

MYCELIUM

INTRODUCTION TO THE MARKET
ADOPTION MODEL

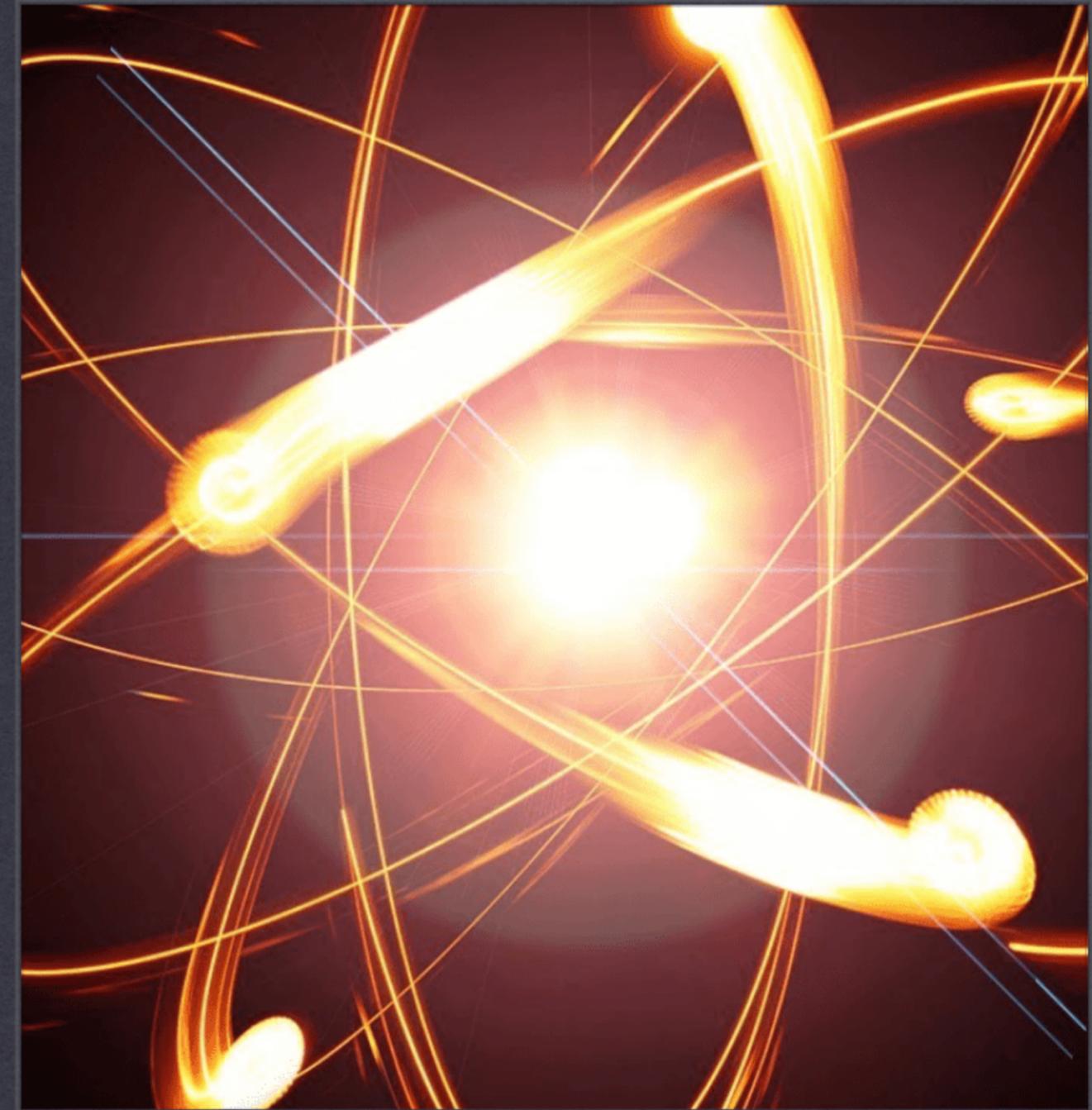
Part 1. What is Mycelium
Part 2. Adoption Model
Part 3. Financials

THE IGNITION PROBLEM

WHEN DINERS CLUB IGNITED THE FIRST GENERAL PURPOSE PAYMENTS CARD SYSTEM IT GOT RESTAURANTS AND CARDHOLDERS ON BOARD BEFORE IT EVEN OPENED ITS DOORS.

CARDHOLDERS HAD RESTAURANTS THEY COULD GO TO, AND RESTAURANTS HAD PEOPLE WHO WANTED TO USE THEIR CARDS.

PAYMENTS IS LIKE DATING. THERE'S NO PRODUCT UNLESS BOTH SIDES OF THE MARKET SHOW UP AT THE SAME TIME.



THE KEY TO SUCESS

THIS BUSINESS IS A TYPICAL “ECONOMIC CATALYST”, IT CREATES VALUE BY BRINGING TWO GROUPS OF CUSTOMERS TOGETHER AND GETTING THEM TO INTERACT.

BILLIONS OF VC DOLLARS GO POOF EVERY YEAR THROUGH PAYMENTS STARTUPS. THE ECONOMIC VALUE CREATED BY THE CATALYTIC REACTION IS ESSENTIAL, THAT VALUE MUST BE BIG ENOUGH TO WARRANT THE COST AND RISK OF INVESTMENT IN DEVELOPING THE PLATFORM.

MYCELIUM’S DIFFERENCE IS A HUGE, MULTI ORDER OF MAGNITUDE DIFFERENCE IN COSTS. THAT SHOULD ALLOW FOR CREATING ENOUGH VALUE.



MAIN FACTORS

Current Market Conditions

- * The two-sided market economy laws are still applied in payments industry: end-users are unable to negotiate prices based on costs to participate on a platform; merchants and consumers have heterogeneous preferences.
- * The market currently works mainly under the legal framework with issuer and acquirer banks acting as a main market force; consumers and merchants have less influence.

Limited Time Available

- * Just like a rocket has a limited amount of time to achieve enough momentum to launch into outer space, platform businesses have a limited amount of time to achieve a critical mass of both customer groups to have the prospect of viable growth.
- * An ignition plan is different from a typical marketing plan that seldom deals with the problem of coordinating the multiple sides of the platform. An ignition plan describes the strategies and tactics for getting both sides on board and reaching critical mass in a timely fashion.

Interchange Fee

The interchange fee is what the merchant pays to the issuing bank every time a consumer pays. The interchange fee is set by the payment networks and represents the largest component (70 percent to 90 percent) of the fees merchants bear for accepting electronic payments transactions. How exactly that rate gets set for individual payment method is based on a variety of circumstances including payment brands, regions, payment type, the type and size of the accepting merchant, and other factors. That very simple explanation unleashes a torrent of surprisingly complex reactions to the concept.

- * Merchants – who ultimately pay this (and all other fees) – hate it.
- * Issuers and payment systems love it.
- * Consumers don't know and don't care.

THREE POTENTIAL ADOPTION DRIVERS

CONSUMERS
MERCHANTS
BANKS



Addressing Consumers

- * There is very little information available on the total costs of different payment instruments mainly because banks have recouped their payment costs through (i) interest earned on payment float (from delaying availability of funds credited to accounts and debiting accounts prior to bill-payment value dates), (ii) maintaining a spread between market rates and the rate paid on deposits, and (iii) charging flat monthly fees or imposing balance requirements.
- * A vivid pricing is a very rare case since, reportedly, banks fear a loss of deposit market share if they are the first (and only) bank to implement it. Some researches¹ show that the impact of explicit pricing would drastically speed up the adoption of more cost efficient methods.

¹ *Transaction Pricing and the Adoption of Electronic Payments: A Cross-Country Comparison.* Wilko Bolt, David Humphrey, and Roland Uittenbogaarda, 2008.

Merchants Are Very Conservative

- * USA, Fourth Quarter 2015¹: ninety-two percent of all businesses accept checks and 84 percent accept cash, beating out the “new” electronic forms of payment (debit cards: 54%, PayPal: 9%, Apple Pay: 2%; Android Pay: 1%).
- * A whopping 61 percent of the enterprises surveyed said that they don’t have an issue with their current systems and processes, while 44 percent said that they adopt any new technology with a lot of caution.
- * Only four percent completely automate their invoicing process.

¹ THE [REDACTED] SMB TECHNOLOGY ADOPTION INDEX, January 2016.

Addressing Banks

- * Issuers and acquirers need the Mycelium payment processes to be certified. There is no straight forward approach to this task since blockchain transactions are still a new phenomenon to both regulators and market participants.
- * Agent-based computing simulation shows that lowering the interchange fees drastically from 4% to 1% provides quite modest $\times 1.5$ increase in adoption speed¹.

¹ Axelrod, 2003; LeBaron, 2000, 2006; Kirman, 2010; Johnson & Lux, 2011; Tesfatsion, 2006. Simulation in Computational Finance and Economics: Tools and Emerging, Biliana Alexandrova-Kabadjova, Sara G. Castellanos-Pascacio, Alma L. Garcia-Almanza

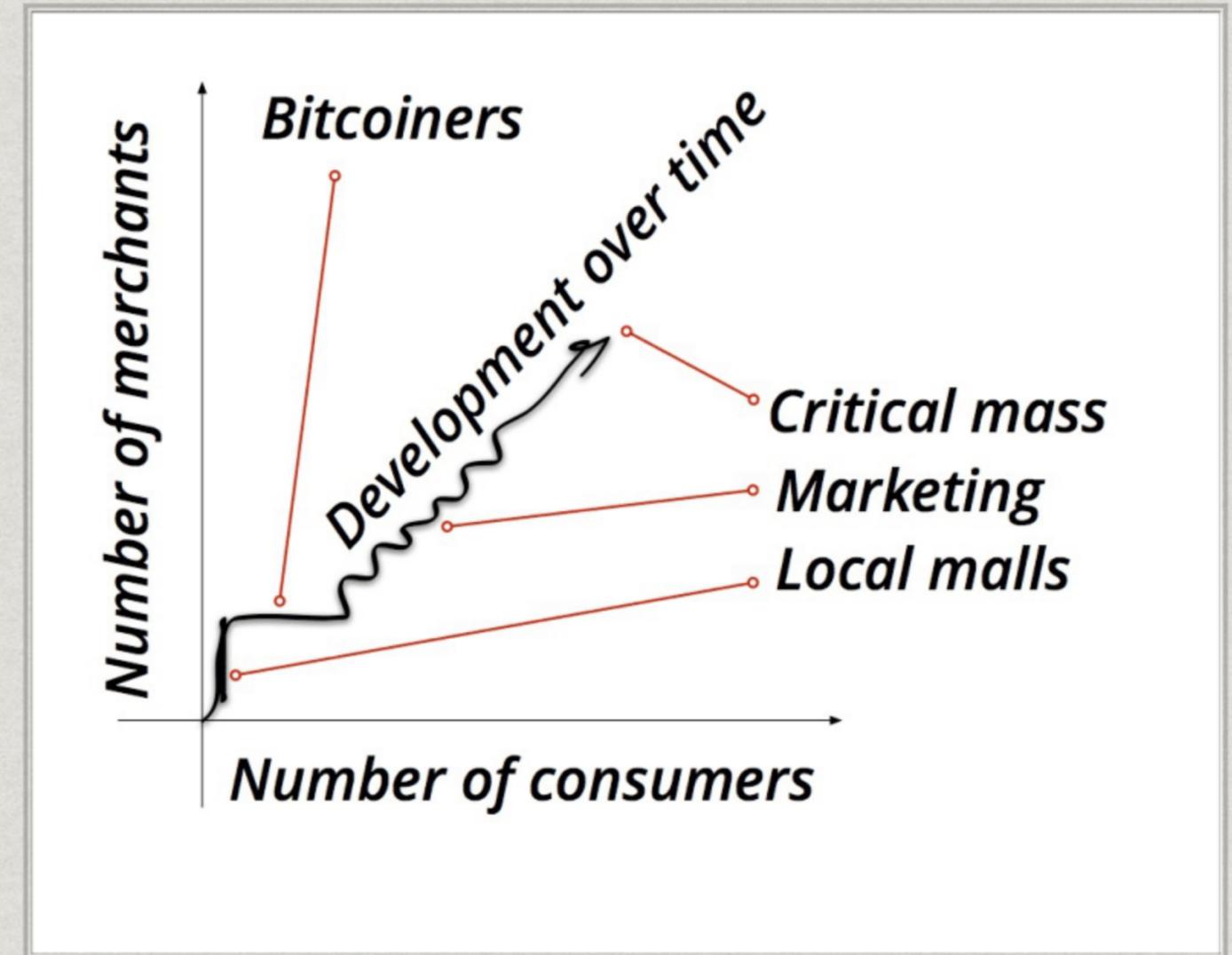
IGNITION STRATEGY

Ignition Strategy: Geography

- * A lot of successful platform businesses have adopted a “go local/go deep” strategy. Take Uber, Facebook, VISA, MasterCard, Yelp, etc. They pick a city. Then they sign up enough merchants to meet demand. More consumers get more merchants and so on. That gets us off the ground in that city. Then we do that for another city.
- * A particular first city has to be defined through consideration of factors indicated on previous slides: local regulation has to be helpful with explicit pricing and lowering banks’ appetites; consumers and merchants should be as advanced as possible to appreciate the ultramodern system design.
- * That leads to Oslo, Norway as a best candidate.

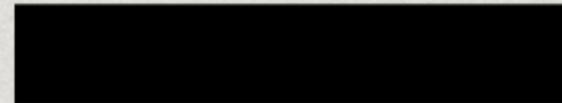
The Path to Critical Mass

- * The optimal growth path to critical mass and to long-run equilibrium is well away from the horizontal and vertical axes in most plausible cases. New multi-sided platforms generally need to have balanced growth.
- * The double-marquee strategy has to be used to obtain enough members on both sides to begin the «zigzag» to critical mass. The “influential” member of one side is a popular local shopping mall; on the other - the group of libertarian authors and bitcoin users.



Summary

- * Markets with high interchange fee and no explicit pricing do not fit.
- * Markets with lower share of credit vs debit are preferable.
- * More technically advanced markets will work better for Mycelium.
- * Bitcoin is coming back, bad image was unfair, had to do with fiat.
- * Small but influential city is great for start (considering factors above).
- * Price war can be won but in a smart way.



2016

**End of Part 2. Other parts:
Part 1. What is Mycelium
Part 3. Financials**