Software development is not about software

Marco Heimeshoff
This guy loves developing business software to an unhealthy degree!

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Software is everywhere!
Software becomes, what the developers understood...

...not what the business people meant.

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Communication

Empathy

The ability to learn

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Structure your company aligned to the business needs.
“Organisations which design systems [...] are constrained to produce designs which are copies of the communication structures of these organisations”

-Melvin Conway
Discover Bounded Contexts

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Find the **boundaries** that enable your business to optimise its **core** domains.
Organisational and technical boundaries should **coevolve**... ...guided by **feedback** from vision, product, expert location, bottlenecks, data cohesion, domain and code

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One team per bounded context!

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“Communication between people drops off radically as soon as their distance from each other exceeds the length of a school bus (~10m).”

- Thomas J. Allen
Emotional safety

Silence
Withdrawing
Avoiding
Masking

Violence
Controlling
Labeling
Attacking
Ubiquituous language
I can suck melancholy out of a song as a weazel sucks eggs.

- Shakespeare, As You Like It, ii. 5.
public class CustomerRepository
{
    IEnumerable<Customer>
    GetCustomerByYearOfBirth(DateTime yearOfBirth)
    {
    }
}
public interface Customers
{
    IEnumerable<Customer> Born_in(Year year);
}

// Instead of
var repo = new CustomerRepo(/*db_connection*/);
var c = repo.GetByYearOfBirth(new DateTime(1981, 11, 19, 0, 0, 0));

// you write
var all_customers = new Customers(/*db_connection*/);
var turning_50 = all_customers.Born_in(Year.of(1968));
public struct Year
{
    int _year;

    private Year(int year) {
        if (year < 1900 || year > 2200) throw new DomainException();
        _year = year;
    }

    public static Year of(int year) => return new Year(year);

    public override ToString() => $"Year of {_year}";
}
public void Ein_Mitarbeiter ohne weitere Regeln bekommt Urlaub gemäß BUrlG()
{
    var grunddaten = szenario(
        mitarbeiter(
            geburtsdatum(1974, 12, 26),
            eintritt(2015, 01, 01),
            austritt(),
            Keine_Rundung),
        arbeitsverhältnisse(
            arbeitsverhältnis(
                von(2013, 01, 01),
                tagewoche(5),
                wochenstunden(40))),
        genommener_urlaub());

    var regelsatz = stelleRegelnAuf(
        "Nur Mindestprüfung",
        offenerZeitraum(von(2015, 01, 01), bis(2015, 12, 31)),
        Berechnungsmodus.Nach_Tagewoche,
        Anspruchsart.Erholungsnachweiss,
        Anspruchsgrundlage(konstant(20)),
        UnterjaehrigeMinderung.VolleMonate,
        Zeitseinheit.Tage);

    Berechne(grunddaten, regelsatz, Zeitraum(2015)).Should().Be(tage(20));
}
Ubiquitous language per Bounded Context
Shopping

Warehouse

Payment

Delivery
You've just discovered DDD

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Tackling complexity in the heart of software
Tactical Models

Building Blocks
Value Objects, Entities, Aggregates
Repositories, Domain Services...

Architecture
Messaging, CQRS, Microservices...

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Discover (what is)
Dream (what can be)
Design (what shall be)
How to model business software?

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Three steps

Extract the right model (to be able to help)

Put the model in semantic code

Secure the code from corruption

It’s a dance, not a march!

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Step one

Extract the right model (to be able to help)...

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Our domain

First they take the dinglebop, and they smooth it out with a bunch of schleem. The schleem is then repurposed for later batches. They take the dinglebop and push it through the krumbo, where the fleeb is rubbed against it. It’s important that the fleeb is rubbed, because the fleeb has all of the fleeb juice. Then a schlomi shows up, and rubs it, and spits on it. They cut the fleeb. There are several hizzards in the way. The blamphs rub against the trumbles, and the plubus and grumbo are shaved away. That leaves you with a regular old plumbus.
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What is the problem?

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Software development is a learning process...

...working software is a side effect.

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Words vanish, make them stick.
EVENT STORMING

by @iobrand
Step two

Put the model in semantic code...
EVENT STORMING

by ziobrando
CQRS & Event Sourcing

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Step three

Secure the code from corruption...
Why zum Geier?
Software becomes, what the developers understood... 

...not what the business people meant.

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Code in harmony with business

Internal trust

Safe from external influence

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Move away from reward and punishment

Strive for engagement

Autonomy in what you want to do and when

Mastery technical, business, facilitating

Purpose duh

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Challenges
You shape the future of humankind. Shape it good!

code and culture
agile and architecture

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Good bye

Now go forth and live meaningful lives