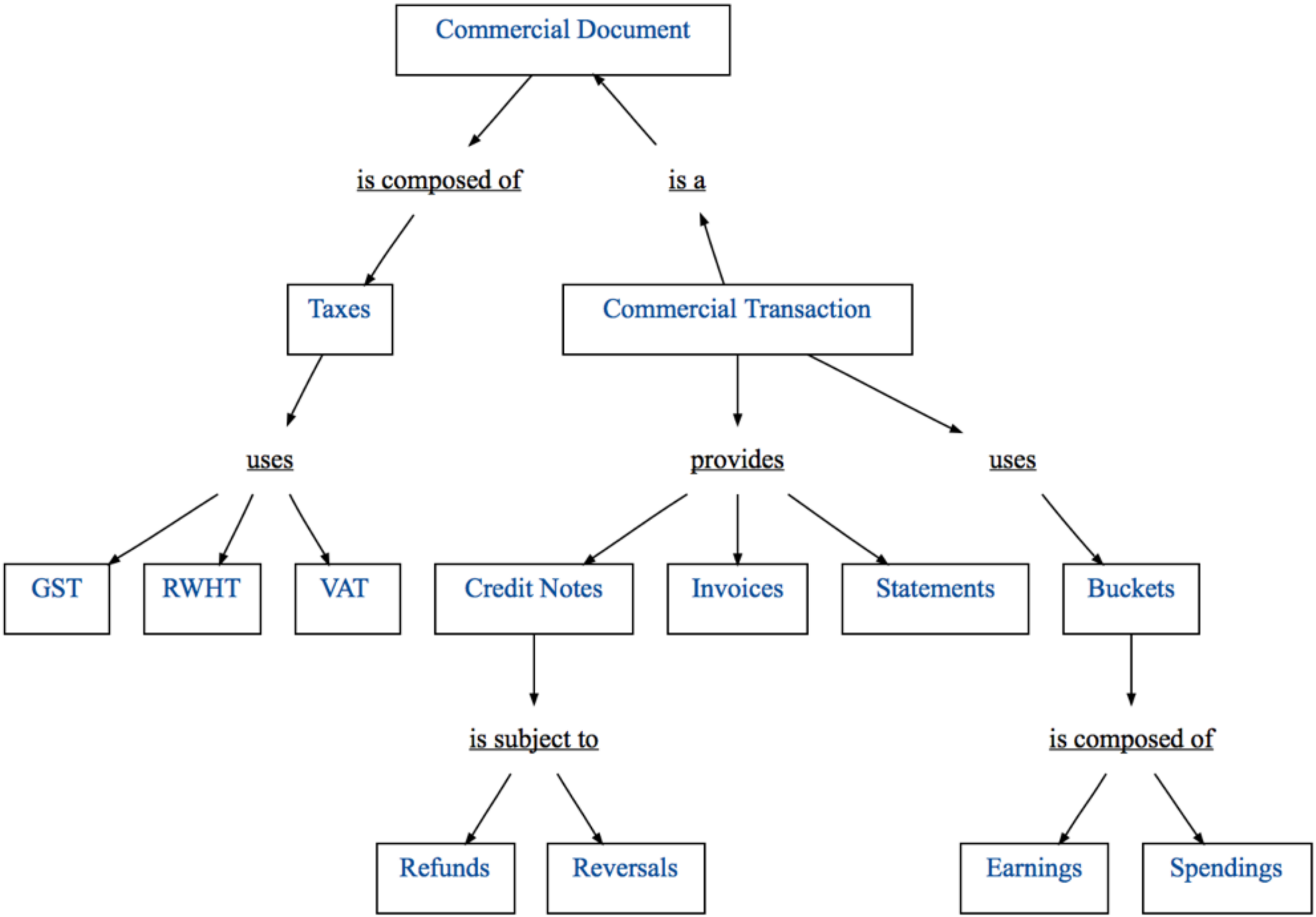
SPENDINGS

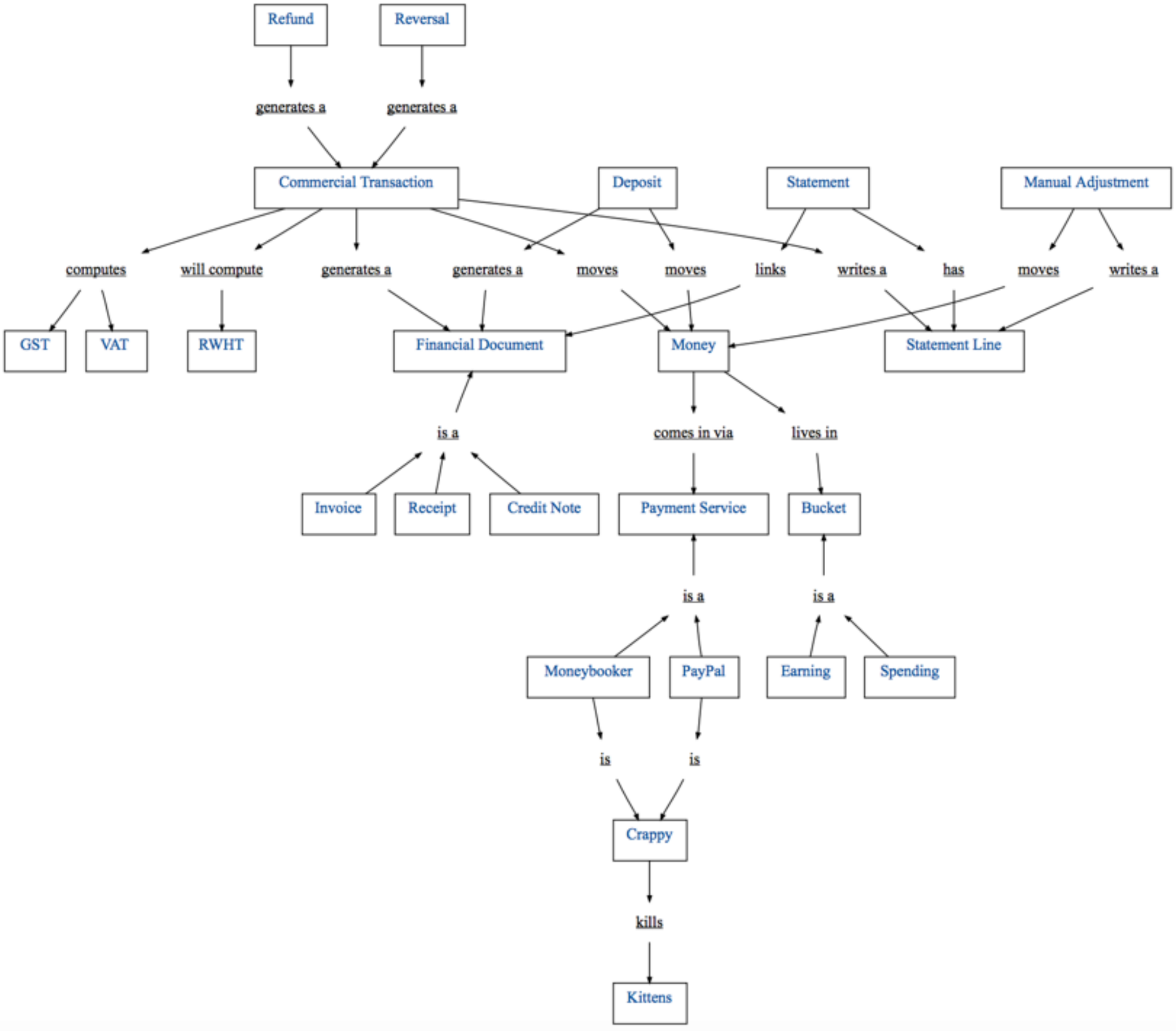
REFUND

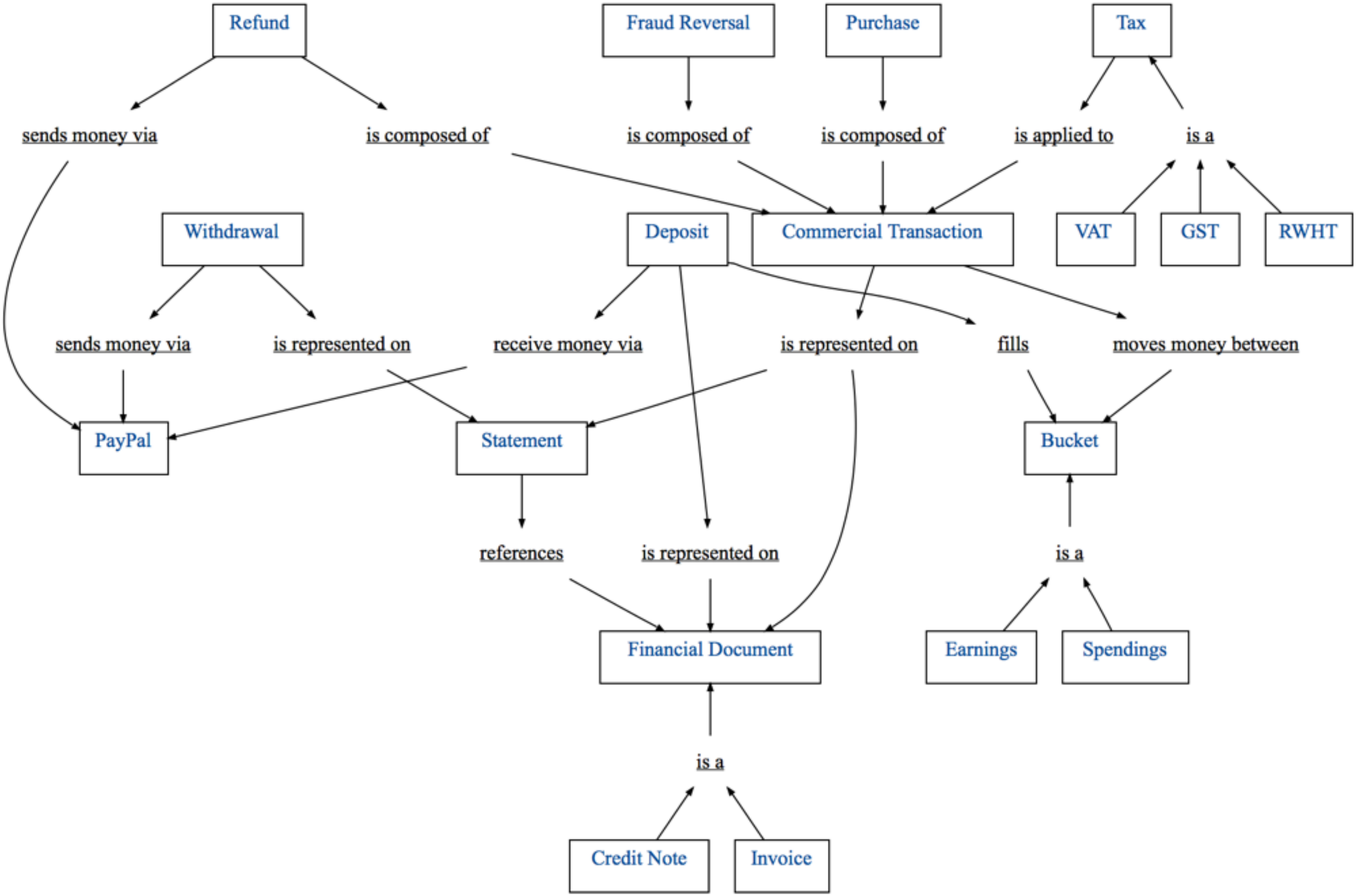
BUCKET

MANUAL ADJUSTMENT

REVERSAL


Commercial Document
is composed of
is a
Taxes
Commercial Transaction
uses
provides
uses
GST
RWHT
VAT
Credit Notes
Invoices
Statements
Buckets
is subject to
is composed of
Refunds
Reversals
Earnings
Spendings


Refund
Reversal
generates a
generates a
Commercial Transaction
Deposit
Statement
Manual Adjustment
computes
will compute
generates a
generates a
moves
moves
links
writes a
has
moves
writes a
GST
VAT
RWHT
Financial Document
Money
Statement Line
is a
comes in via
lives in
Invoice
Receipt
Credit Note
Payment Service
Bucket
is a
is a
Moneybooker
PayPal
Earning
Spending
is
is
Crappy
kills
Kittens


Refund
Fraud Reversal
Purchase
Tax
sends money via
is composed of
is composed of
is composed of
is applied to
is a
Withdrawal
Deposit
Commercial Transaction
VAT
GST
RWHT
sends money via
is represented on
receive money via
is represented on
fills
moves money between
PayPal
Statement
Bucket
references
is represented on
is a
Financial Document
Earnings
Spendings
is a
Credit Note
Invoice

how similar are they?

Number of team members:
6

Total number of propositions: 111

Total number of *unique* propositions: 86 (77%)

Number of propositions shared by more than half of the team:

4

Number of propositions shared by the whole team:

0

but let’s cut them some slack…

…and just count any two propositions that connect the same concepts as equivalent…

now

how similar are they?

Total number of *unique* propositions:
86 (77%) -> 71 (64%)

Number of propositions shared by more than half of the team:

4 -> 6

Number of propositions shared by the whole team:

0 -> 0

Next Steps

- pick the best one
- tighten it up
- merge in what's missing from the others
- iterate!
- refer to it often

Wrap Up

Build Your Own :)

https://capstone.herokuapp.com/

or, hopefully by the time you read this

https://www.conceptmaps.io

Questions

Make Your Team's Domain Language Truly Ubiquitous with Concept Maps

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