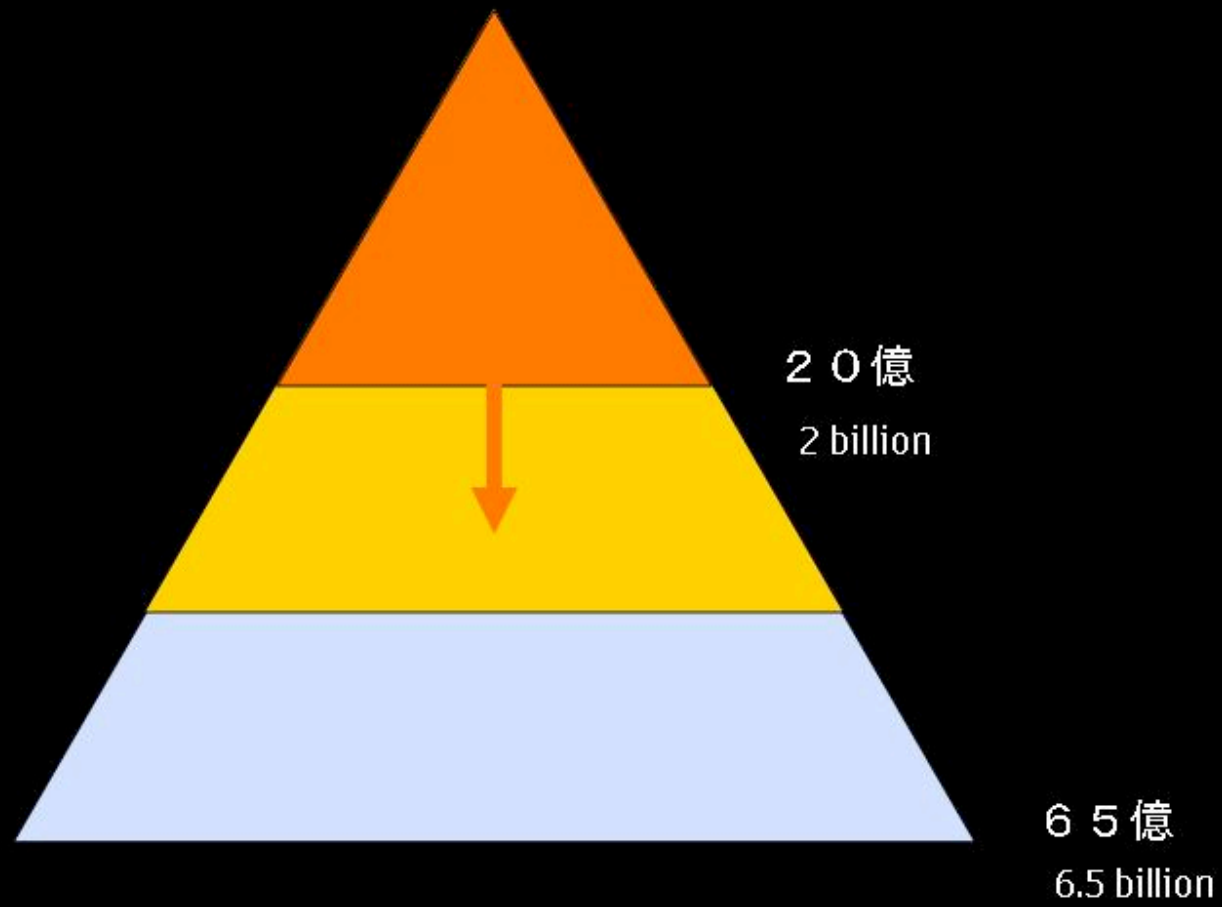




# ケータイを修理するという文化

Mobile Phone Repair Cultures

Jan Chipchase



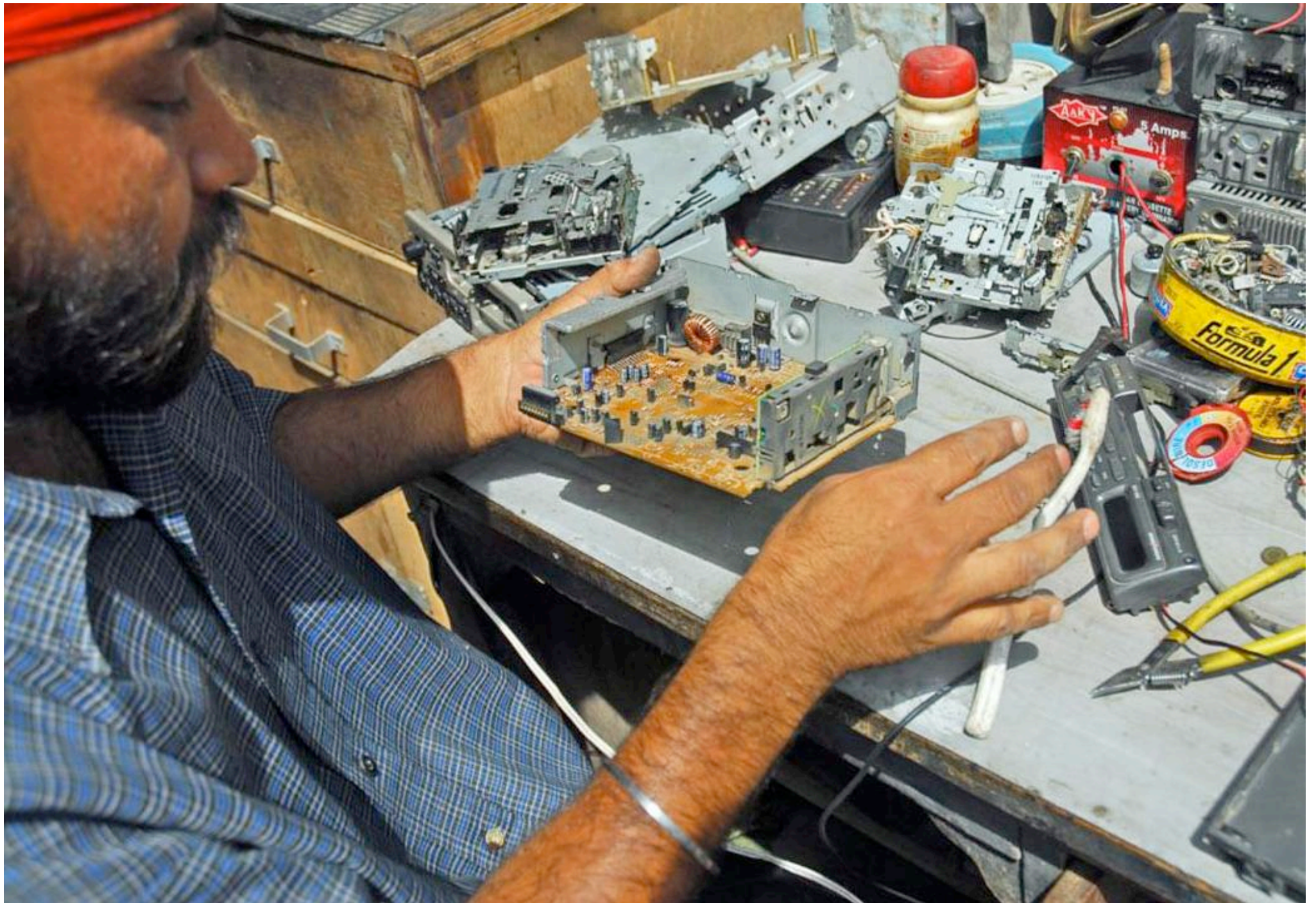




ホーチミン、デリー、ウランバートル、ソウェト、カンパラ、成都、吉林、厦門、ラサでのリサーチ

research in Ho Chi Minh City, Delhi, Ulan Bataar, Soweto, Kampala, Ji Lin, Chengdu, Xiamen, Lhasa









覆面調査, 突撃インタビュー, 観察  
mystery shopper, ad-hoc interviews, observations





# 修理の生態系

repair eco-system

必要数量のコンポーネント サプ  
ライヤ, 卸売業者, 顧客, 知識

critical mass of component suppliers,  
wholesalers, customers, knowledge









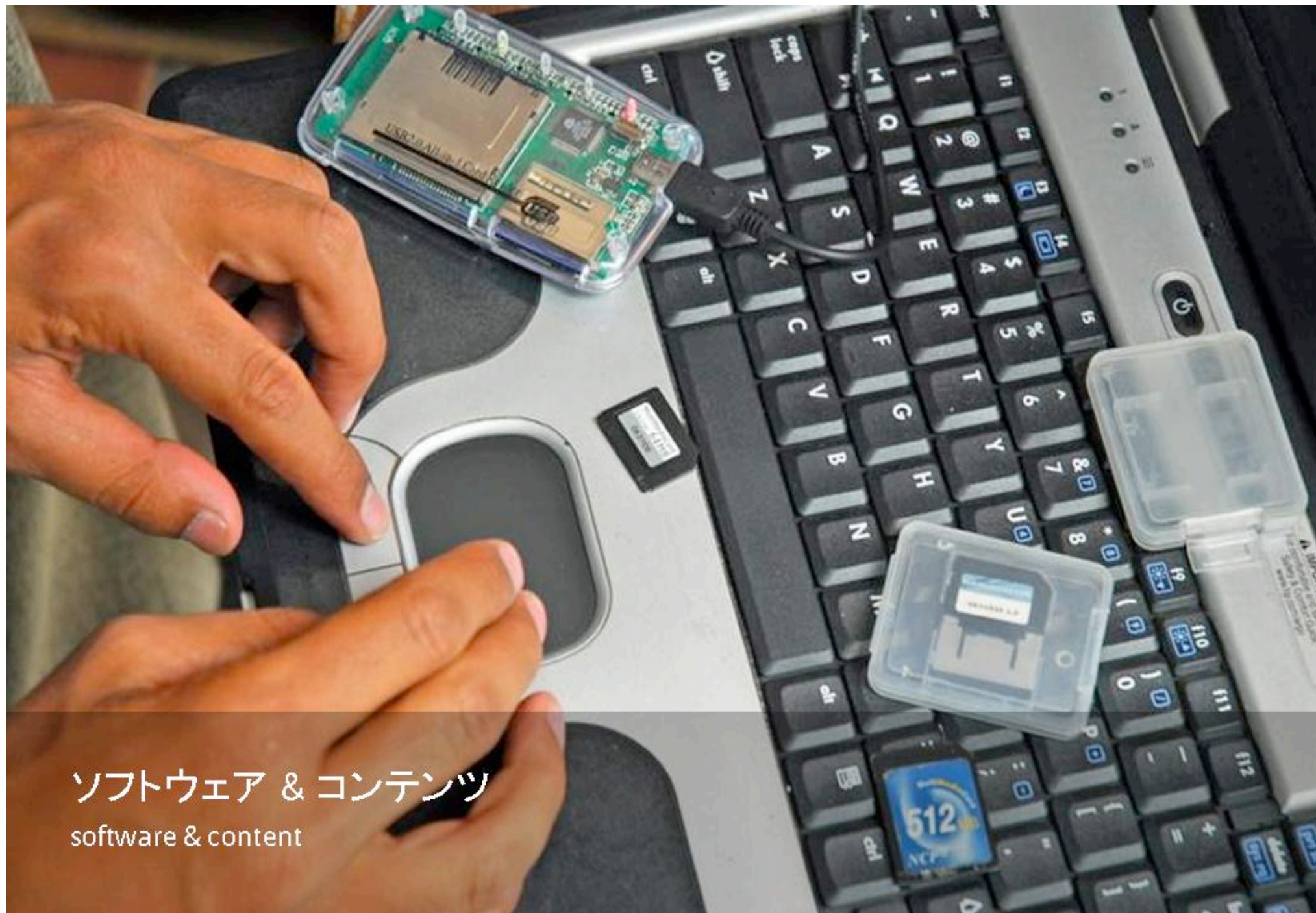




平らな面 + スクリュードライバ + ハブラシ + 知識

a flat surface + screwdriver + toothbrush + knowledge





ソフトウェア & コンテンツ  
software & content





保証書  
warrantees





研修所

training institutes



# 何が目新しいのか？

what's novel?

スケール、コスト、サイズ、他の電子機器と比べた  
修理するオブジェクトの普遍性

輸入、半合法的なグレーマーケット、盗難（？）品

優先度と修理にかかる時間

テレビ vs 電話 / エンタメ vs コミュニケーション

プロダクトの寿命をより長く

scale, cost, size, ubiquity of objects of repair compared to other electronics  
imported, grey market, stolen devices (?)  
priority & speed of what is repaired  
television vs. phone / entertainment vs communication



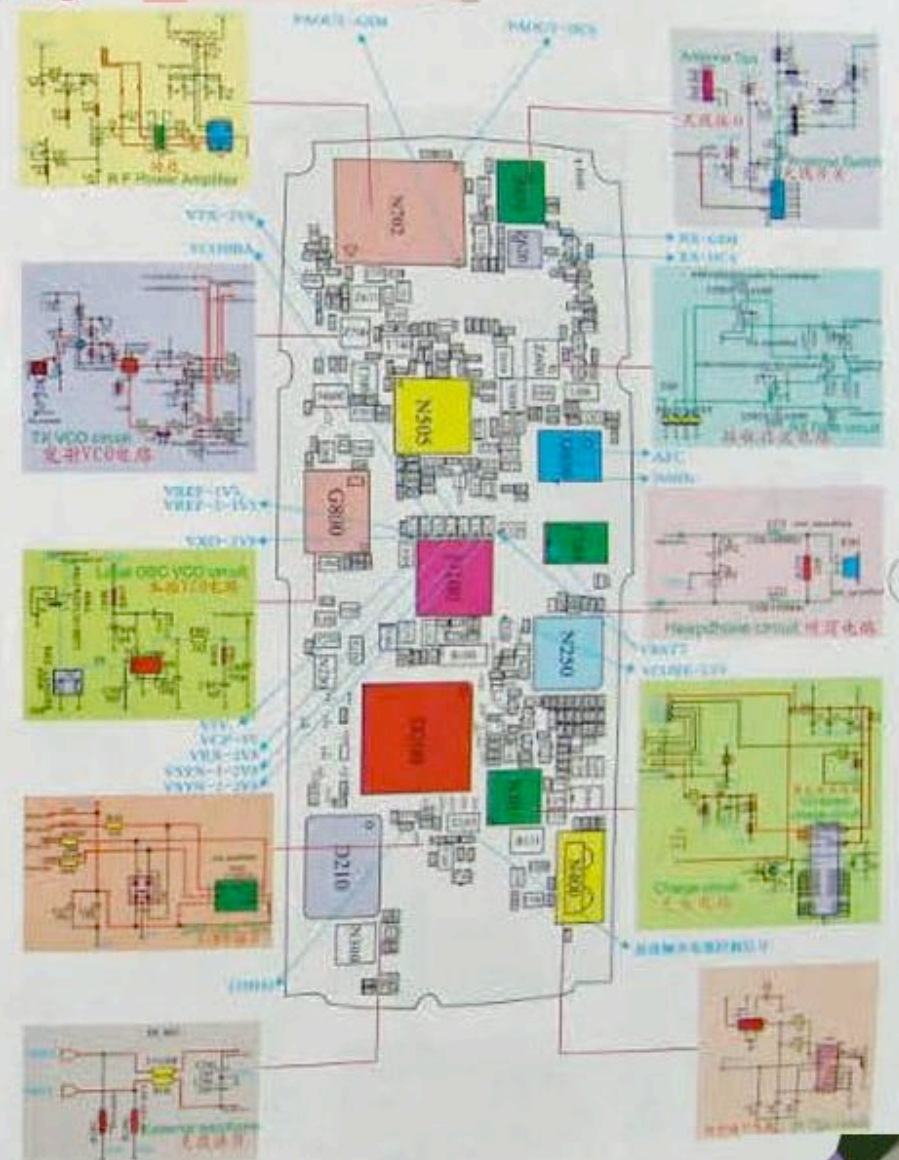
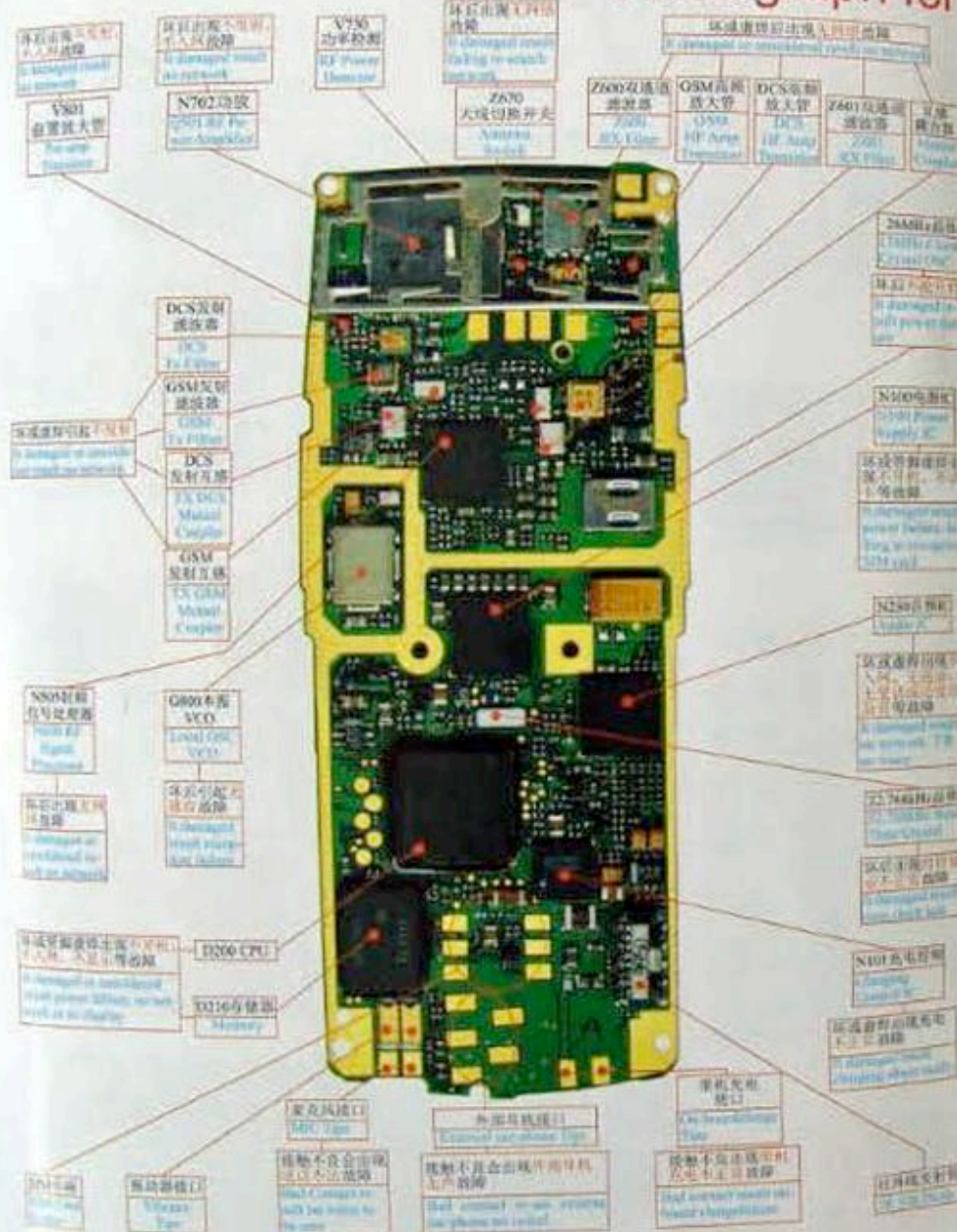


スケール

scale



# THE 1<sup>st</sup> Photograph for repairing









A photograph of an older man and a woman sitting at a wooden table, looking intently at a smartphone held by the man. The woman is wearing a grey winter jacket with a fur-lined hood and a patterned scarf. The man is wearing a dark blue sweater. The background is a simple indoor setting with a window.

# 消費者への影響

implications for consumers

安さ、利便性、速さ、所有コストの軽減、製品の寿命をより長く

cheap, convenient, fast  
reduced cost of ownership  
extend lifetime of products





# 企業への影響

implications for companies

インフォーマルな修理文化から何が  
学べるのか？誰にどんなリスクが？

what can we learn from informal repair cultures?  
what are the risks? for whom?



修理 >> 革新

repair >> innovation





[www.janchipchase.com/repaircultures](http://www.janchipchase.com/repaircultures) もどうぞ



## **Presentation to Pecha Kucha 34 @ Super Deluxe, Tokyo, 20 slides, 20 seconds per slide**

**1 >>** Hei. I'm Jan Chipchase, and I work for Nokia Research's Mobile Human Computer Interaction Group, and tonight I'd like to share a little bit about some research I've conducted into cultures of mobile phone repair **2 >>** Currently over 2 billion people have cellular connectivity. The big question everyone is trying to figure out is what would it take to connect the next 4.5 billion? A lot of growth is coming from highly price sensitive consumers in emerging markets such as China, India & Brazil. Thinking about the total cost of ownership - one element is the cost of repair **3 >>** Conducting research in places such as Delhi, Ulan Bataar, Chengdu, and Kampala looking at the range of local repair services on offer, not just for mobile phones, but taking a holistic view - these guys in the photo are two members of the Delhi research team **4 >>** How do products break? What happens to them once they are broken? What steps do people take to get them fixed? And what are the monetary and other associated (environmental) costs? **5 >>** Using techniques such as observations, ad-hoc interviews and mystery shopper that is in this instance quite simply buying phones, breaking them and then having them repaired and documenting the process we've been trying to get a sense of what is possible **6 >>** The first thing to note is that the repair ecosystem is well developed - with a critical mass of component suppliers, wholesalers, customers, sufficiently skilled repair guys (as yet never repair-women), and above all knowledge - social networks play an important role sharing knowledge **7 >>** This repair engineer is fixing this phone without using any manuals (which are sitting on the shelf gathering dust) - its far easier to pop next door and ask a neighbour how he would do it... By the way, the woman in the photo - she owns the shop and her husband does the repairs - a fairly typical situation in China **8 >>** One element of the ecosystem is the repair equipment wholesaler where you buy pretty much any tool you can think of...



**9 >>** For all the sophisticated tools that are available many repairs can be carried out using only a small flat surface, a screwdriver, and toothbrush for cleaning contacts plus some basic knowledge. Some repairs, for example to circuit boards are more complex, but pretty much there are minimal barriers to entry **10 >>** Software and content is also available, simply hand over your memory card and ask them to copy whatever it is that you need. Most of the content is geared to adult males in their teens and twenties - including photos of fast cars, nationalist imagery and pin-ups **11 >>** Despite the ad-hoc nature of the ecosystems consumers are offered written or verbal warranties for repairs and purchases - this is understandable given that much of the business is generated by word of mouth - you go to the person or shop that you trust. In Ulan Bataar, Mongolia (where this photo was taken) consumers are offered a months warranty for a used phone, one week for a used battery **12 >>** The repair eco-systems in India have evolved to include numerous training institutes / colleges where novices can sign up for 3 month training courses to learn everything there is to know about fixing a mobile phone **13>>** So what, if anything, is novel about all of this? First off consider the sheer scale of the mobile phone market compared to say televisions, DVD players or car radios - its far easier to find the components to fix the broken hinge on say, a RAZR quite simply because so many people have them **14 >>** Most electronics also take up far more physical space than other mobile phones – a repair shop owner could store 100 mobiles in the space it takes to keep this one broken television **15 >>** You can also subscribe to manuals often written in Hindi, Mandarin and/or English complete with centerfold posters detailing the most common faults for different phone models and how to fix them, but also including chapters on phone unlocking, re-flashing and installing applications



**16 >>** Phones are, by and large, considered essential objects to carry when leaving home - if your mobile phone or your television is broken which are you likely to fix first? This is especially true if, like the matoke seller in this photo taken in rural Uganda, your business depends upon it **17 >>** For consumers the informal repair cultures are largely cheap, fast, convenient, reducing the total cost of ownership for consumers many of whom are highly price sensitive. Some consumers prefer to go through formal repair channels, but as the vibrancy of these markets attest, many do not **18 >>** What are the implications for manufacturers of mobile phones? The repairs extend the lifetime of product lessening (?) their environmental impact – an increasingly important consideration. I work in research and my starting point is thinking about what can we learn from mobile phone repair eco-systems? They exist (naturally) and appear to function very well, meeting consumer needs without any formal support from the companies that make the products. What are the risks? To consumers? To the brands that are being repaired? **19>>** One conclusion from all this, is that given the sophistication of what exists today in the mobile phone repair eco-system – the critical mass of suppliers, consumers, skills, social networks and above all knowledge, what would it take to turn these cultures of repair into cultures of innovation? **20 >>** A short essay on repair cultures appears at [www.janchipchase.com/repaircultures](http://www.janchipchase.com/repaircultures). Ta.