

日本經驗：遠距照護運用 於高齡社區照護

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Background: Aging Society

Japan's population: 126.1 million

Aging rate: 28.4 %

Taiwan's population: 23.6 million

Aging rate: 15.3 %

(FY2019)

Aging rate (Yamanashi) : 29.9 %



Enhancing **medical services**
= urgent issue



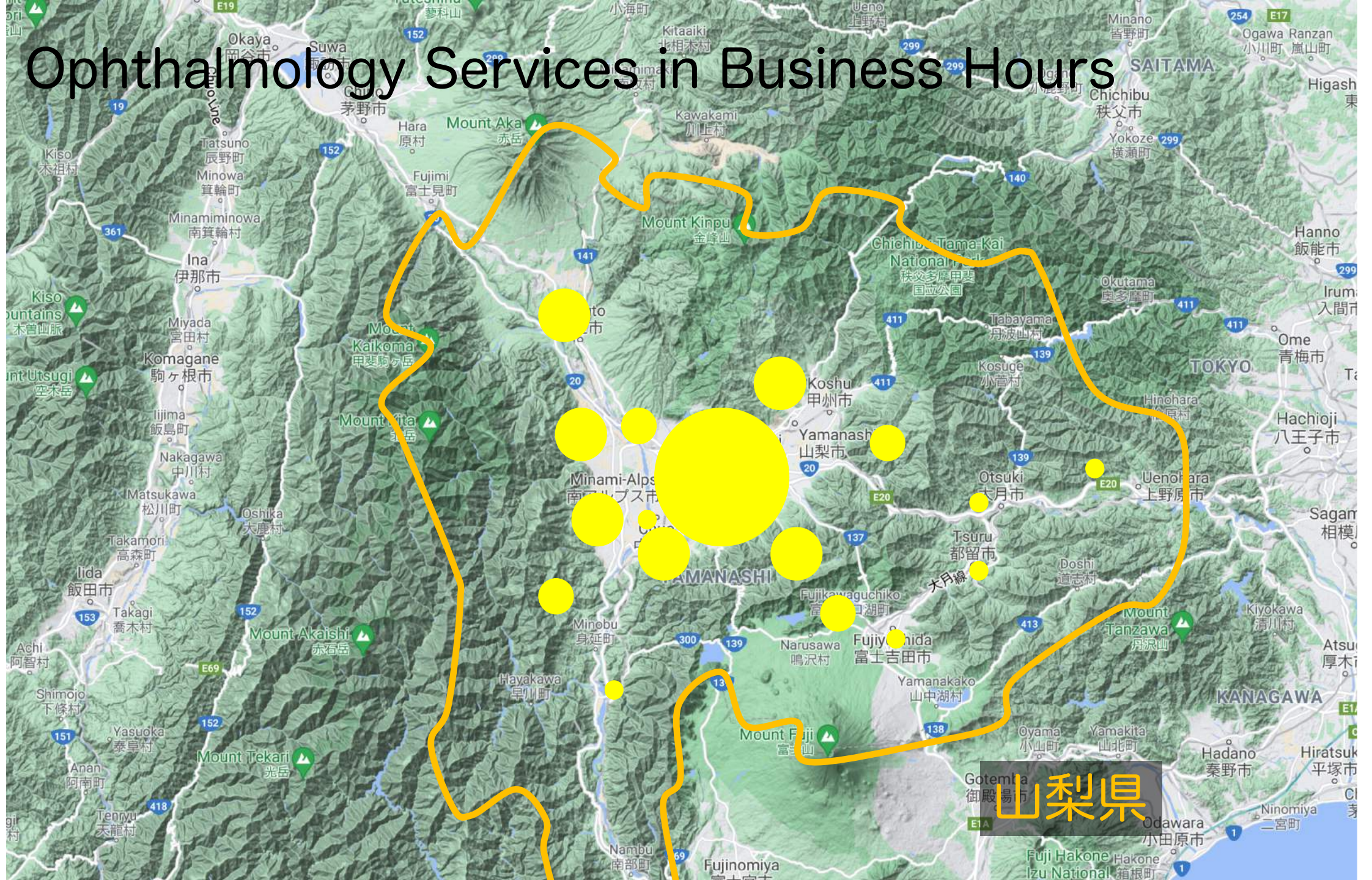
Location of Yamanashi Prefecture



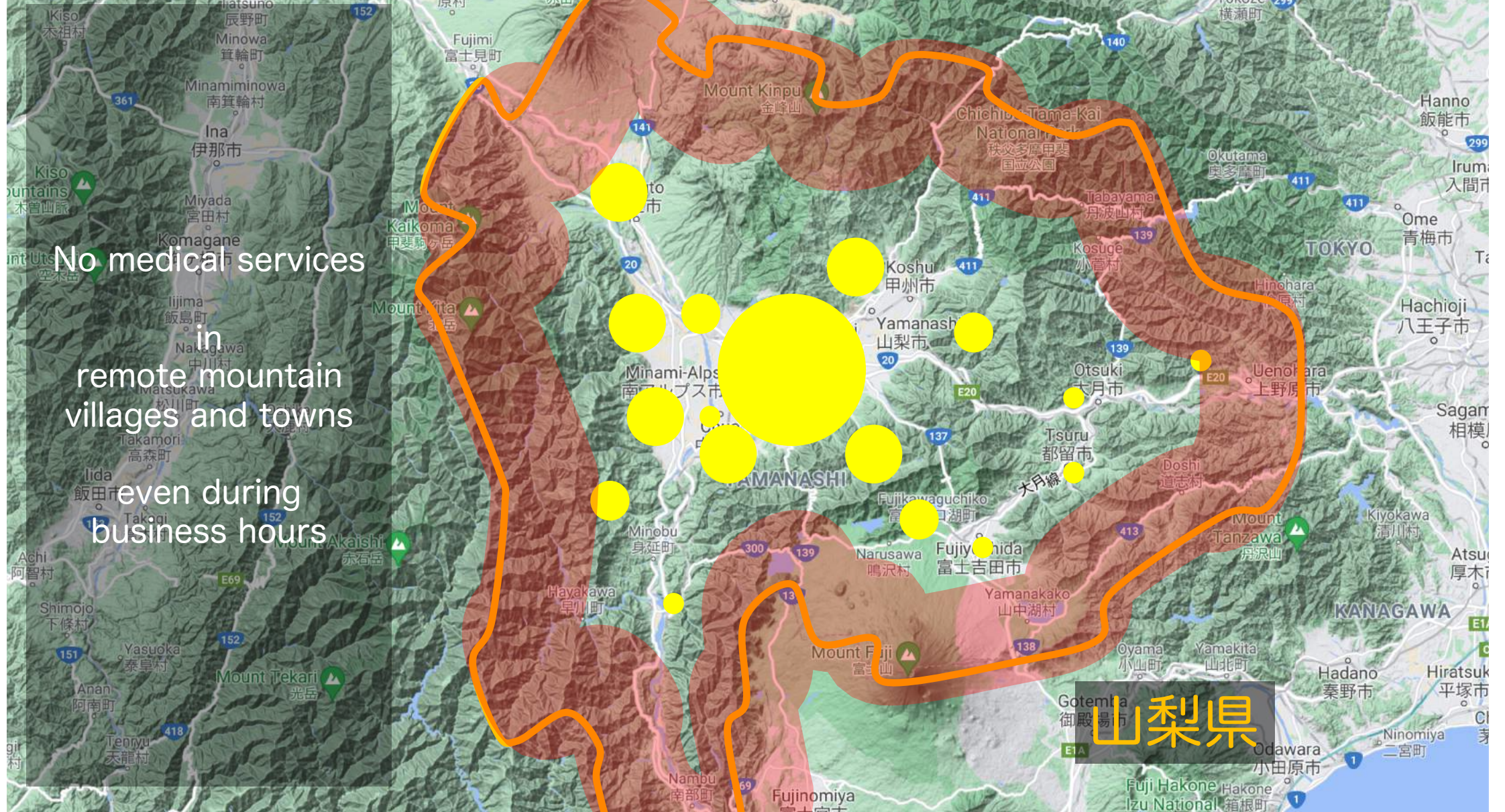
Kofu Basin in Yamanashi Prefecture



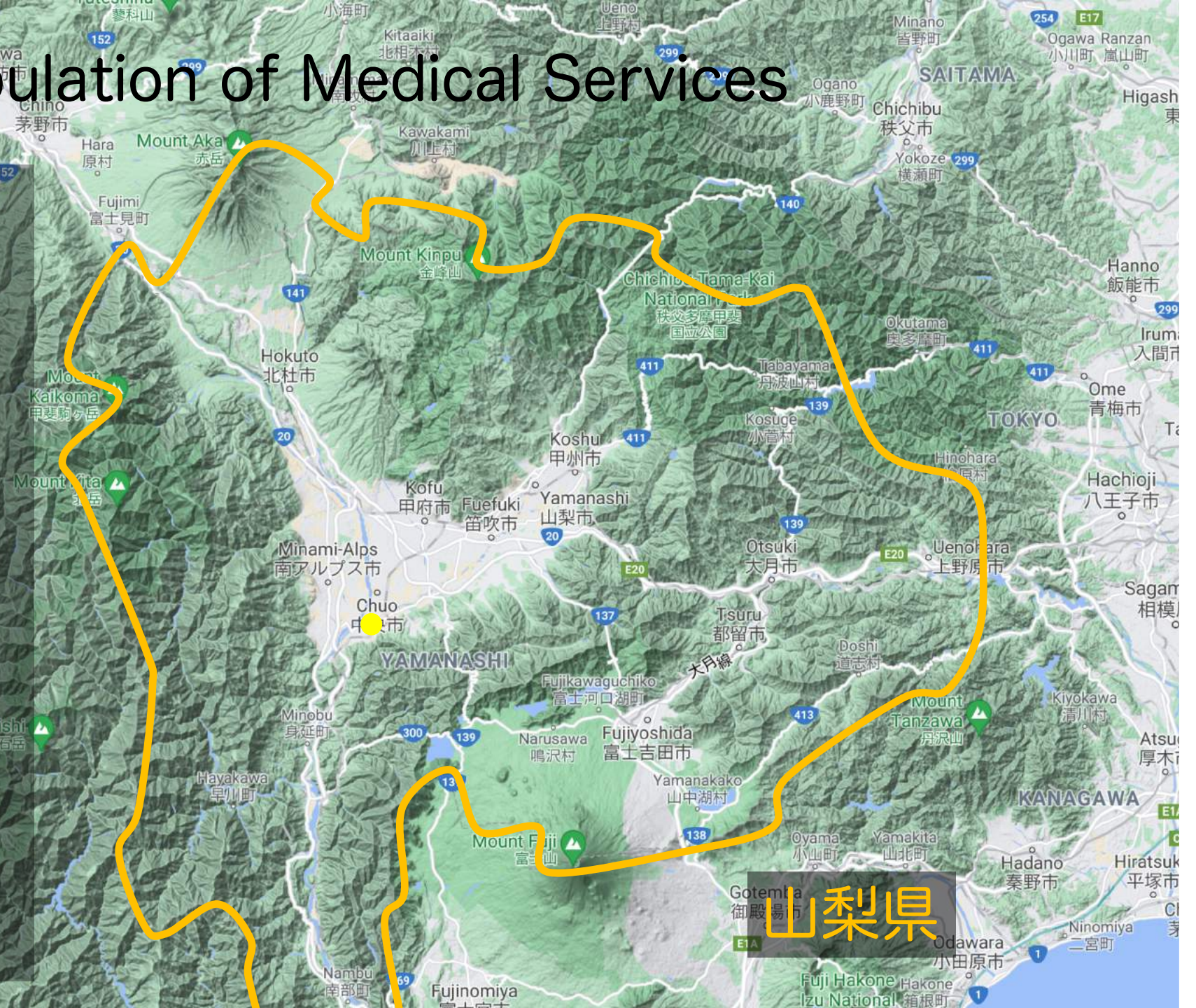
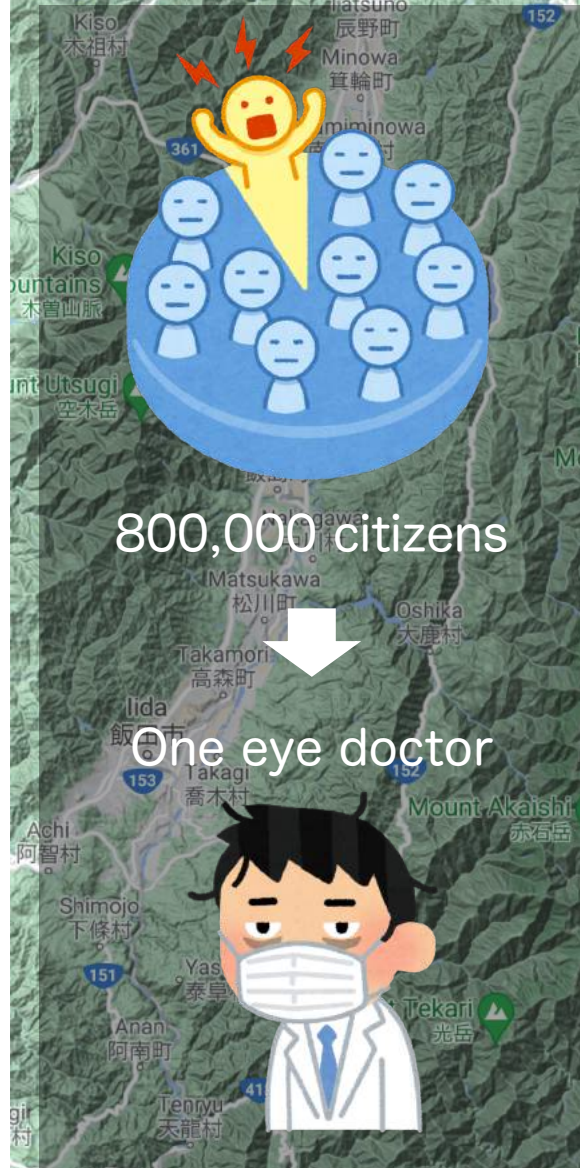
Ophthalmology Services in Business Hours



Geographical Depopulation of Medical Services



Time Depopulation of Medical Services



Local Social Issue: Depopulation of Medical Care

1. Geographical depopulation: No services in remote mountain areas
2. Time depopulation: One doctor for overtime services

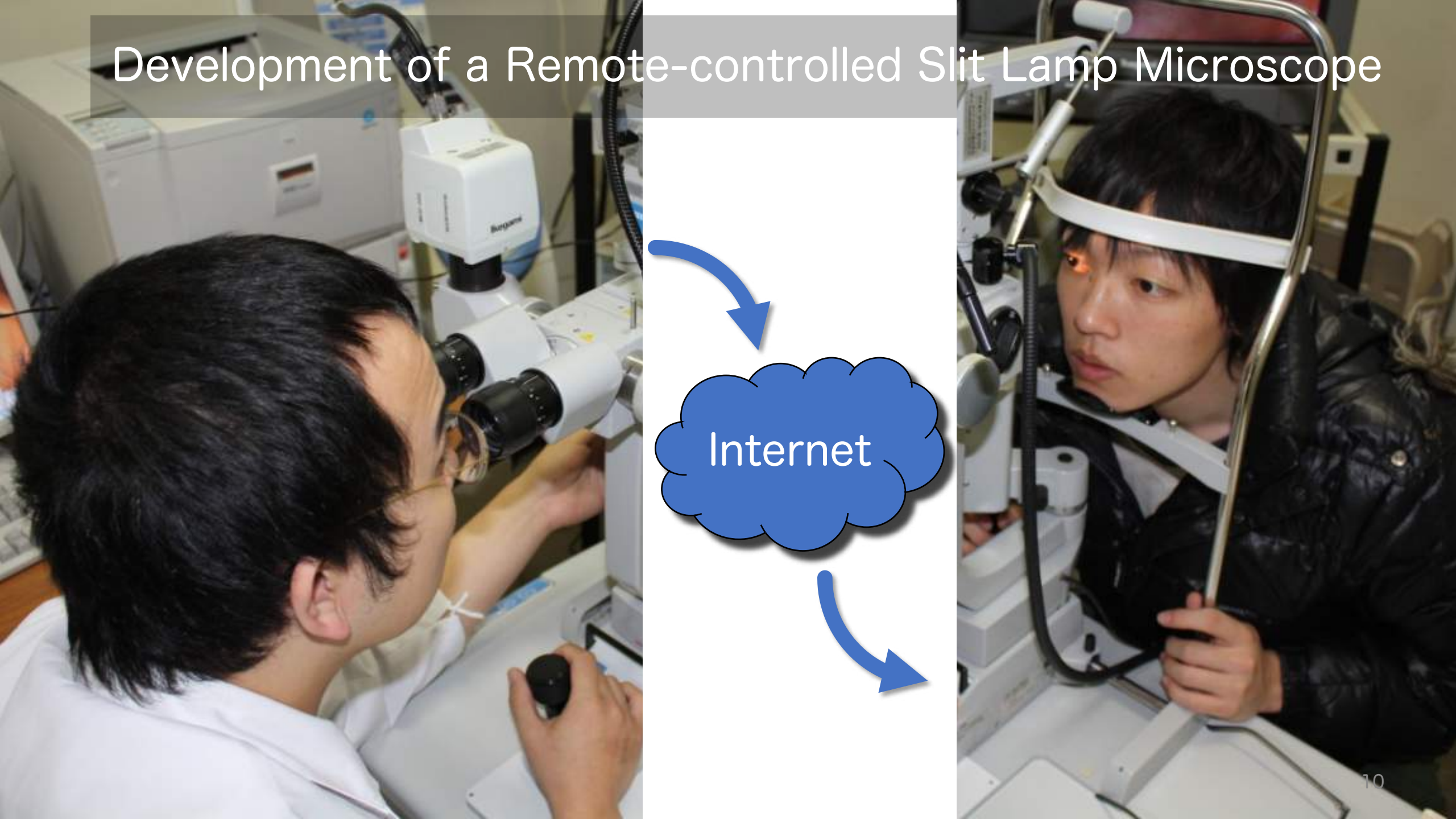


- How do we solve these issues in the field of ophthalmology?
- What are the characteristics of ophthalmic diagnosis?

Ophthalmic Diagnosis: Use of Slit Lamp Mic



Development of a Remote-controlled Slit Lamp Microscope



Solution: Remote-controlled Slit Lamp Microscope System

Eye View Robo (EVR-4)



Doctor's Terminal



Remote-controlled Slit Lamp Microscope

EVR-4: Working Demonstration



Bill Buxton's Design Principle

do smart things with stupid technology today,
rather than wait and do stupid things with smart
technology tomorrow



User-centered approach (Human-centered approach)

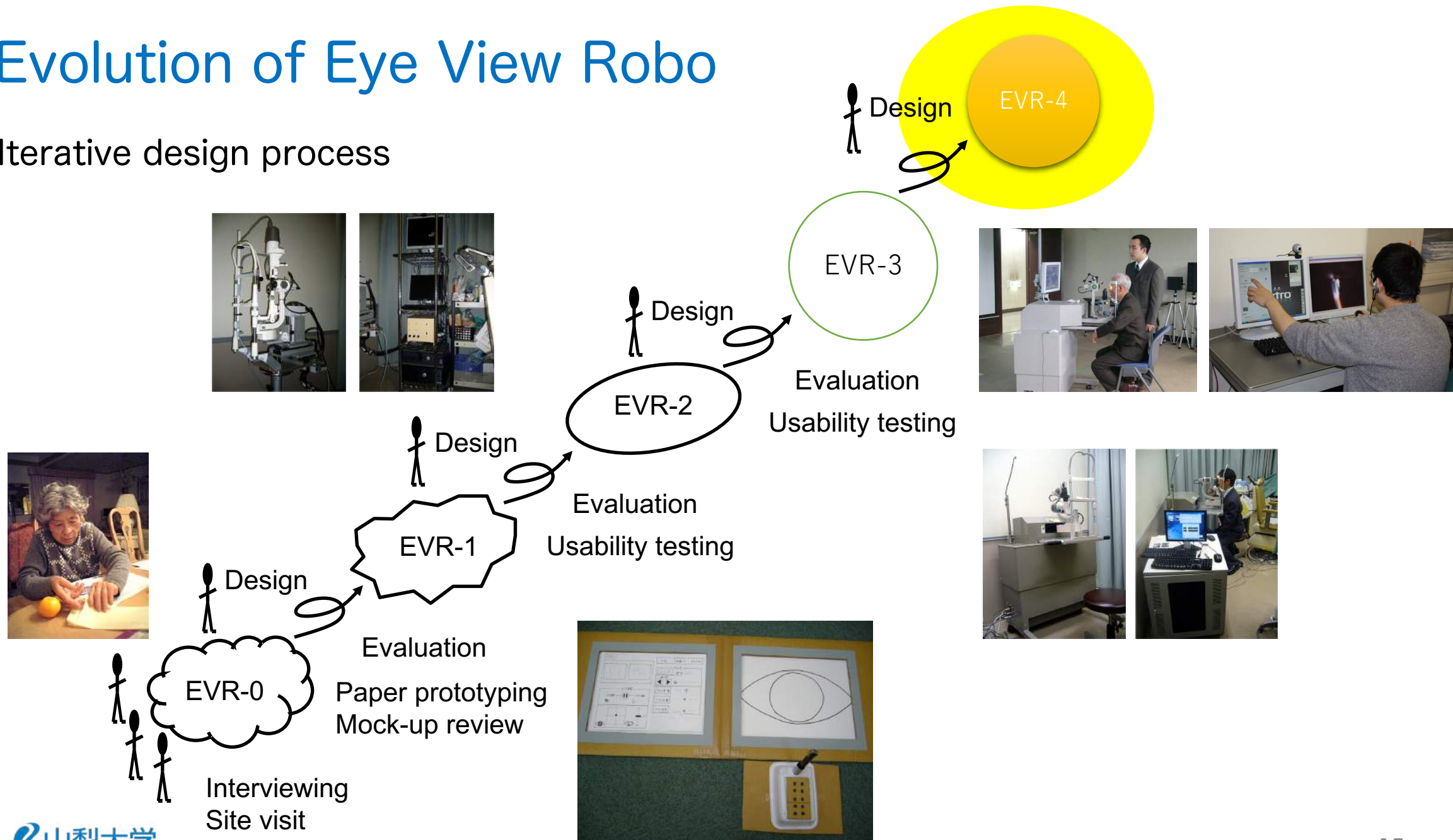
= quick prototyping and verification of new application concepts



Technology-driven approach

Evolution of Eye View Robo

Iterative design process



Paper-prototyping Session



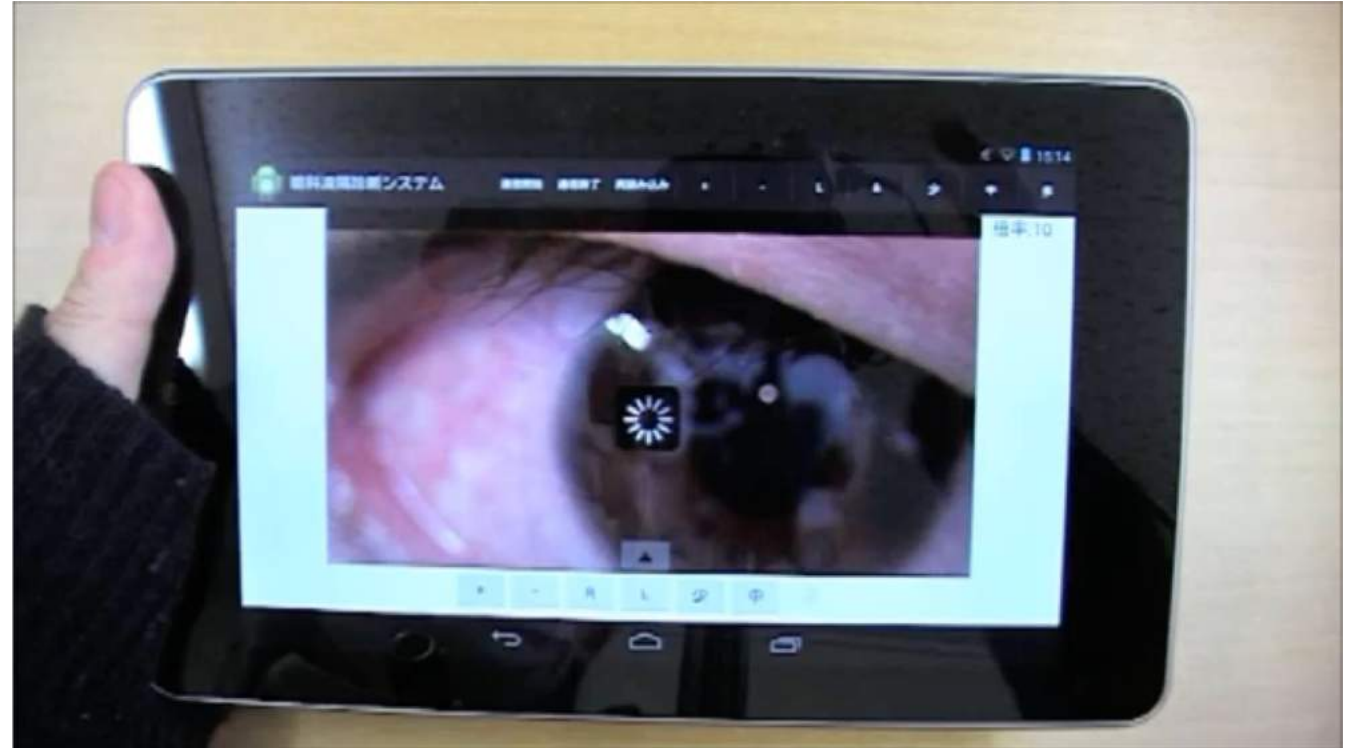
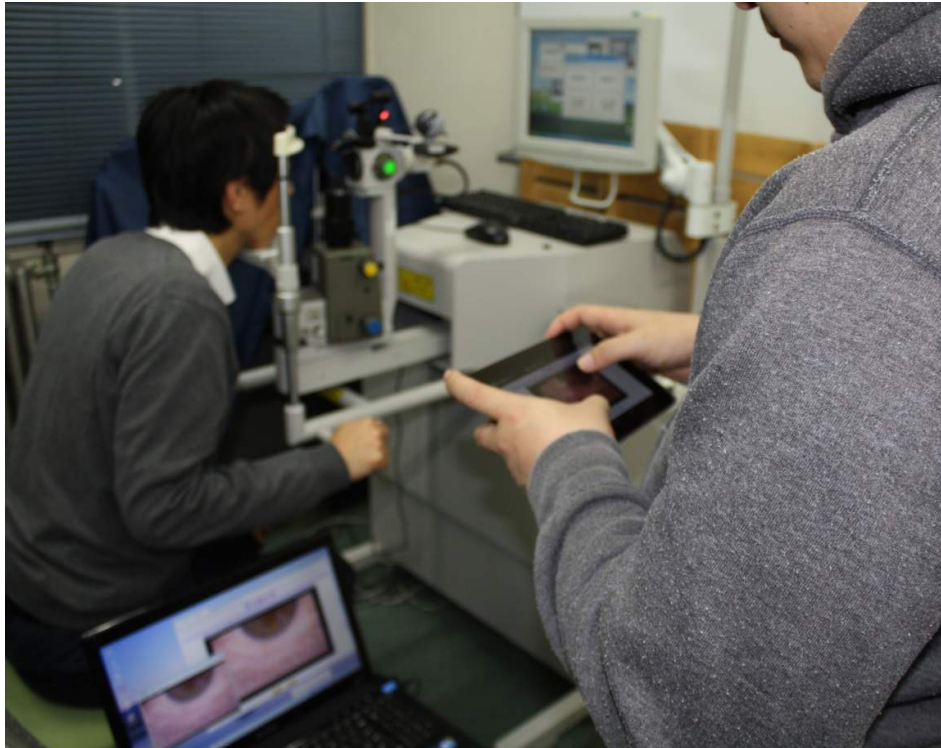
Extracted Requirements:

- Need a jump button to switch between left and right eyes
- Requires a button to reset the microscope position to its initial state



We were able to discover **potential bugs** at low cost **without writing a single line of code.**

EVR-4: New Diagnostic Experience



Conclusion: A Solution to a Local Social Issue

Depopulation of Medical Care

1. Geographical depopulation: No services in remote mountain areas
2. Time depopulation: One doctor for overtime services



A remote-controlled slit lamp microscope system

- Basic concept of the system
- Human-centered design process: Buxton's design principle

A Technical Solution for the COVID-19 Eye Care?

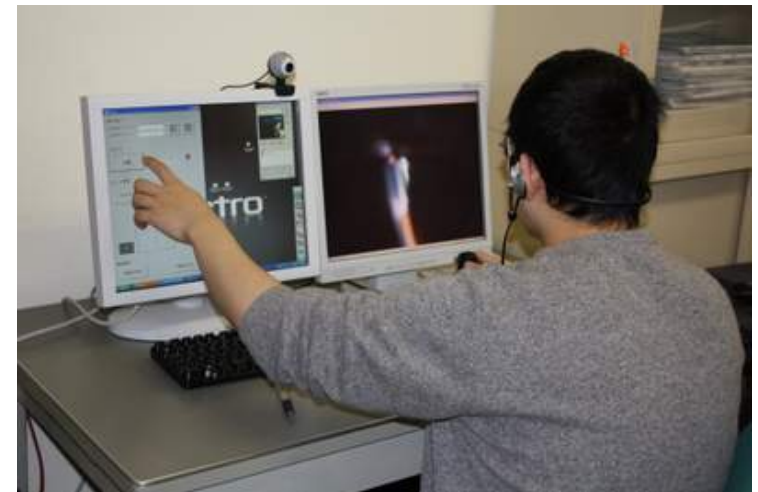
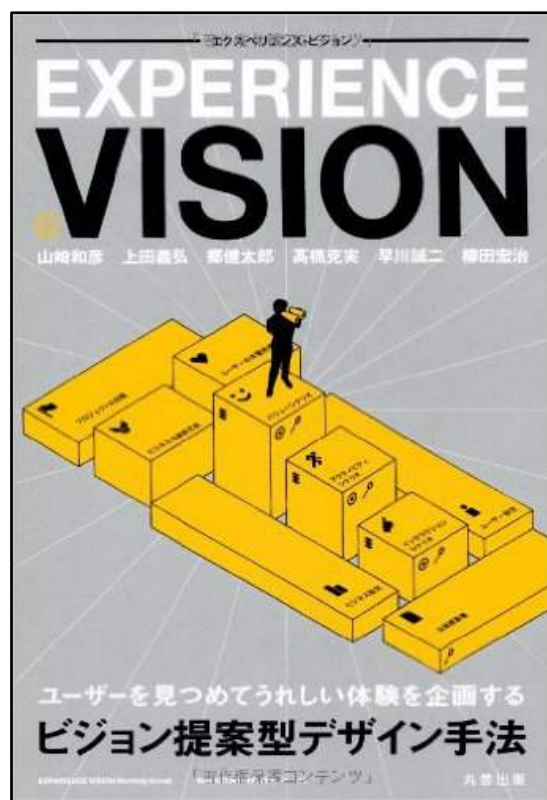


Image: <https://www.aoa.org/healthy-eyes/caring-for-your-eyes/covid-19-eye-health-care-guide-for-patients>

山崎 和彦, 上田 義弘, 郷 健太郎,
高橋 克実, 早川 誠二, 柳田 宏治,
エクスペリエンスビジョン, 丸善
出版, 東京, 2012

使用者體驗願景設計：從0到1的產品、
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