

## DIGITAL TECHNOLOGIES, ENVIRONMENTAL CHANGE, AND PUBLIC POLICY

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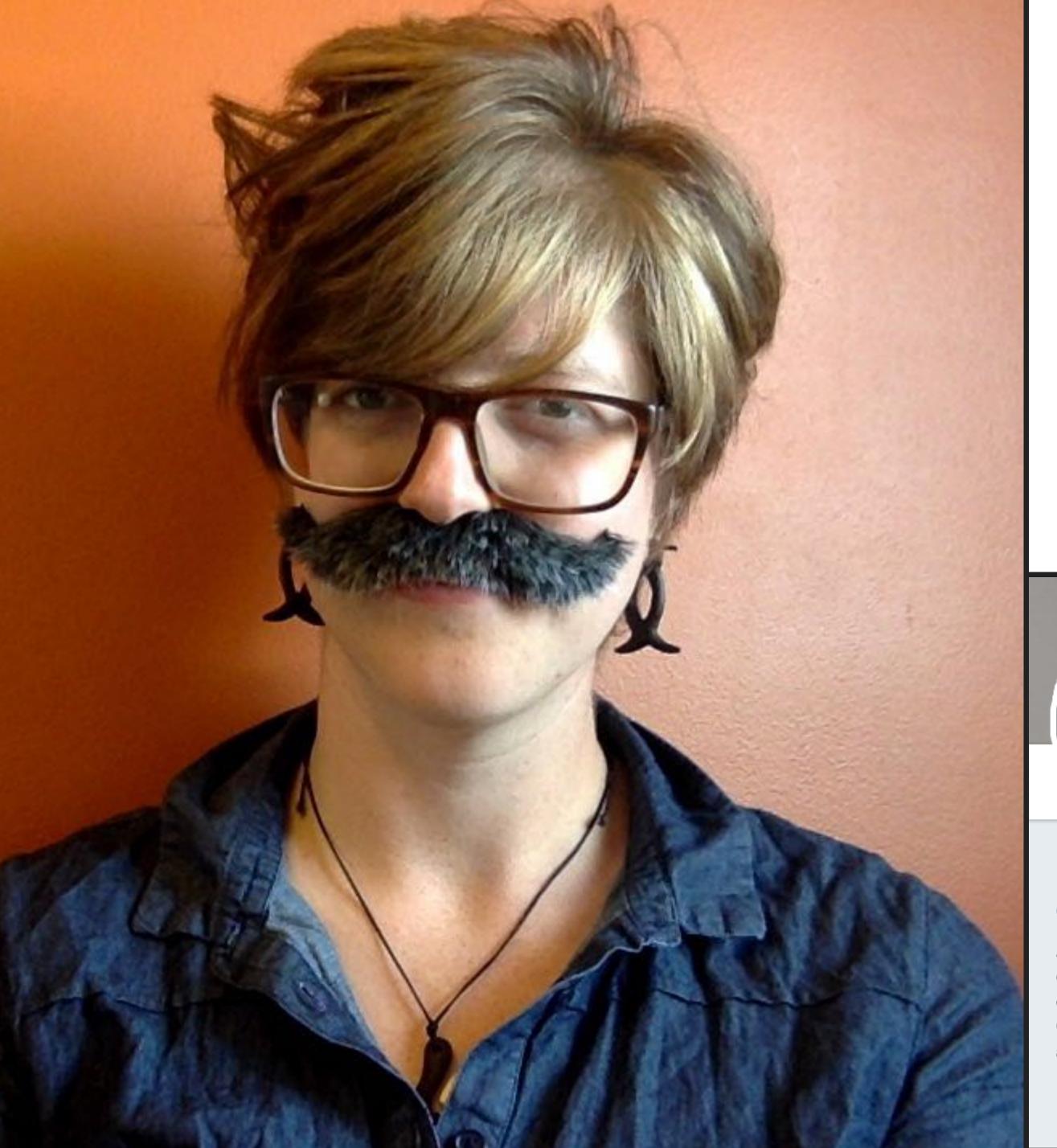
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- WHO AM I?
- WHAT ARE THE ENVIRONMENTAL EFFECTS OF DIGITAL TECHNOLOGIES?
- HOW HAVE GOVERNMENTS USED PUBLIC POLICY TO ADDRESS THOSE EFFECTS?
- WHAT MORE CAN BE DONE?

## OUTLINE





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Innovation for the Digital Economy An EPSRC Doctoral Training Centre

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#### **Lickable Cities**

@lickablecities

An impractical research community, exploring the flavours of urban environments. Headed by Chief Gustographers @van\_tho, @justaturbo, and @dgfctr

Worldwide

**Tweets** 

Tweets & replies

Media

Pinned Tweet



Lickable Cities @lickablecities · Oct 11

We hold these truths to be self-evident, that all: ppl are created equal; interfaces+infrastructures are #lickable; your base R belong to us

1 3 ♥ 3

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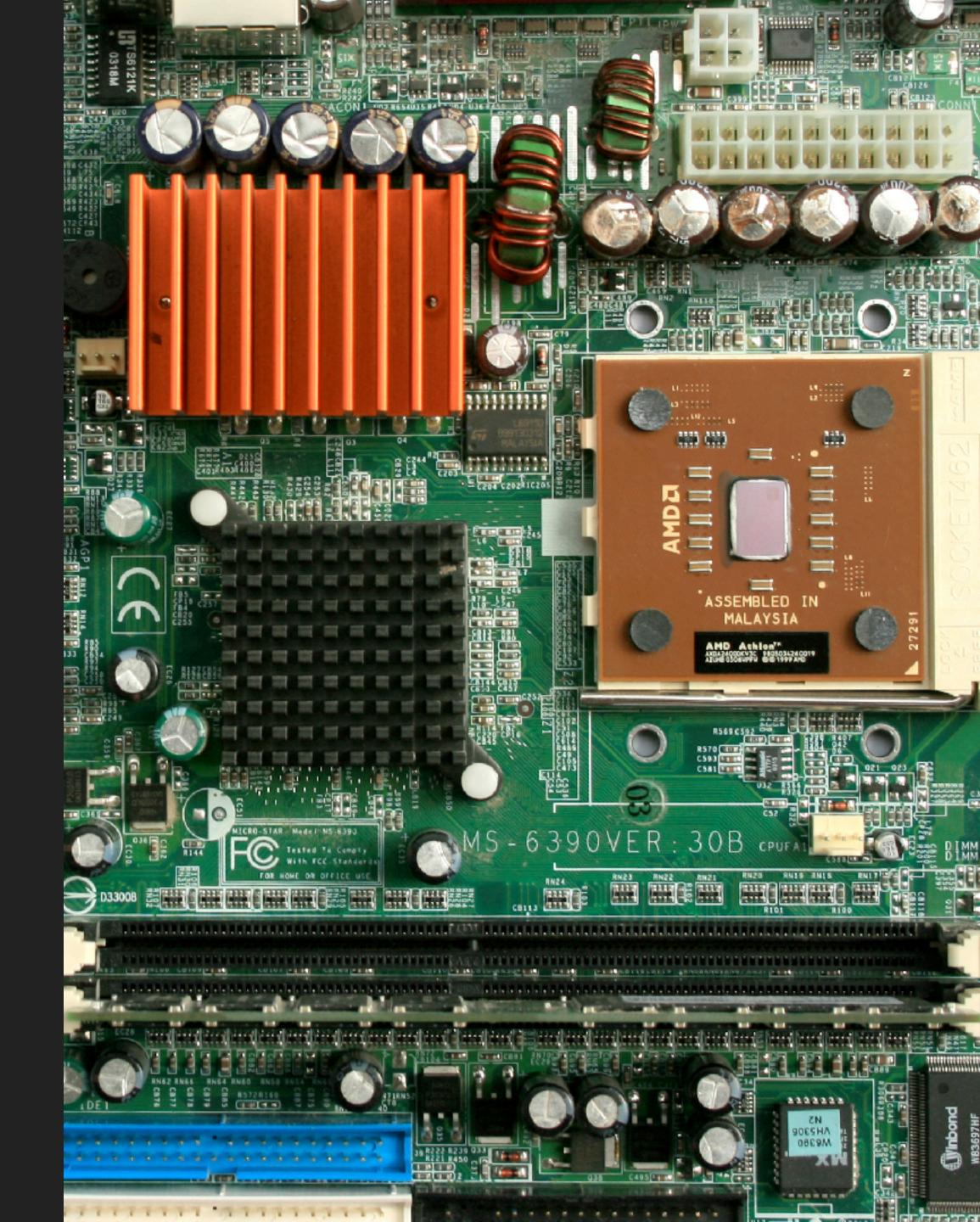
70s Dinner Party @70s\_party · Oct 20

Never have I wanted anything as much as I want a parsley poodle sand

- CARBON DIOXIDE EMISSIONS
- **ECOSYSTEM DEGRADATION**
- **▶** RESOURCE DEPLETION

## WHAT ARE THE ENVIRONMENTAL EFFECTS OF DIGITAL TECHNOLOGIES?

PHOTO CREDIT: "MICROATX MOTHERBOARD WITH AMD ATHLON PROCESSOR 2 DIGON3.JPG" BY JONATHAN ZANDER. CC BY-2.5 <a href="http://bit.ly/2zKEztU">http://bit.ly/2zKEztU</a>









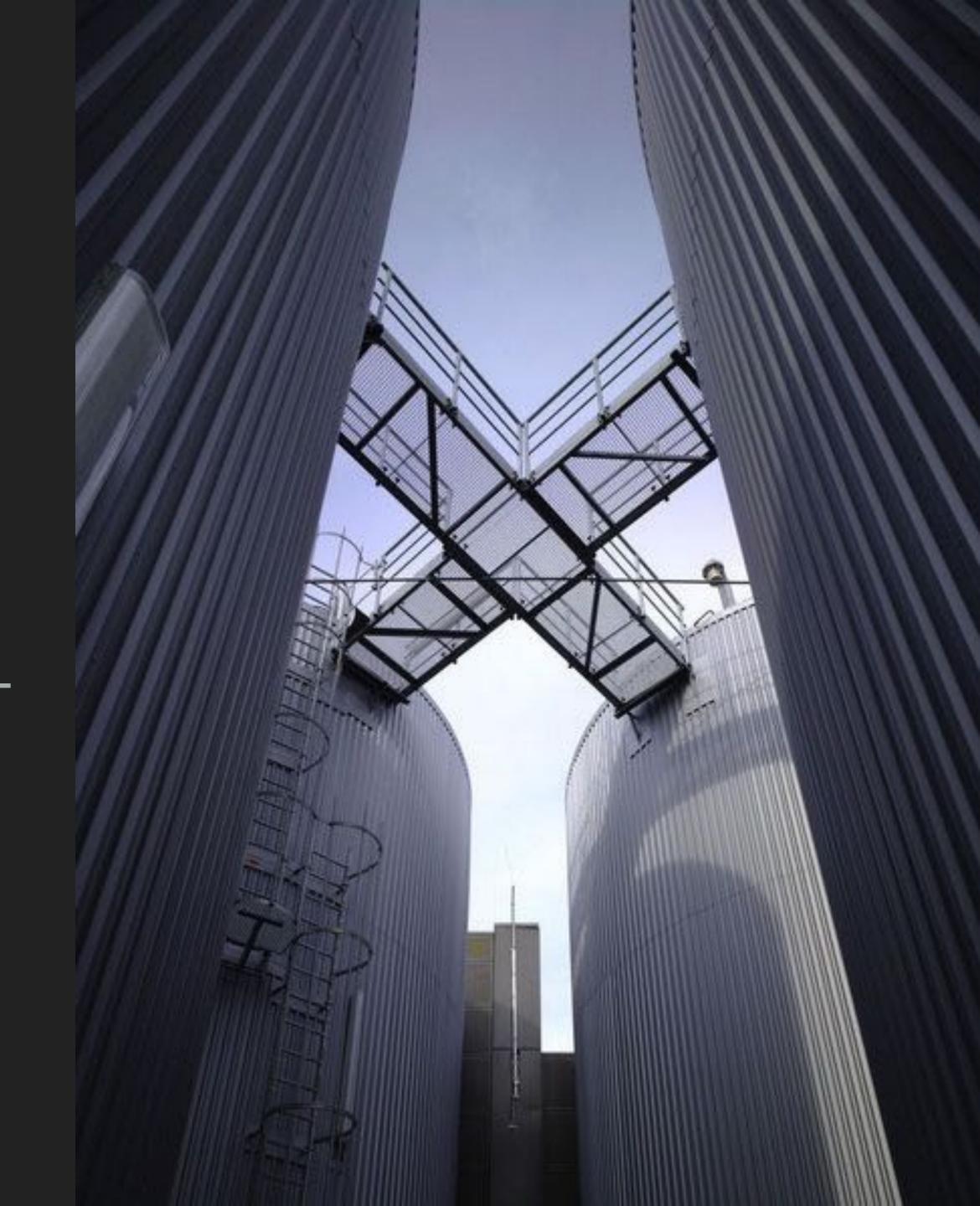


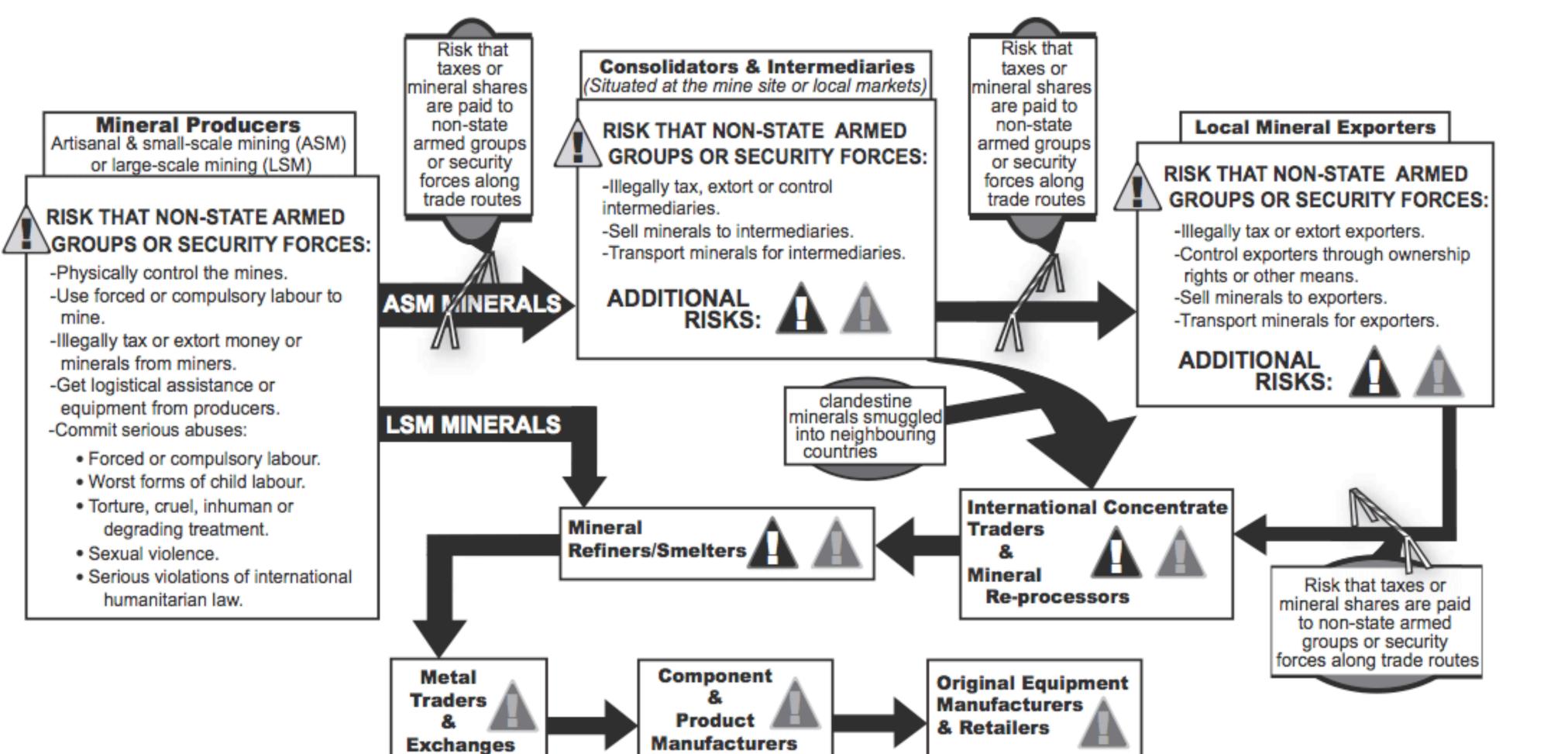




# HOW HAVE GOVERNMENTS USED PUBLIC POLICY TO ADDRESS THOSE EFFECTS?

- GREEN PROCUREMENT POLICIES
- **WASTE MANAGEMENT POLICIES**
- **CLEAN ENERGY POLICIES**





#### **LEGEND**



- Risk of direct or indirect support to non-state armed groups through the extraction, transport, trade, handling or export of minerals.
- Risk that public security forces are present for purposes other than providing security.
- Risk related to contracting of security forces, public or private.



 Risk of non-existent or inadequate due diligence for a responsible supply chain of minerals from conflict-affected and high-risk areas (as recommended in this guidance).



- -Risk of bribery to conceal or disguise the illicit origin of minerals, to misrepresent taxes, fees and royalties paid to governments for the purposes of mineral extraction, trade, handling, transport and export.
- -Risk of fraudulently misrepresented information on mineral origin, transportation routes, chain of custody and the circumstances of mineral extraction, trade, handling, transport and export.

Credit: OECD, 2013. "Due Diligence Guidance for Responsible Supply Chains of Minerals" Report.





FROM FAIRPHONE AND GREENPEACE TO APPLE AND GOOGLE

### PRIVATE AND NON-PROFIT RESPONSES





"NOW IS THE TIME FOR THE TECH SECTOR TO CHANNEL ITS EXPERTISE INTO REINVENTING THE WAY THAT ELECTRONIC DEVICES ARE MADE AND USED IN SOCIETY, TO REVERSE THE EVER-INCREASING CONSUMPTION OF THE PLANET'S FINITE RESOURCES AND RELIANCE ON FOSSIL FUELS, CREATING A CIRCULAR AND RENEWABLY POWERED BUSINESS MODEL THAT OTHER SECTORS CAN FOLLOW."

- GREENPEACE'S GUIDE TO GREENER ELECTRONICS, 2017



#### FOR ALL OF US

- COMMIT TO DEEPENING OUR PERSONAL AND ORGANISATIONAL KNOWLEDGE ABOUT THE ENVIRONMENTAL FOOTPRINT OF DIGITAL TECHNOLOGIES
- EXAMINE HOW OUR ORGANISATIONS MANAGE THEIR ELECTRONICS PROCUREMENT AND WASTE.
- ESTABLISH PARTNERSHIPS WITH RESEARCHERS AND NON-STATE ACTORS WHO ARE WORKING IN THE EMERGING DOMAINS OF 'GREEN COMPUTING' AND 'INFORMATION AND COMMUNICATION TECHNOLOGIES FOR SUSTAINABILITY' (ICT4S).

#### FOR CANADA

- CONSIDER EXPANDING AND EXTENDING ITS 'POLICY ON GREEN PROCUREMENT' TO DIGITAL SERVICES.
- ADOPT A MECHANISM FOR ASSESSING HOW NEW DIGITAL PROJECTS AND SERVICE INCREASE THE LONG-TERM DEMAND FOR ENERGY, DATA AND ADDITIONAL DIGITAL DEVICES.
- FUND SUFFICIENT CLEAN ENERGY PROJECTS TO OFFSET THAT INCREASED DEMAND.
- ASK FEDERAL DEPARTMENTS AND AGENCIES (E.G. CANADIAN ENVIRONMENTAL ASSESSMENT AGENCY) TO DEVELOP RELEVANT EVALUATION AND ASSESSMENT TOOLS.

#### WHAT MORE CAN WE DO?

PHOTO CREDIT: "ALBERTA\_OILSANDS\_ENERGY.JPG" BY JIMMY JEONG. CC BY-NC-ND 2.0. http://bit.ly/2z37Z9I

# IN THE NEXT 50 DAYS, WE HAVE A UNIQUE AND EXCITING OPPORTUNITY TO DRASTICALLY RETHINK THE LINKS BETWEEN OUR ENVIRONMENTAL AND DIGITAL AGENDAS.

LET'S SEIZE THAT OPPORTUNITY.

