## **Business Models**

#### Prof. Dr. Dirk Riehle

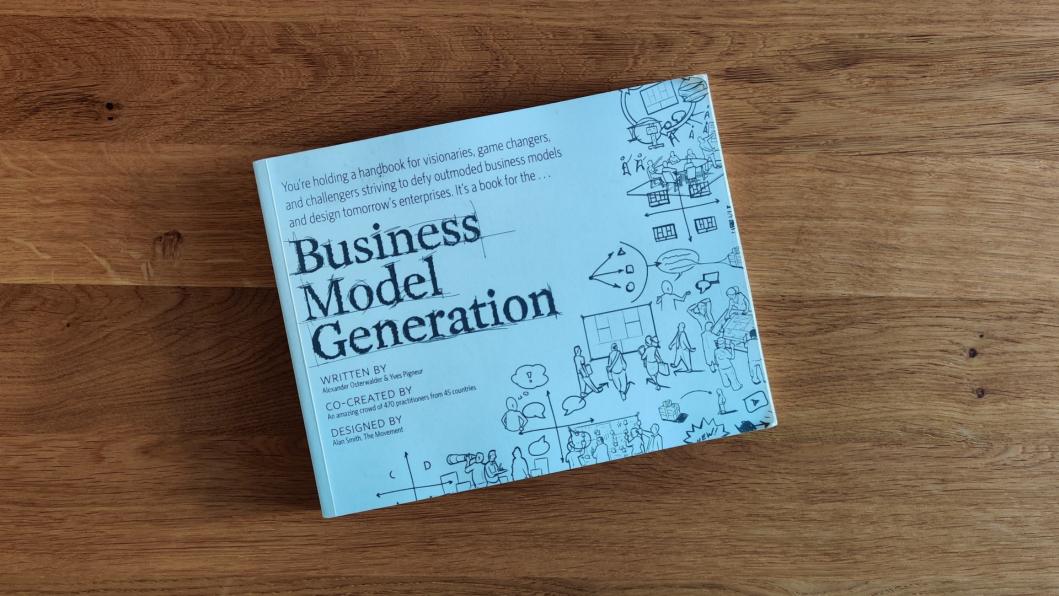
Friedrich-Alexander University Erlangen-Nürnberg

COSS B04

Licensed under CC BY 4.0 International

#### **Summary**

- 1. Business model (definition)
- 2. Business model canvas
- 3. Value proposition
- 4. Revenue generation
- 5. Operations and production
- 6. Business model types
- 7. Business model examples



## 1. What is a Business Model?

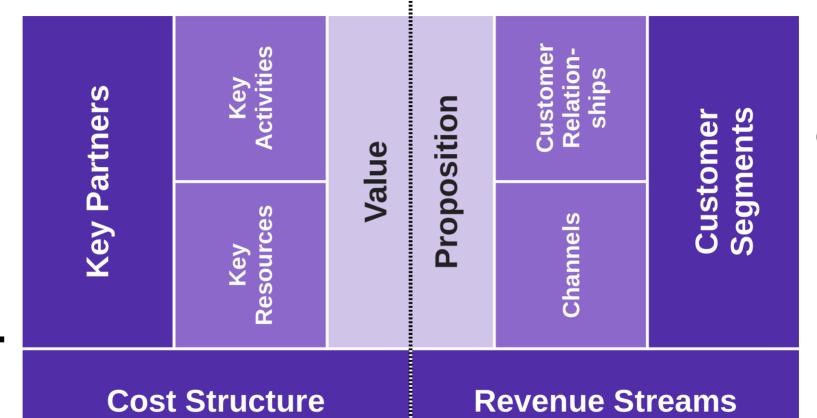
#### **Business Model (Definition)**

- A business model
  - Is a model of how an organization creates, delivers, and captures value
- A model
  - Is a description of components and how they interact for a purpose
- A model gets instantiated a.k.a. executed

#### 2. The Business Model Canvas

#### **The Business Model Canvas**

## **Operations and** production



# Revenue generation

#### **Components (of a Business Model)**

- Value proposition
- Revenue generation
  - Customer segments
  - Channels
  - Customer relationships
  - Revenue streams
- Production and operations
  - Key partners
  - Key activities
  - Key resources
  - Cost structure

## 3. Value Proposition

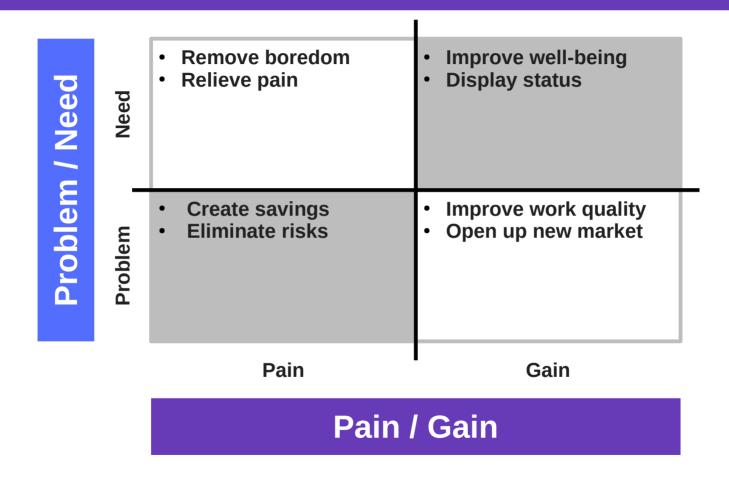
#### 1. Value Proposition

- The value proposition
  - Is the value to customers (so they buy)
    - Creating a gain or relieving a pain
    - Solving a problem or fulfilling a need
  - Turned into a product or service
    - Cast as a minimum viable product
    - Consisting of distinct features

-

- The value to customers can be predominantly
  - Quantitative (speed, price)
  - Qualitative (convenience, novelty)

#### **Examples of Creating a Gain or Relieving a Pain**



#### **Quantifying the Customer Gain or Pain**

- By intensity or relevance of incidents
- By frequency of incidence

## 4. Revenue Generation

#### **Revenue Generation**

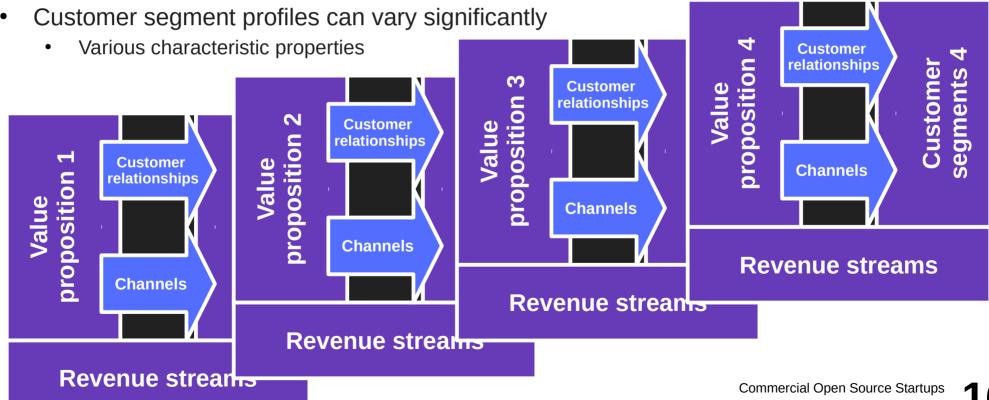
- Revenue generation
  - Is the comprehensive process of
    - Deriving a **revenue stream**
    - By selling to a customer segment
    - A product or service built on a value proposition\
    - Through a **channel** that reaches the segment
    - Using customer relationships
  - Can vary by customer segment
    - Creates a unique combination then

#### (Markets and) 2. Customer Segments

- A customer segment
  - Is a cohesive cluster of similar customers
- In multi-sided markets
  - You have multiple types of customers, split further into segments
- All customer segments together constitute the total market

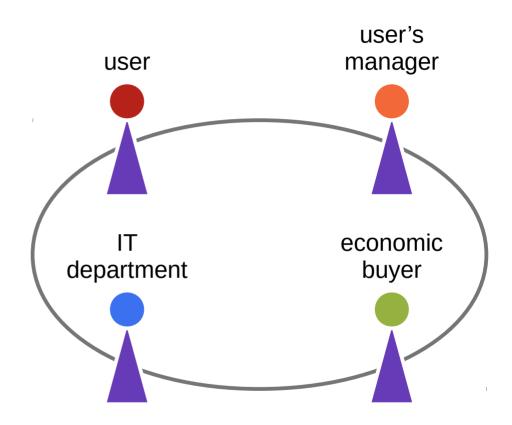
#### **Value Proposition Matches Customer Segment**

- Value proposition varies by segment
  - Specific value proposition defines the profile that marks the segment



#### **Personas**

- A persona
  - Is an archetypal [1] person
  - Within an archetypal customer
  - Within a customer segment
- At any customer
  - There are likely to be several personas
  - All with different powers re: purchase
  - And different profiles



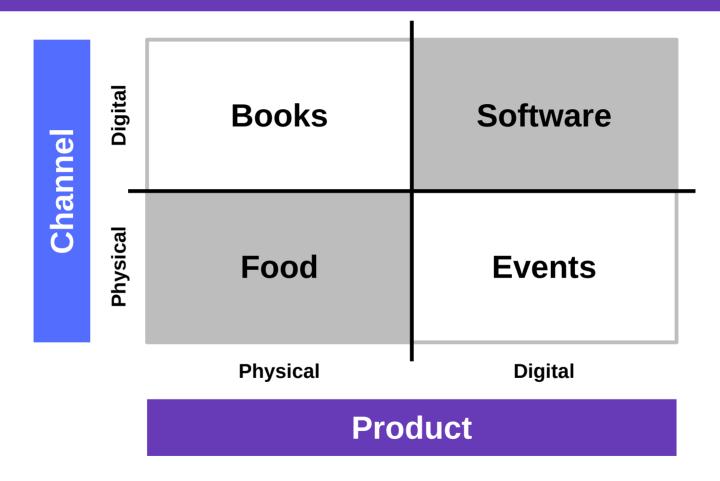
#### **Example Market Structure Breakdown**

Dimension	Example		
Markets	Cars; beanie babies;		
Customer types	Car buyers, car sellers; beanie baby collectors;		
Customer segments	Truck buyers/sellers; minivan buyers/sellers; sports car buyers/sellers;		
Personas	Truck-buyer-user, truck-buyer-economic- buyer, truck-buyer-maintainer,		

#### 3. Channels

- A channel
  - Is a well-defined process (conduit) of reaching a customer segment
  - Can be physical or digital
- Channels are used to sell to customers

#### Physical vs. Digital



#### **Examples of Software Distribution Channels**

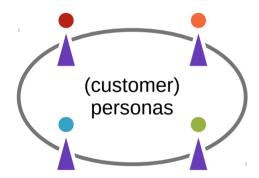
- Digital
  - Own web store
  - Platform app store
  - Digital retailers
- Physical
  - Book stores
  - Electronic stores
  - System integrators

#### **Direct vs. Indirect Channel Sales**

- In a direct channel sale
  - Your company sells directly to the customer
  - You make maximum profit
- In an indirect channel sale
  - Your company sells through a reseller
  - Your profit drops by the cut intermediaries are taking
  - Some of your SG&A costs drop because selling got simpler

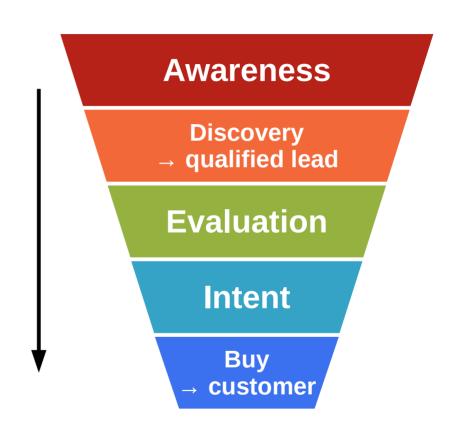
#### 4. Customer Relationships

- As a business, you need to understand how to
  - Get
  - Keep, and
  - Grow your customer base
- For this, you use personas (see customer segment discussion)



#### **Customer Acquisition (Getting Customers)**

- Marketing primes the sales funnel
  - Tries to create demand
    - Advertising
    - Trade shows
    - Trade magazines
    - Email, webinars
  - Output: Qualified leads
- Sales takes over qualified leads
  - Consumer
    - Low-touch sales
    - Web store
  - Enterprise
    - High-touch sales
    - Evaluation
    - Sale
  - Output: Sale + customer



#### **Customer Acquisition Cost (CAC)**

- Each step in the sales funnel
  - Has a cost associated with every potential customer entering it
  - Reduces the number of potential customers moving forward
- Customer acquisition cost
  - Is the accumulated cost normalized for one realized customer
  - Is a key metric (cost) to be matched against revenue

#### **Example CAC for Enterprise Software Product**

	Cost per lead	Survival rate	No customers	Total stage cost
Trade show lead	100 €	100 %	10	1.000 €
Evaluation	5.000 €	20 %	2	10.000 €
Sale	2.000 €	50 %	1	2.000 €
Customer acquisi	13.000 €			

#### **Customer Retention (Keeping Customers)**

- Retaining existing customers is cheaper than getting new ones
- Techniques for keeping customers
  - Foremost, keep delivering a great product
  - Then create loyalty program, added benefits
  - Increase switching costs to lock-in customers

#### **Customer Attrition (Churn)**

- Customer churn
  - Is the percentage of customers you loose in a given time period

Observe	Period					
Churn Sta	Start	1 month	6 month	1 year	2 years	5 years
20 %	100	80	26	7	0	0
10 %	100	90	53	28	8	0
5 %	100	95	74	54	29	5
1 %	100	99	94	89	79	55

- Customer lifetime = 1 / churn
  - For example, a 1% churn rate = 100 months of customer lifetime

#### **Customer Growth**

- Growing your customer base is cheaper than acquiring new customers
- Techniques for growing your customer base
  - Up-sell your customers
  - Cross-sell them
  - Get referrals

#### **Customer Lifetime Value (CLV)**

- The lifetime value of a customer is
  - The total revenue from the customer over time in today's currency
- Steps to calculate (the average) CLV
  - Determine customer lifetime (from customer churn)
  - By period, determine revenues and costs for that period
  - Discount period profits by how far out the revenues are
- Customer costs include
  - Initial customer acquisition costs
  - Subsequent retention costs
  - Possible growth costs

#### **Heuristics for the Customer Lifetime Value**

- CLV should be >> than CAC
  - CAC dominates most costs
- Rules of thumb vary by domain

#### 5. Revenue Streams

- Revenue (income)
  - A payment received from a customer
- A revenue source
  - Is a synonym for customer
- A revenue stream
  - Is the stream of revenues received from a source over time
- An aggregate revenue stream
  - Is the aggregation of several revenue streams from different sources
- The total revenue stream
  - Is the aggregation of all revenue streams
- Business intelligence lets you analyze your revenue streams

#### **Pricing**

- The price of a unit of product or service
  - Is the money charged to the customer for that unit of product or service
  - Is best set equal to the value the potential customer sees in it
  - The value of a unit of product or service varies by time
  - This maximizes revenues by customer
- Price discrimination
  - Is the process of setting prices specific to a customer
  - Then, you can try to capture maximum value
- If you can't price discriminate, you price
  - By segment
  - By channel
- Always price based on value, never on costs

#### **How Revenue Streams are Structured**

- Individual sale (revenue)
  - Is **price** x **no units** of product or service sold
- Revenues can be aggregated resp. broken down in many ways
  - By market structure: Markets → customer segments → customers
  - By classic (physical) break-down: location, demographics
  - By channel: Web store, retailer, etc.
- Prices (incl. volume discounts) may vary by breakdown

## 5. Operations and Production

#### **Operations and Productions**

- Operations and productions
  - Is the comprehensive process of
    - Creating and delivering your product or service to customers and maintaining it
- Production is part of operations
  - Deals with creating and maintaining the value proposition

#### 6. Key Partners

- A key partner is another organization you strike a deal with
  - To operate your own organization or
  - To produce your product or service

#### **Types of Partnerships**

- Suppliers
  - To build your product from components
  - Example: Apple + Foxconn
- Strategic alliances
  - To build a whole product
  - Example: SAP and its consulting partners
- Joint business development
  - To jointly promote complementary products
  - Example: Intel (Inside) and computer manufacturers
- Strategic investors
  - To raise funds and gain access to important resources
  - Example: Daimler investment in Tesla

#### **Success Factors and Failure Reasons of Partnerships**

- Success factors
  - Understand your core value proposition
  - Focus on your competitive differentiation

- Failure reasons
  - Not understanding each other's motivation
  - Not seeing eye to eye (small vs. large co.)

#### 7. Key Resources

- A key resource
  - Is an asset (resource) needed to operate your business
  - Is therefore a key competitive differentiator
- Resource categories (types)
  - Materials
    - Tangible (raw materials, production facility)
    - Intellectual property
  - Capital
  - Labor

#### **Tangible Materials (Resources 1 / 4)**

- Types of tangible resources
  - Raw materials
    - Input to production
  - Production facilities, e.g. machinery
    - Used to produce
- Sources of tangible resources
  - Owned or paid for

#### Intellectual Property (Resources 2 / 4)

- Types of intellectual property
  - Copyright
  - Patents
  - Trademarks
  - Trade secrets
  - Contracts
- Sources of intellectual property
  - Own invention
  - Built-up over time
  - University and research institutions
  - Purchased from elsewhere
  - Strategic partnership with elsewhere

#### Capital (Resources 3 / 4)

- Types of capital
  - Financial resources
  - Operating capital
- Sources of capital
  - Friends and family
  - Bank loans
  - Venture capital
  - Leasing, factoring

#### Labor (Resources 4 / 4)

- Relevant aspects
  - Quality of labor (how skilled a workforce?)
  - Quantity of labor (how many?)
- Sources of labor
  - Local labor market
    - Local universities
  - Globally sourced remote work

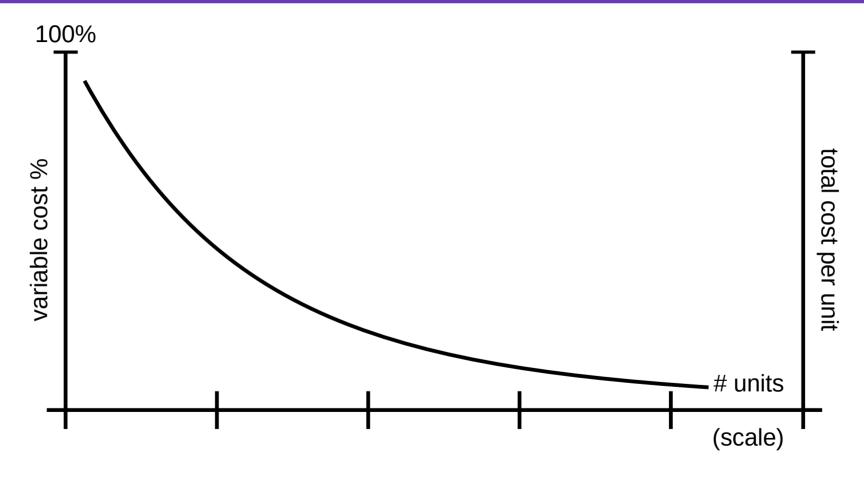
#### 8. Key Activities

- A key activity
  - Is a core business process needed to operate the business
  - Therefore is critical to create, deliver, and maintain value proposition
  - Is a key competitive differentiator
  - Should not be outsourced
- Example key activities
  - Software development
  - Cloud operations

#### 9. Cost Structure

- The cost structure of a business
  - Is a model of the costs (expenses) needed to operate and scale your business
- Cost categories
  - Fixed costs
  - Variable costs
- Traditionally, the cost structure is expressed in the income statement

#### Fixed vs. Variable Costs / Economies of Scale



#### Fixed / Variable Costs in Software / Software-as-a-Service

- Software / fixed costs
  - Software development
    - Initial software development
    - Continued development

- Software / variable costs
  - Customer support services

- Software-as-a-Service / fixed costs
  - Software development
    - Initial software development
    - Continued development
  - Operations
    - Cloud infrastructure (fixed costs)
    - Site reliability engineering
- Software-as-a-Service / variable costs
  - Customer support services
  - Operations
    - Compute power per customer

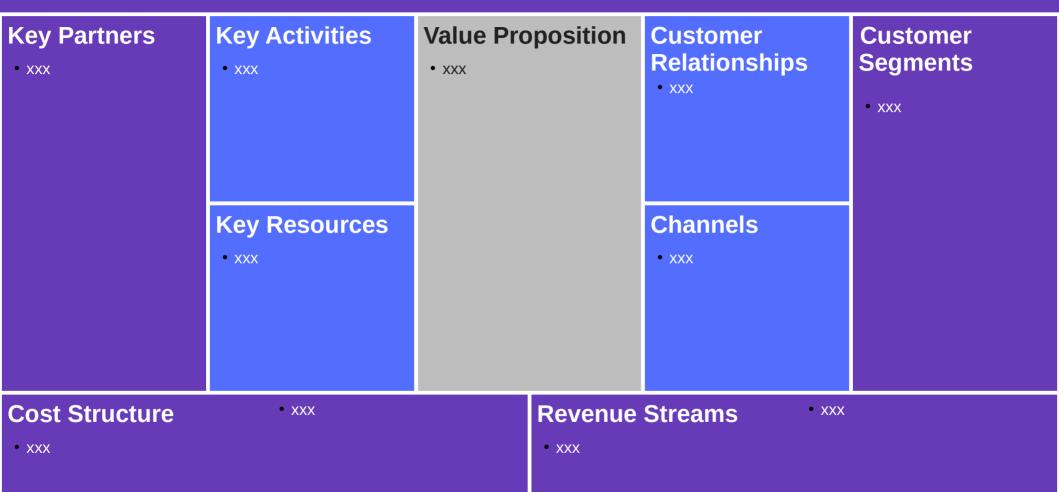
# 6. Business Model Types

## Types of Business (Models) [HS99]

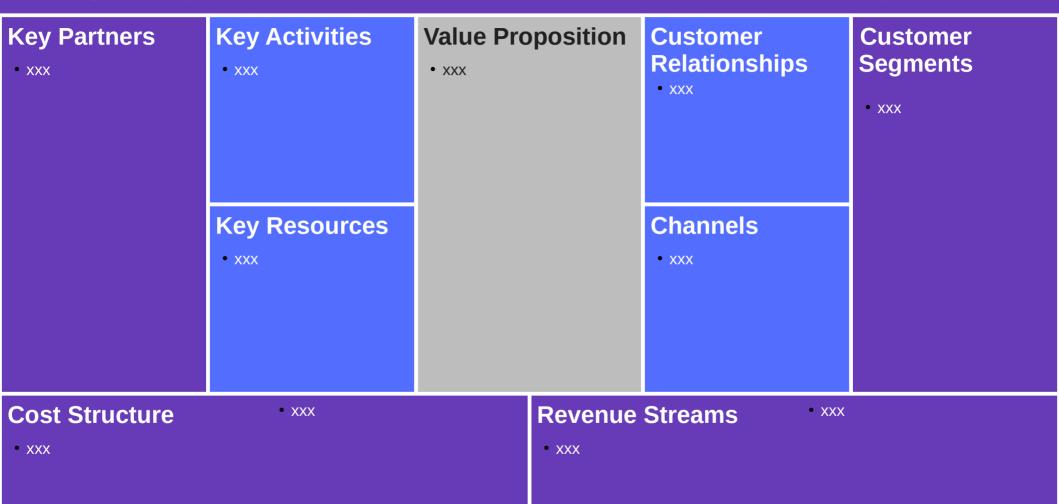
	Product Innovation	Customer Relationship Management	Infrastructure Management
Economics	Early market entry allows for a premium price and large market share; speed is key	High cost of customer acquisition makes it imperative to gain large shares of wallet; economies of scope are key	High fixed costs make large volumes essential to achieving low unit costs; economies of scale are key
Culture	Employee centered; codding the creative "stars"	Highly service-oriented, "customer-first"	Cost focused; stress on standardization, predictability, efficiency
Competition	Battle for talent; low barri- ers to entry; many small players thrive	Battle for scope; rapid consolidation; a few big players dominate	Battle for scope; rapid consolidation; a few big players dominate

# 7. Business Model Examples

## Workday (Example Enterprise Software-as-a-Service)



### MongoDB (Example Infrastructure Software-as-a-Service)



#### **Summary**

- 1. Business model (definition)
- 2. Business model canvas
- 3. Value proposition
- 4. Revenue generation
- 5. Operations and production
- 6. Business model types
- 7. Business model examples

# Thank you! Questions?

dirk.riehle@fau.de – http://osr.cs.fau.de

dirk@riehle.org – http://dirkriehle.com – @dirkriehle

#### **Credits and License**

- Original version
  - © 2020 Dirk Riehle, some rights reserved
  - Licensed under Creative Commons Attribution 4.0 International License
- Contributions
  - None yet