



conditions
score extract
card interpretation
addition engineering
sets intentional
patients company
disease assembles
Homeland threat
start helped
dataset Security
driven understanding
genomic University
important relationships
free computers correlations
reverse example predict
patterns hypothesis
studies essential
credit REFS forward
division fragments
want work
scale effect millions
recommendations response
doing figure apply
large little causal
interested

MOLE^eMART

Chemical Online Marketplace
-- A Big Data Search Engine



occurred looking typically specifically classifiers association
trillions data big using Hill particular ensemble
analyticals latecomers clinical traffic principles cause consistent networks approaches distributions Bayesian simulation types
layers features database goal
knowledge

The Market

Other Bulk Chemicals
\$2700 Billion

Specialty Chemical
\$934 Billion

Active Pharmaceutical Ingredient
\$150 Billion

Research Biotech
\$57 Billion

Research Essentials
\$56 Billion

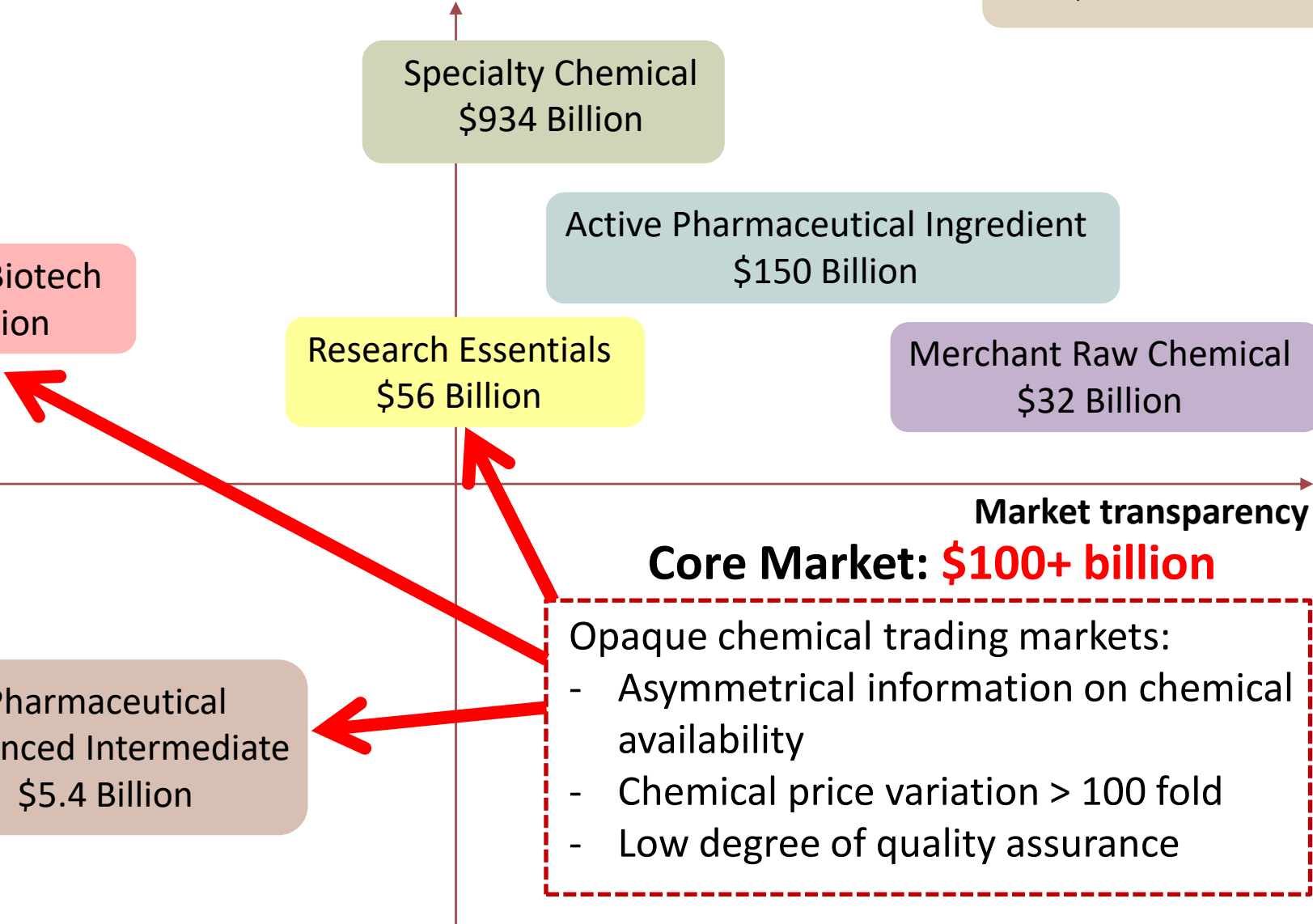
Merchant Raw Chemical
\$32 Billion

Pharmaceutical
Advanced Intermediate
\$5.4 Billion

Market transparency
Core Market: \$100+ billion

- Opaque chemical trading markets:
- Asymmetrical information on chemical availability
 - Chemical price variation > 100 fold
 - Low degree of quality assurance

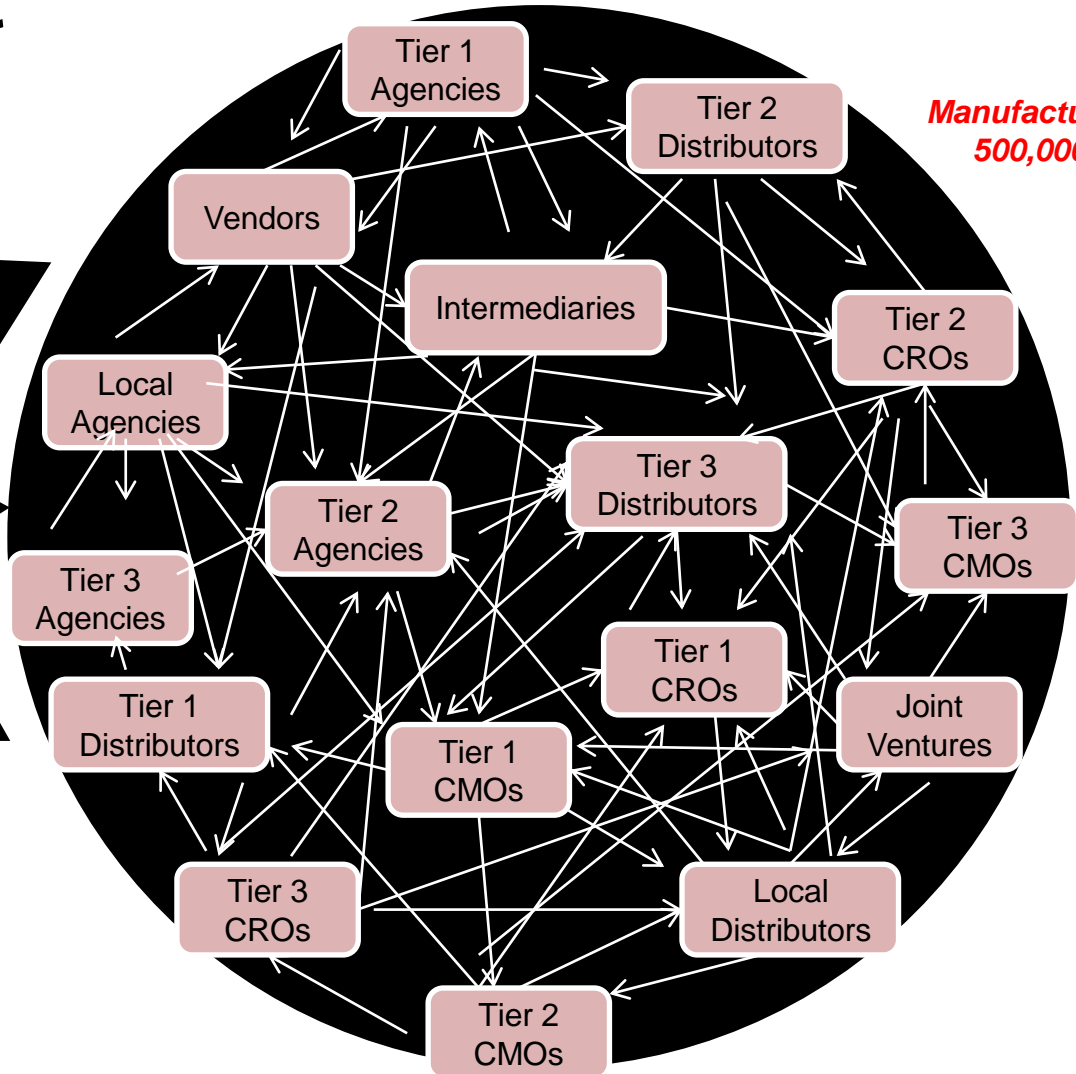
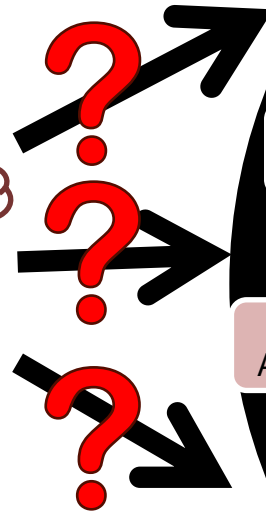
Accessible Market Size



The "Dark" Market

Products
160,000,000

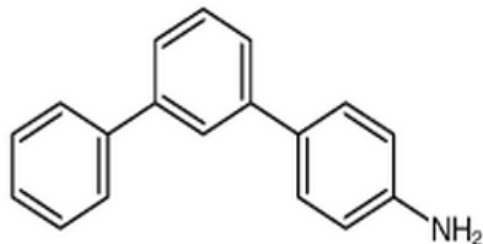
Manufactures
500,000



Multi-dimensional needs from users

Extremely low degree of transparency

Chemical Product Characteristics



CAS No: 63344-48-9

2,4-diphenylaniline

1

Search Engine Friendly

- Unique ID for each chemical, like barcode – **CAS No.**
- Chemical structures are computer readable – **SMILES**

2

Platform Trading Friendly

- Inherent properties to describe a chemical: **Molecular Weight, M.P., B.P., etc.**
- Widely acceptable quality measurement: **Chemical Purity**

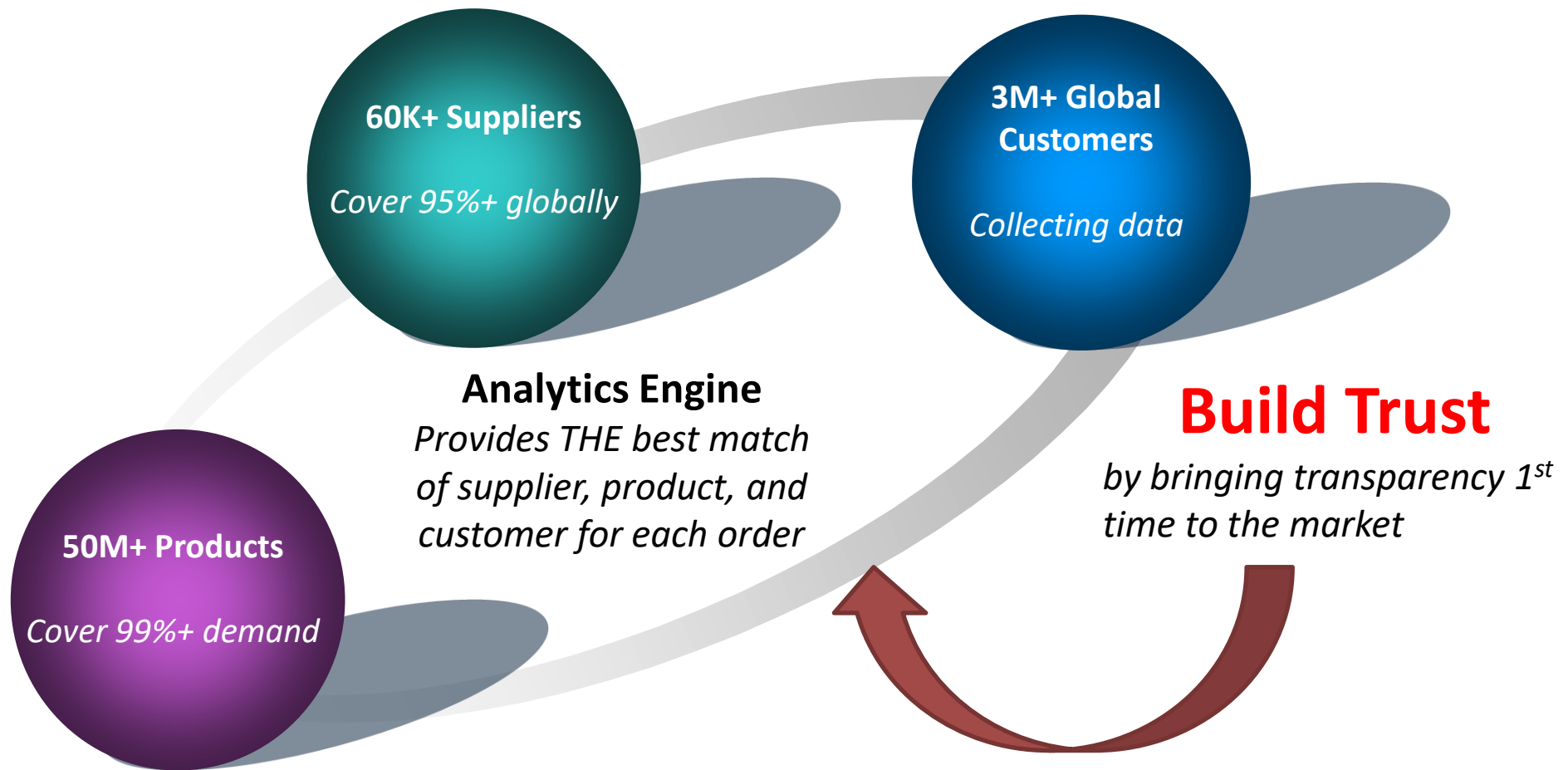
3

Huge Market Potential

- Enormous varieties of chemical products produced by industry: **160 million**
- High Unit Price: **90% chemicals are more expensive than GOLD or DIAMOND**

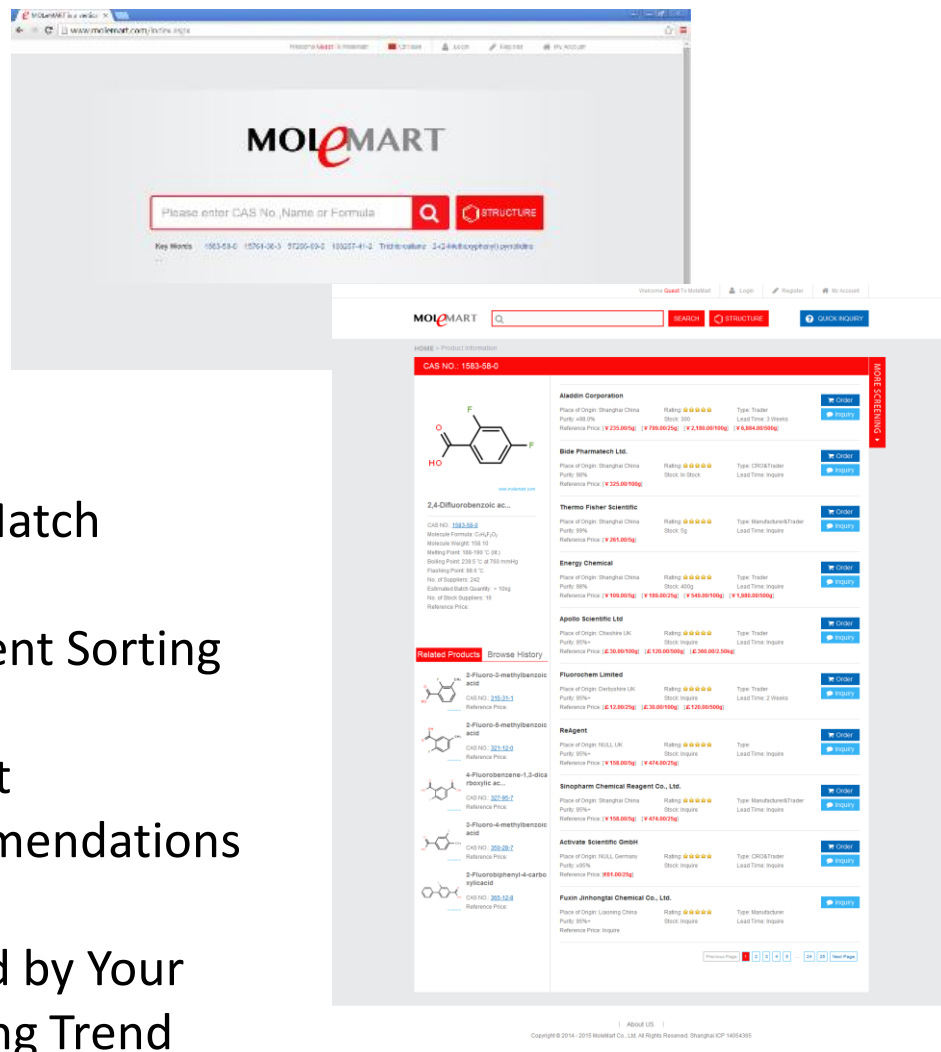
The Solution – MOLeMART Model

E-commerce Platform & Real-time Big Data Analytics Engine
 rate suppliers intelligently according to various needs



The Product

Tells you *Who to Trust*
and *What to Purchase*



Search by Product



Review Listing



Purchase!

- Exact Match
- Intelligent Sorting
- Chemist Recommendations
- Inspired by Your Shopping Trend

One-step Purchasing Service

Competitive Advantage

Product

Compound Product Database (CPD)

- 99%+ available chemical products globally

Supplier Management System (SMS)

- 95%+ chemical suppliers globally
- Scorecard of 400+ attributes
- Transaction & promotion history available

Customer Loyalty Management (CLM)

- Scorecard of 300+ attributes
- Target to collect 75%+ global buyers by year 5

Big-data Matching System (BMS)

- Match buyers and sellers at product level
- Improve effectiveness by 10 fold

Technique

Data Collection Completeness

- Auto-collecting global data of products, suppliers, and buyers

Data Accuracy Assurance

- Algorithm to clean, process, merge, and validate data to ensure accuracy
- Alert to double-check and re-collect

Data Mining and Modeling

- Machine learning and predictive modeling to evaluate risk of each supplier for each request

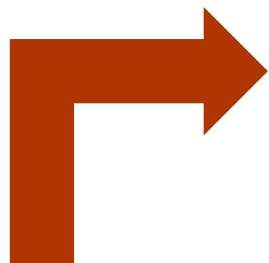
Real-time Matching and Sorting

- Intelligent real-time sorting; buyers simply order from the top

The World of Chemical Market



I need 5g 4853-74-1
for my research!



Bet on Search Engine

Google

Baidu 百度

After 3 hours



Tired and lost



Call Suppliers I know

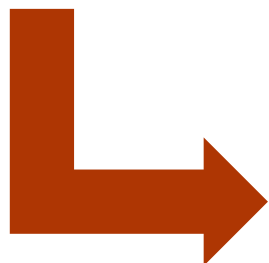
WuXi AppTec

SIGMA-ALDRICH

After 3 weeks



10 times priced



Ecommerce Platform

eMolecules

MOLBASE

After 3 months



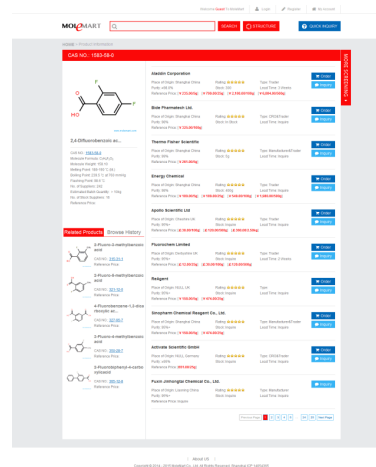
20% chance deliver





I need 5g 4853-74-1
for My Research!

The MOLeMART World



**Analytics Search Engine
99%+ Hit Rate:**

- Data Pre-analyzed
- Search Quality Insured
- No Fake Info.

**Identified from This
Customer:**

- Quality: 54%
- Timing: 31%
- Cost: 15%

**Evaluation & Sort by
5g 4853-74-1:**

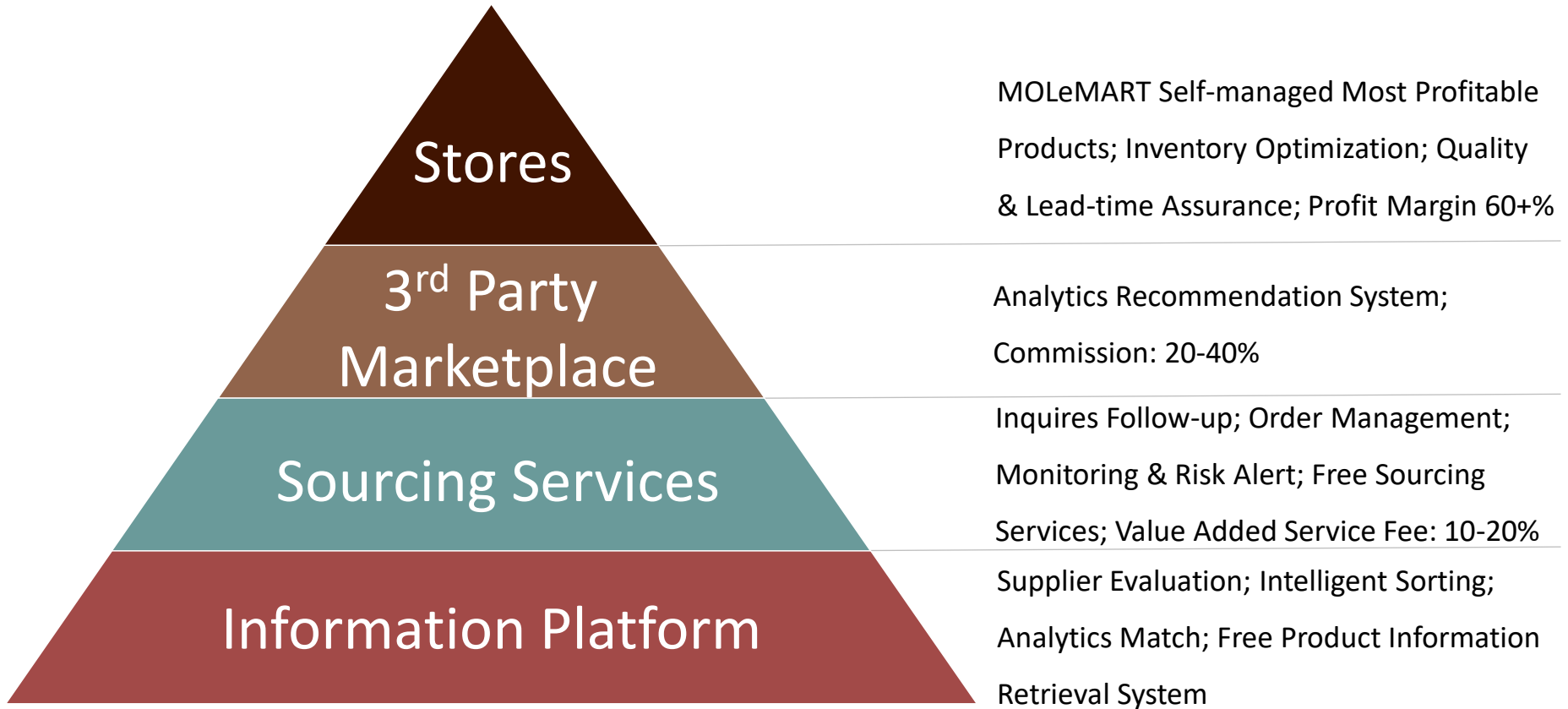
- Quality Prediction
- Time Estimation
- Cost Expectation
- Score Combination

**Click & Order from
Matched Supplier:**

- Order Management
- Risk Alert
- Closed-loop Transaction

We know buyers and suppliers more than they do

The Profit Model



The Competition

Big Data



- 13,000 Suppliers
- 20,000,000 Products
- <100 Variables



- 60,000+ Suppliers
- 50,000,000 Products
- 1000+ Variables



www.ChemNet.com.cn

- 25,000 Suppliers
- 200,000 Products
- <50 Variables



- 655 Suppliers
- 90,000,000 Products
- <100 Variables



- <1,000 Suppliers
- 3,000,000 Products
- <200 Variables

Analytics

Driven



- 13,000 Suppliers
- 6,000,000 Products
- <40 Variables



- 131 Suppliers
- 20,000,000 Products
- <100 Variables



- <100 Suppliers
- 11,000,000 Products
- <50 Variables



- 175 Suppliers
- 7,000,000 Products
- <100 Variables



- <20 Suppliers
- 1,000,000 Products
- <40 Variables

Small Data

Information

Driven

Appendix: User Acceptance Progression

Buyer

Supplier



Appendix: MOLeMART Vision

