

Connecting data silos using a social network approach to support AI for Women's Health

Case study in fertility

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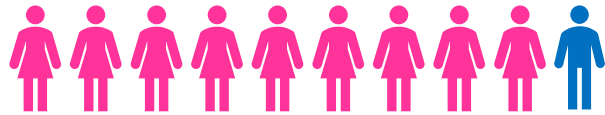


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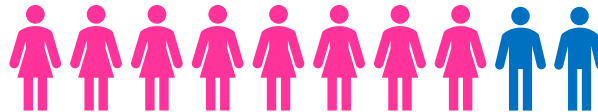


Women's Health: Niche and under-served?

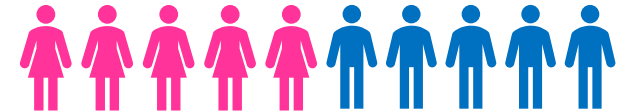
Women are the **primary healthcare decision makers** in 90% of households



80% of household healthcare spending is done by women



Large **under-served market** servicing 50% of the world's population



\$60B estimated global market? Opportunity misunderstood, undervalued and overlooked

Specific Issues Pregnancy, infertility, menopause, gynecological conditions, ovarian and cervical cancers, osteoporosis, violence against women, ...

Women vs Men Same conditions are more common in women, or affect women more severely or differently (e.g. breast cancer, heart disease)

Women's Health needs a new targeted approach in a health system designed for men

Precision medicine and AI rely on **DATA**

Data needs to be large, good quality, and globally diverse, to:

- Identify differences between women and men
- Identify differences between female sub-groups
- Identify ways to better address (ignored) female specific issues

Ensures healthcare products are unbiased and applicable (scalable) to every women around the world



Women's health has a data access and bias problem

High value problems that are synergistic, delivered by specialist clinics with **siloes** data

Women's health data is:

- Sparce
- Poor quality
- Locked up in small disaggregated specialist clinics (e.g. IVF, ObGyn)
- Geographically distributed



Precision medicine and AI for Women's Health can be addressed using a **Social Network model**



What do Social Networks have to do with healthcare?



What are Social Networks?

- Decentralized network with a globally connected user-base
- Collaboration and sharing
- Growth via the Network Effect
- Democratization from large companies to the masses (users/anyone)

...what does this all mean?



YouTube as an example...

Users (content creators) **create** and **share** videos for other users

They are **incentivized** by **royalties** on ads

Any user can be a content creator or a consumer, or both

User: Content Creator



Share
Content
(Data)
→
←
Receive
Royalties

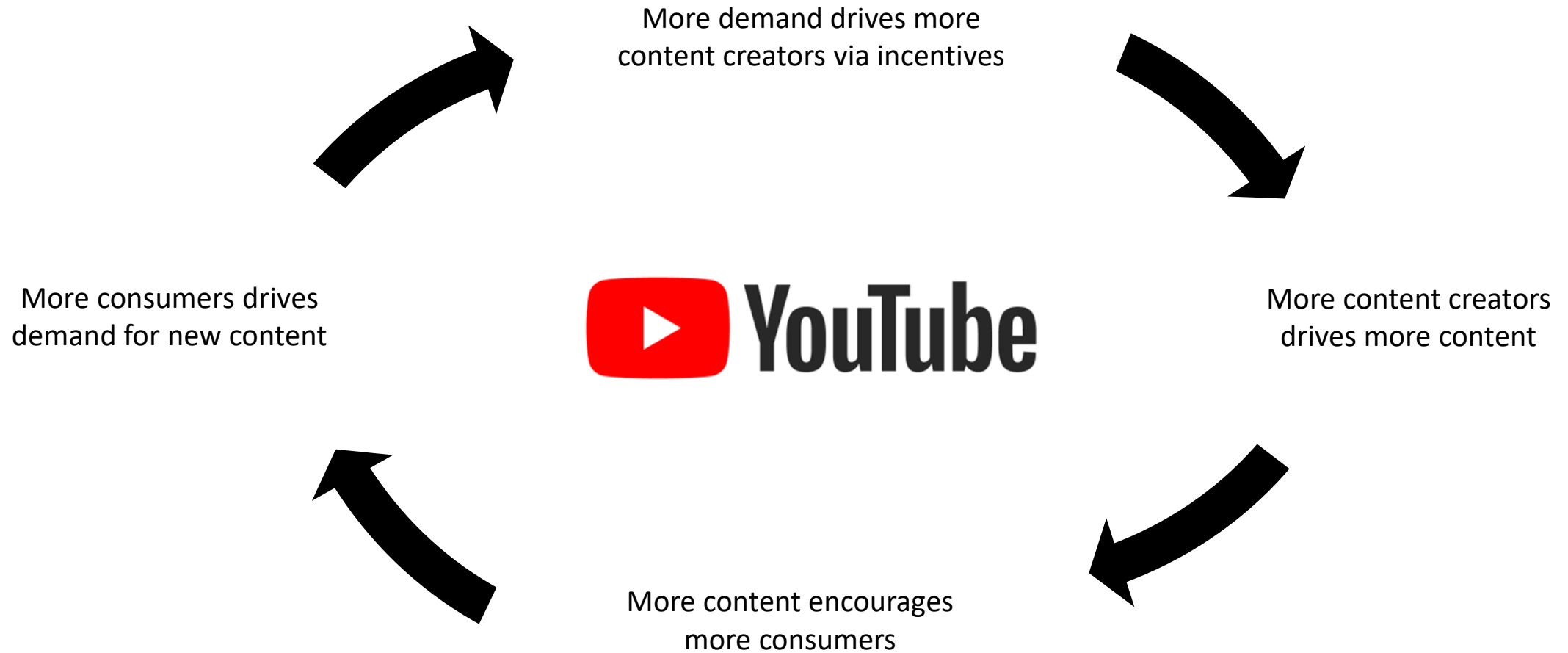


Shared
Content =
"Product"
Consumed
→

User: Consumer



Growth via the Network Effect



Now it's healthcare's turn with AI Open Projects!

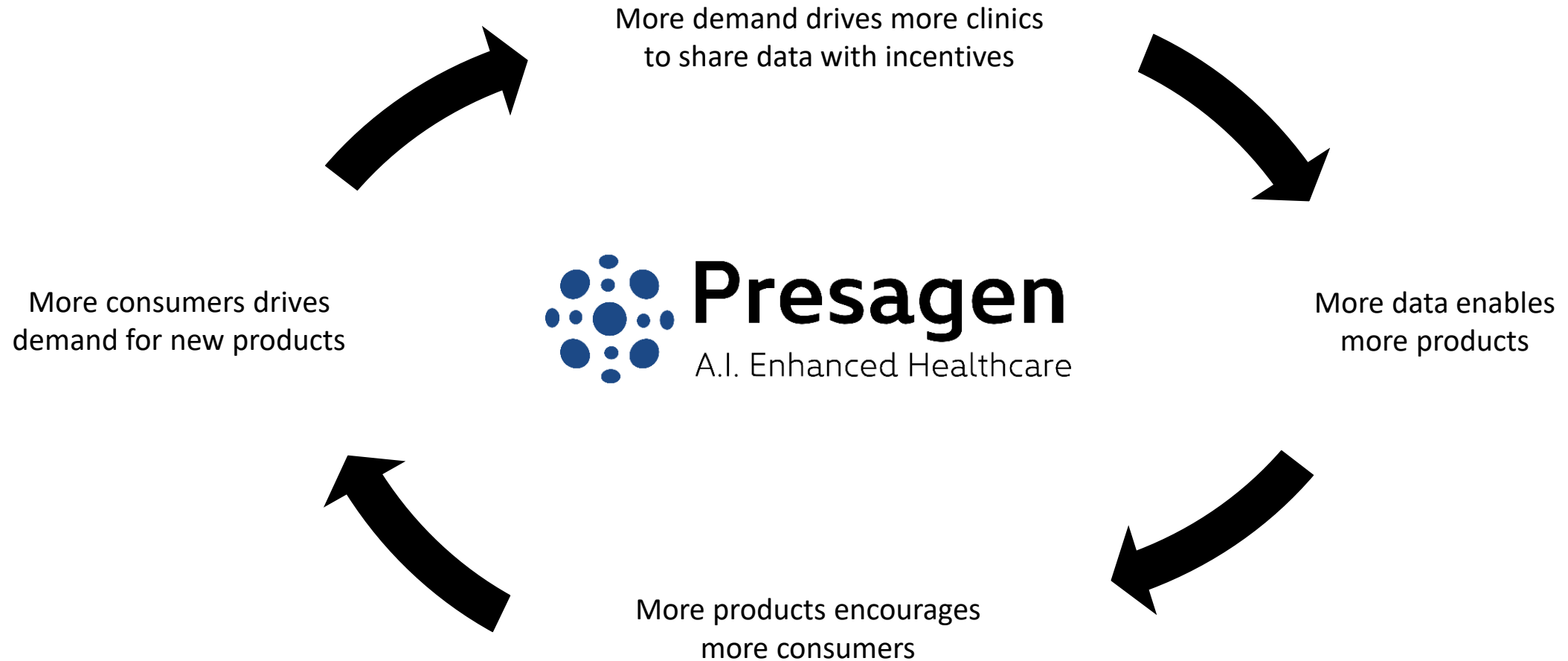
Users (clinics) **share** medical data to build **AI healthcare products** for other users

They are **incentivized** by **royalties** on future product sales

Any clinic (provider) can be a data contributor (collaborator) or a consumer, or both



Growth via the Network Effect



Solving significant healthcare data challenges

Data Diversity

GLOBAL CLOUD NETWORK

Decentralized access to globally diverse and siloed data needed to develop scalable unbiased AI



Data Protection

DECENTRALIZED FEDERATED AI

Train AI on data distributed globally without moving or seeing the data
Patent (PCT), Nature Scientific Reports



Data Quality

AUTOMATED DATA CLEANING

Detect poor quality medical data without manually seeing the data
Patent (PCT), Nature Scientific Reports



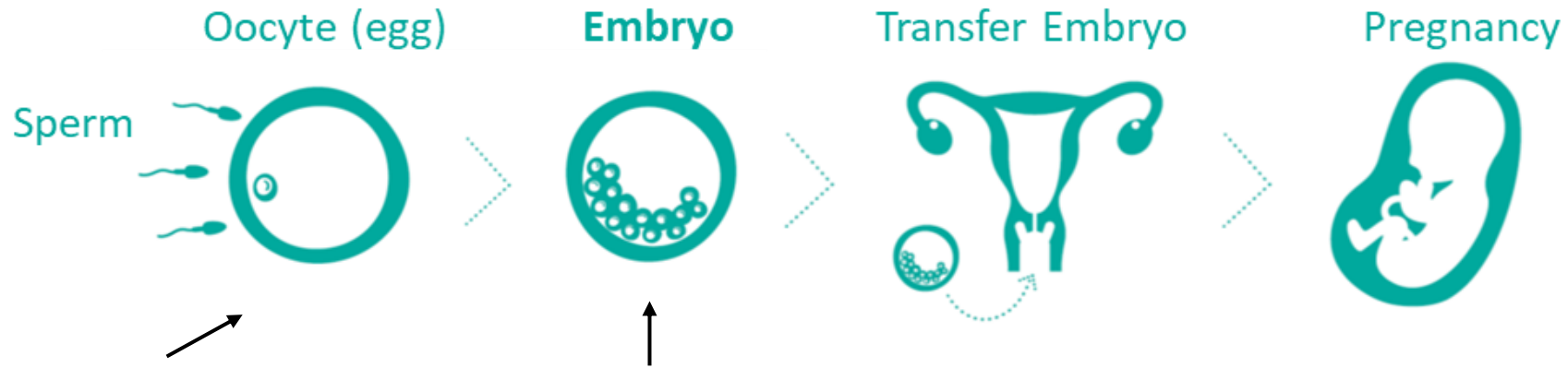


Life Whisperer

AI Enhanced Fertility



Life Whisperer Two AI apps selling in 48 countries



Life Whisperer Oocyte
In development, release 2023.
Applicable to egg freezing market.



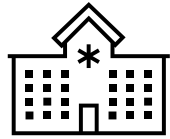
Life Whisperer Viability AI

Identify embryos likely to lead to a clinical pregnancy

Life Whisperer Genetics AI

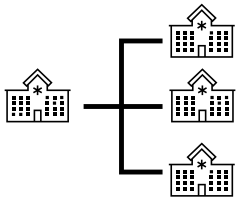
Identify embryos likely to be genetically normal (euploid)

A growing global collaborative network *starting* with fertility



200+

Individual Clinics



18

Clinic Networks, representing...



100k+

Patients per annum



13

Countries

Life Whisperer Globally Scalable Unbiased AI



25%

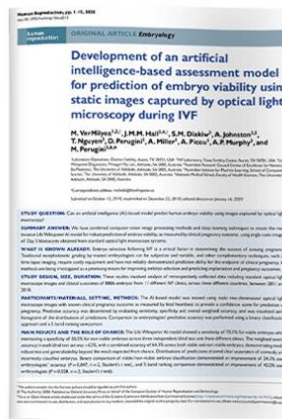
Increased accuracy for pregnancy prediction

12%

Reduction in cycles needed to achieve pregnancy*

82%

Probability of selecting a genetically normal embryo



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