

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT – INTERNATIONAL TRANSPORT FORUM

ROUNDTABLE ON THE BENEFITS OF ACCESSIBILITY

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Towards a Framework for Identifying and Measuring the Benefits of Accessibility

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OBJECTIVES

- **EXPLAIN MOTIVATION FOR ESTABLISHING A WIDE VIEW OF BENEFITS**
- **PROVIDE SYSTEMATIC NARRATIVE BASIS FOR A POLICY AND POLITICAL DIALOGUE**
- **MOVE TOWARDS A STANDARDIZED AND QUANTIFIABLE EVALUATION FRAMEWORK**

OBJECTIVE 1

MOTIVATION: TRAPS IN CONSTITUTIONAL AND LEGISLATIVE MANDATES

- Most mandates acknowledge accessibility as a human right; BUT
- Mandates also acknowledge (i) **costs** and (ii) **cost-benefit balancing** as legitimate considerations in their execution
- Costs viewed broadly and easy to count
- Benefits viewed narrowly

EXAMPLES OF CONSTRAINING LANGUAGE

Country / Governing Body	Laws/Rule Regarding Access and Prohibiting Discrimination on Basis of Disability	Limits on Accommodation
United Nations	CONVENTION ON THE RIGHTS OF PERSONS WITH DISABILITIES (CRPD)	ACCOMMODATION REQUIRED AS LONG AS IT DOES “NOT IMPOS[E] A DISPROPORTIONATE OR UNDUE BURDEN, . . .” [CONVENTION ON THE RIGHTS OF PERSONS WITH DISABILITIES, ARTICLE 2, 2006]
Australia	THE AUSTRALIAN DISABILITY DISCRIMINATION ACT 1992	ACCOMMODATION REQUIRED UNLESS WOULD IMPOSE AN “UNJUSTIFIABLE HARDSHIP” [DISABILITY DISCRIMINATION ACT 1992, CTH, SECTION 31].
Canada	COVERED BY THE <u>CANADIAN CHARTER OF RIGHTS, FREEDOMS</u> AND THE CANADA TRANSPORTATION ACT	SERVICE PROVIDERS MUST MAKE PROVISION FOR ACCESSIBLE TRANSPORT UP THE POINT OF ‘UNDUE HARDSHIP’ [CANADA TRANSPORTATION ACT AND COUNCIL OF CANADIANS WITH DISABILITIES V. VIA RAIL CANADA INC., 2007]
New Zealand	HUMAN RIGHTS ACT 1993 (AMENDED HUMAN RIGHTS AMENDMENT ACT 2001)	ACCOMMODATION REQUIRED, INCLUDING FOR ACCESS TO “PLACES, VEHICLES, AND FACILITIES,” EXCEPT “WHEN IT WOULD NOT BE REASONABLE TO REQUIRE THE PROVISION OF SUCH SPECIAL SERVICES OR FACILITIES” (SECTION 43)
European Union	EUROPEAN ACCESSIBILITY ACT (PROPOSED 2015)	ACCESSIBILITY REQUIREMENTS REFERRED TO IN ARTICLE 3 APPLY TO THE EXTENT THAT THEY DO NOT IMPOSE A DISPROPORTIONATE BURDEN ON THE ECONOMIC OPERATORS CONCERNED.” [DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL , ARTICLE 12]

RISK INHERENT IN CONSTRAINING LANGUAGE

“A factor relied on to justify the continuity of a discriminatory barrier in almost every case is the cost of reducing or eliminating it to accommodate the needs of the person seeking access. **But tribunals must be wary of putting too low a value on accommodating the disabled**”

2007 Canadian Supreme Court Decision

COUNTERING THE RISK

- Policy and Regulatory Action
- Sufficient capital investment to trigger a self-sustaining market for accessibility
- Each require a *strong policy/political narrative and quantitative framework*

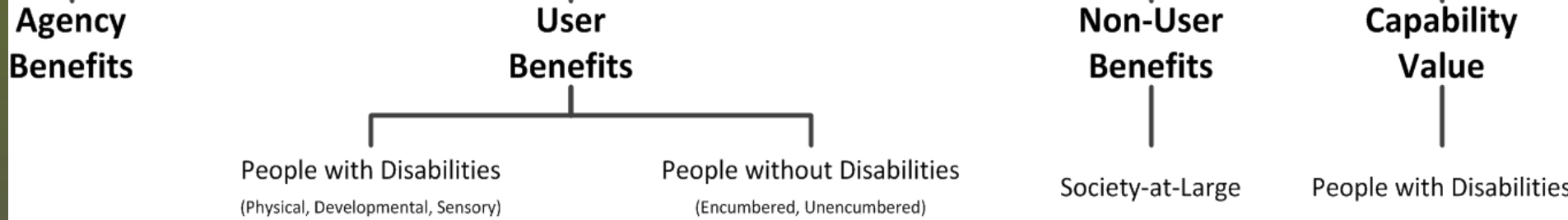
OBJECTIVE 2
SYSTEMATIC NARRATIVE

**BASIS FOR POLICY AND
POLITICAL NARRATIVE**

ACCESSIBILITY IMPROVEMENT



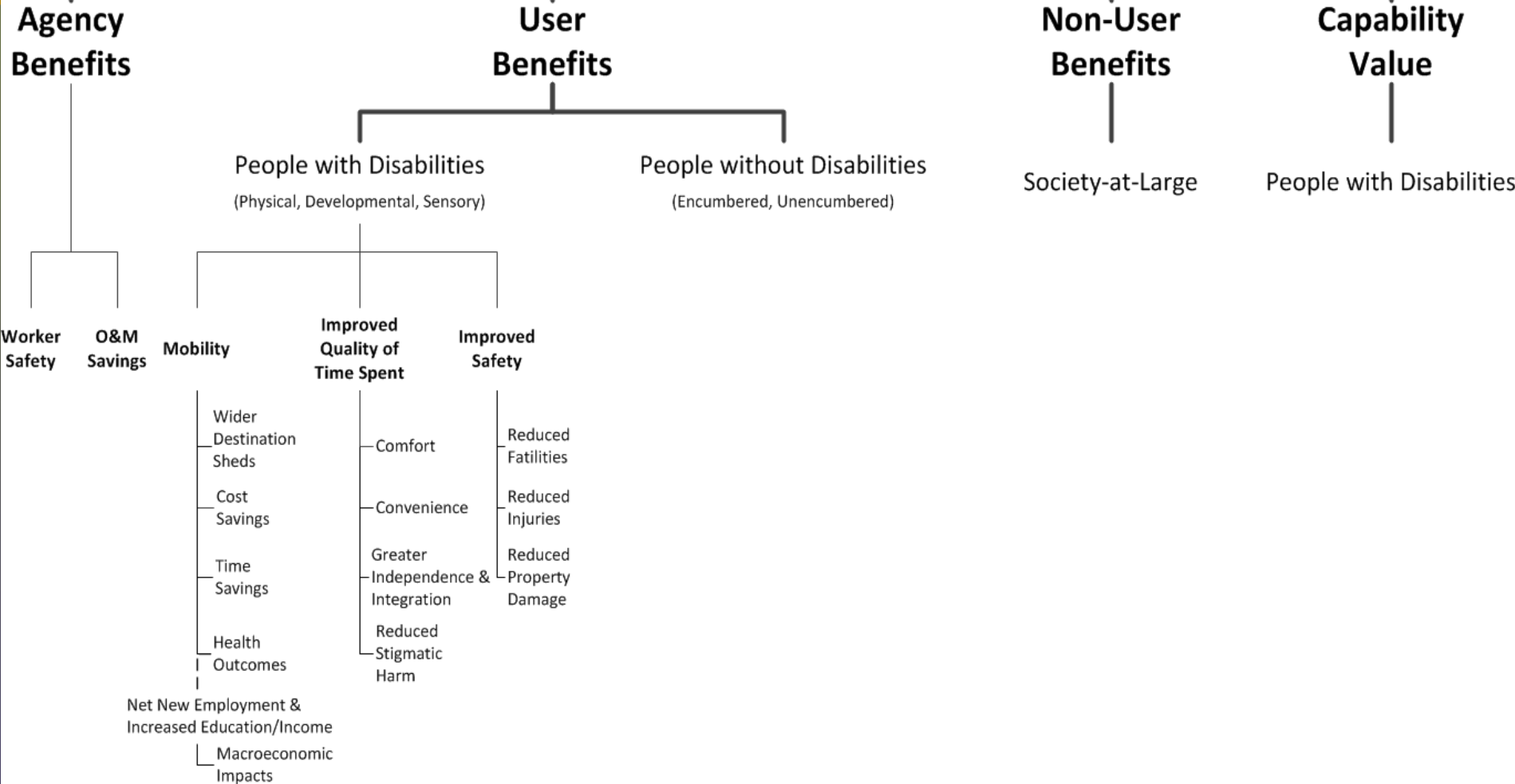
ACCESSIBILITY IMPROVEMENT



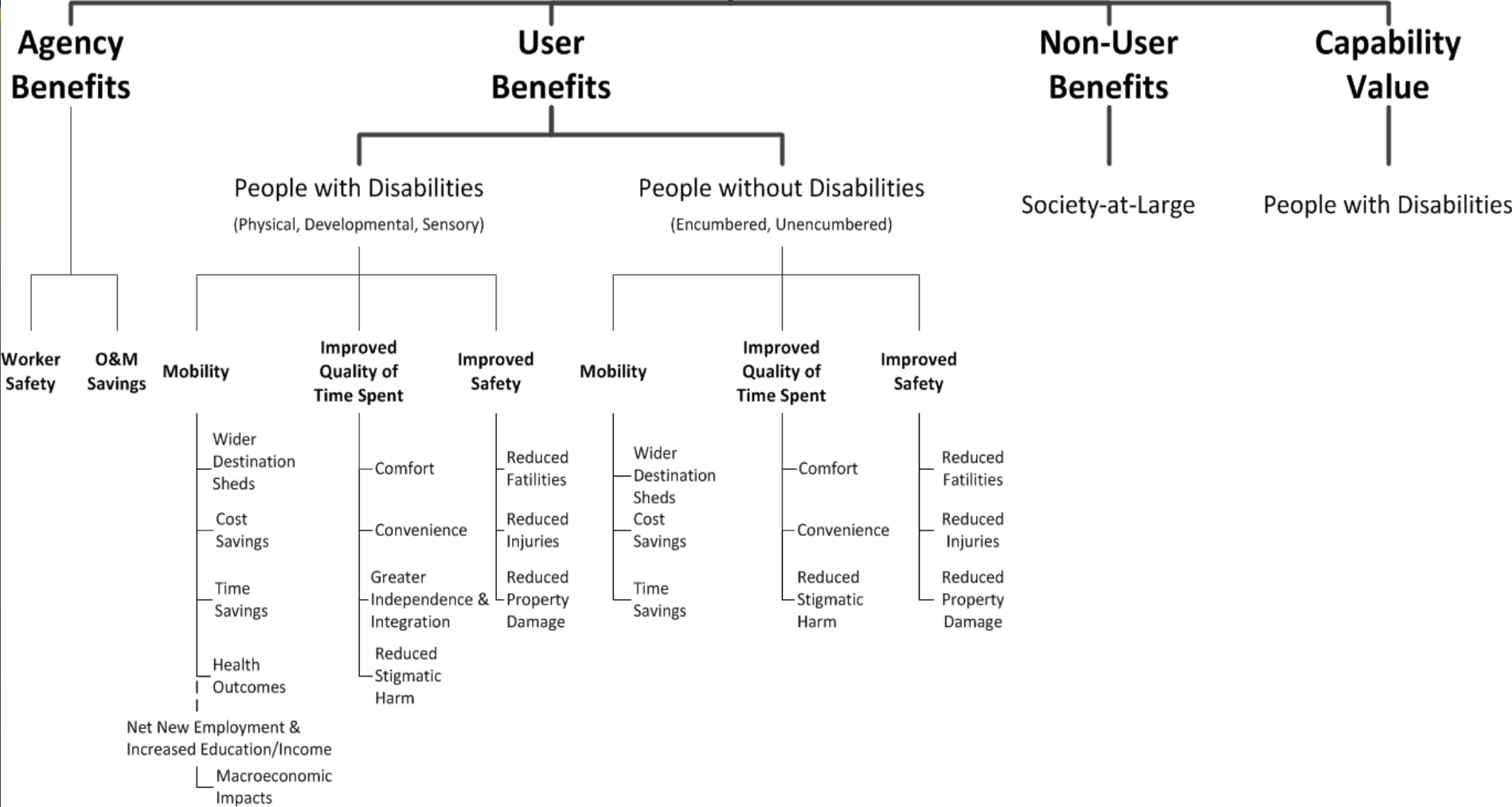
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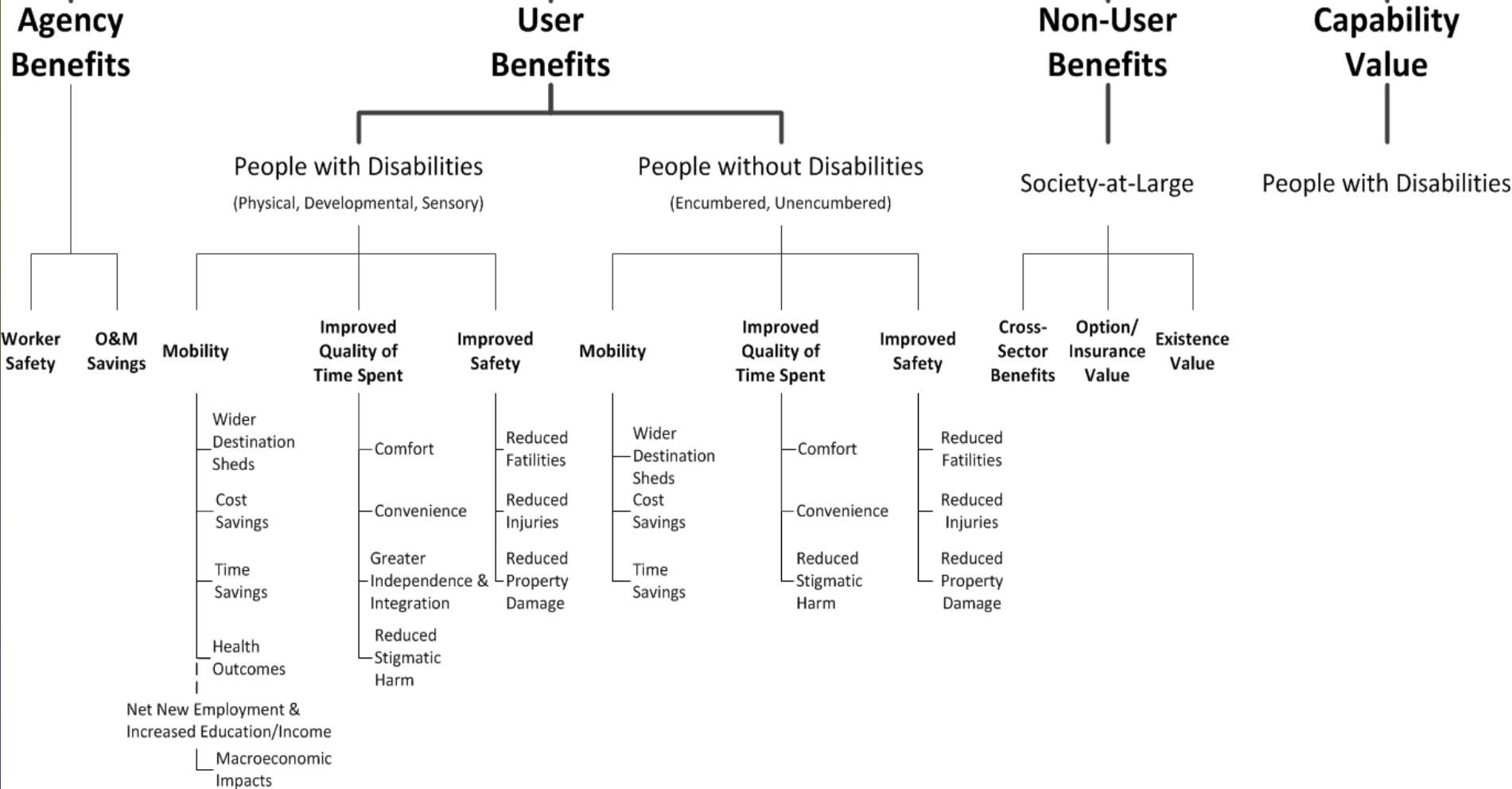
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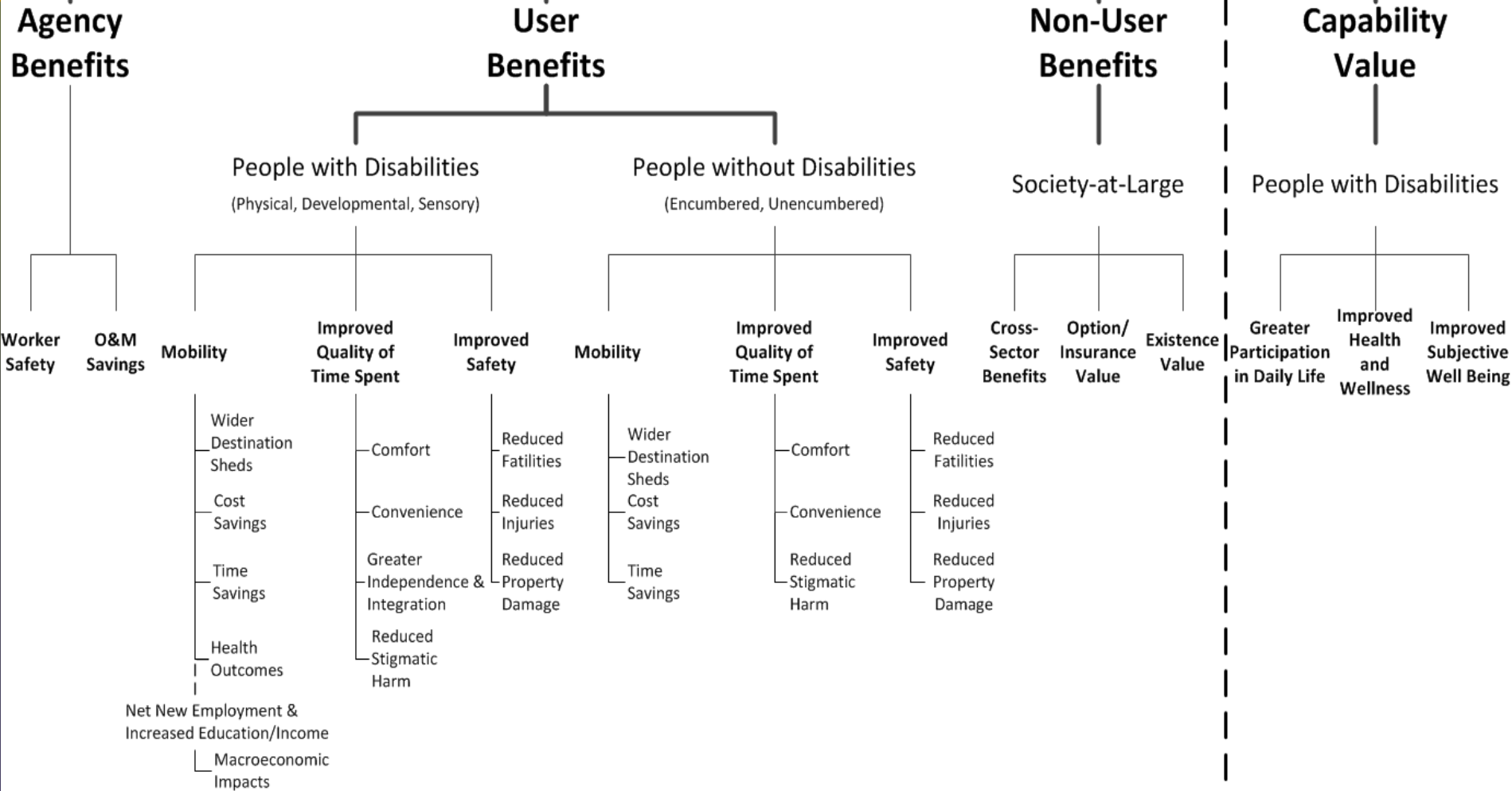
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ACCESSIBILITY IMPROVEMENT



OBJECTIVE 3

QUANTIFICATION

TWO METHODOLOGIES AT PLAY

- **BENEFIT-COST ANALYSIS**

- Quantification in original units
- Monetary-equivalent value
- Qualitative Specificity -- only as much determinacy as actually available

- **CAPABILITY APPROACH**

- Freedom to achieve well-being of primary moral importance
- Freedom to achieve well-being understood in terms of people's real opportunities to do and be what they have reason to value
- Human development metrics

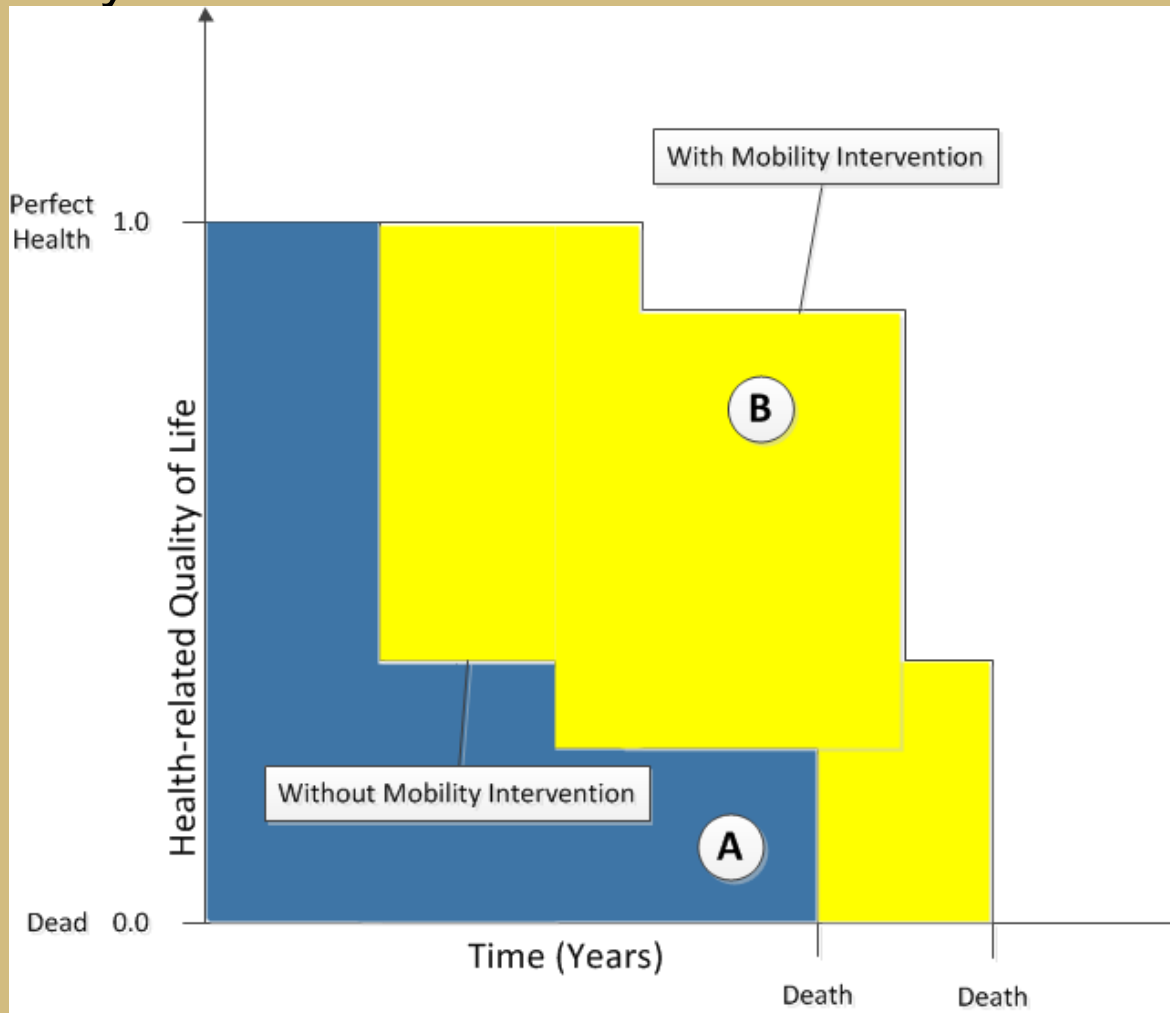
OBJECTIVE 3

QUANTIFICATION: USE VALUE; PEOPLE WITH DISABILITIES; MOBILITY

CLASS OF BENEFIT	TYPE OF BENEFIT	BENEFICIARY	DESCRIPTION	QUANTIFICATION	MONETIZATION
USE	MOBILITY	PEOPLE WITH DISABILITIES	WIDER ACCESS TO DESIRED DESTINATIONS, GENERATED TRIPS.	DEMAND ANALYSIS; GEOGRAPHIC INFORMATION SYSTEMS; GRAVITY AND ISOCHRONIC INDICES; QUALITY-ADJUSTED LIFE YEARS.	WILLINGNESS TO PAY/ACCEPT
USE	MOBILITY	PEOPLE WITH DISABILITIES	TIME SAVINGS	DEMAND ANALYSIS	VALUE OF TIME
USE	MOBILITY	PEOPLE WITH DISABILITIES	IMPROVED HEALTH OUTCOMES	QUALITY-ADJUSTED LIFE YEARS	VALUE OF QUALITY-ADJUSTED LIFE YEARS.

QUALITY-ADJUSTED LIFE YEARS

- Mobility as a Healthcare Intervention



Valuation of Quality-Adjusted Life Years

- **Annuitize Value of Statistical life over 35 years to convert to Value of a Statistical Life Year**
- **Value of Life \$6.5M \approx VSLY of \$300,000 (r=3%)**

OBJECTIVE 3

QUANTIFICATION: USE VALUE, PEOPLE WITH DISABILITIES; QUALITY

CLASS OF BENEFIT	TYPE OF BENEFIT	BENEFICIARY	DESCRIPTION	QUANTIFICATION	MONETIZATION
USE	QUALITY OF TIME SPENT	PEOPLE WITH DISABILITIES	INCREASED COMFORT	DEMAND ANALYSIS	WILLINGNESS TO PAY VOT PREMIUMS
USE	QUALITY OF TIME SPEND	PEOPLE WITH DISABILITIES	INCREASED CONVENIENCE	DEMAND ANALYSIS	WILLINGNESS TO PAY VOT PREMIUMS
USE	QUALITY OF TIME SPENT	PEOPLE WITH DISABILITIES	REDUCED STIGMATIC HARMS	COST MONETIZATION OR DEMAND ANALYSIS	WILLINGNESS TO PAY VOT PREMIUMS

VALUING STIGMATIC HARM - DIGNITY

- **2011: Valuation of Stigmatic Harm Included in U.S. Federal Government Guidelines for Cost-Benefit Analysis**
- **Cost Monetization -- Breakeven Analysis**
- **Weighted Value of Time**
- **Qualitative Specificity**

OBJECTIVE 3

QUANTIFICATION: USE-VALUE, PEOPLE WITH DISABILITIES; SAFETY

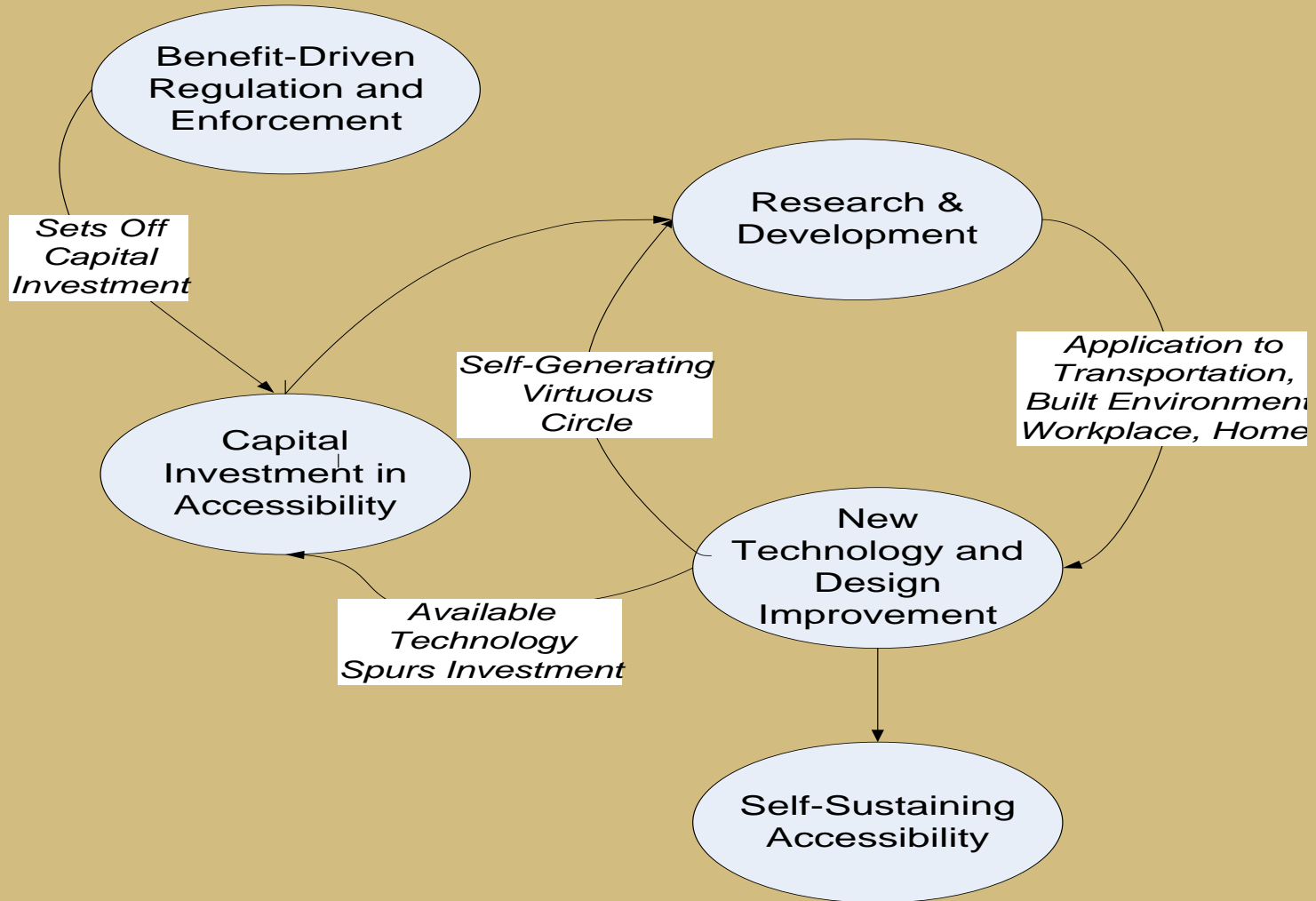
CLASS OF BENEFIT	TYPE OF BENEFIT	BENEFICIARY	DESCRIPTION	QUANTIFICATION	MONETIZATION
USE	SAFETY	PEOPLE WITH DISABILITIES	REDUCED FATALITIES, INJURIES, PROPERTY DAMAGE	DEMAND AND INCIDENCE ANALYSIS	WILLINGNESS-TO-PAY BASED STATISTICAL VALUE OF LIFE, LIMB, SUFFERING, PROPERTY

OBJECTIVE 3

QUANTIFICATION: USE-VALUE, PEOPLE WITHOUT DISABILITIES; MOBILITY, SAFETY, MACRO-ECONOMIC IMPACTS

CLASS OF BENEFIT	TYPE OF BENEFIT	BENEFICIARY	DESCRIPTION	QUANTIFICATION	MONETIZATION
USE	MOBILITY	PEOPLE WITHOUT DISABILITIES	WIDER ACCESS TO DESIRED DESTINATIONS, GENERATED TRIPS.	DEMAND ANALYSIS; GEOGRAPHIC INFORMATION SYSTEMS; GRAVITY AND ISOCHRONIC INDICES	WILLINGNESS TO PAY/ACCEPT; VALUE OF QUALITY-ADJUSTED LIFE YEARS.
USE	MOBILITY	PEOPLE WITHOUT DISABILITIES	TIME SAVINGS	DEMAND ANALYSIS	VALUE OF TIME
USE	MOBILITY	PEOPLE WITHOUT DISABILITIES	INCREASED COMFORT	DEMAND ANALYSIS	WILLINGNESS TO PAY PREMIUMS
USE	MOBILITY	PEOPLE WITHOUT DISABILITIES	INCREASED CONVENIENCE	DEMAND ANALYSIS	WILLINGNESS TO PAY PREMIUMS
USE	SAFETY	PEOPLE WITHOUT DISABILITIES	REDUCED FATALITIES, INJURIES, PROPERTY DAMAGE	DEMAND AND INCIDENCE ANALYSIS	STATISTICAL VALUE OF LIFE, LIMB, SUFFERING, PROPERTY
USE	MACRO-ECONOMIC IMPACTS	SOCIETY-AT-LARGE	INCOME GAINS THROUGH HIGHER LABOUR MARKET PARTICIPATION AND EDUCATIONAL ATTAINMENT	INPUT-OUTPUT ANALYSIS	DIRECT, INDIRECT AND INDUCED GDP; RETURN ON DISABILITY

TRIGGERING A VIRTUOUS CIRCLE OF SELF-SUSTAINING ACCESSIBILITY AND RETURN ON DISABILITY



OBJECTIVE 3

QUANTIFICATION: NON-USE VALUE

CLASS OF BENEFIT	TYPE OF BENEFIT	BENEFICIARY	DESCRIPTION	QUANTIFICATION	MONETIZATION
NON-USE	CROSS-SECTOR	SOCIETY AT-LARGE	SOCIAL SERVICE AGENCY RESOURCES	DEMAND AND BUDGET ANALYSIS	BUDGETARY RESOURCE SAVINGS
NON-USE	OPTION VALUE	SOCIETY AT LARGE	INSURANCE	DEMOGRAPHIC ANALYSIS; STATED PREFERENCE ANALYSIS	WILLINGNESS TO PAY/CONTINGENT VALUATION ANALYSIS
NON-USE	EXISTENCE VALUE	SOCIETY AT-LARGE	CIVIC SOCIETY	STATED PREFERENCE	CONTINGENT VALUATION

OBJECTIVE 3

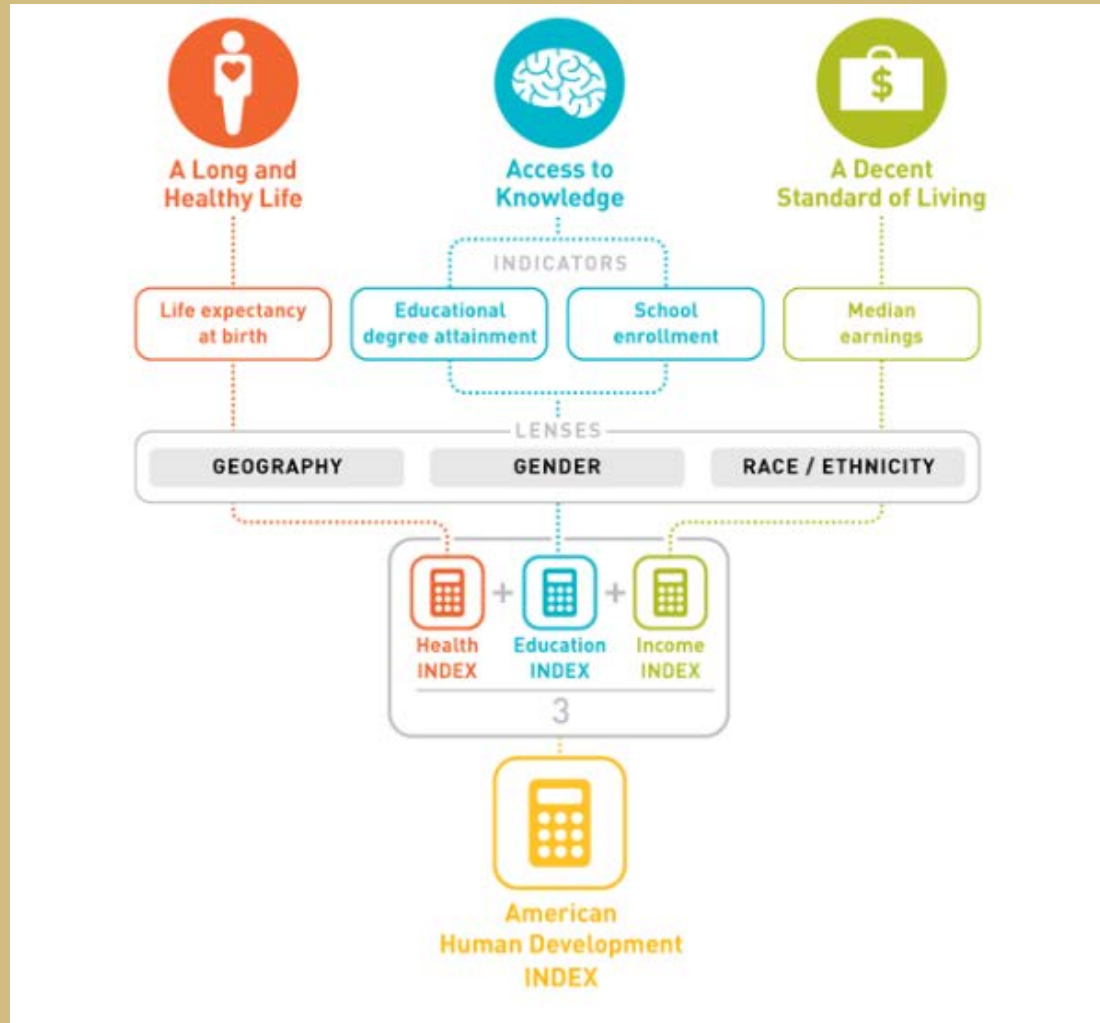
QUANTIFICATION: CAPABILITY

CLASS OF BENEFIT	TYPE OF BENEFIT	BENEFICIARY	DESCRIPTION	QUANTIFICATION	INDEXING
CAPABILITY		PEOPLE WITH DISABILITIES	ACCESS TO FREEDOMS THROUGH DUE PROCESS; POLITICAL PROCESS; JUDICIAL PROCESS	PERIODIC RANDOMIZED SAMPLE SURVEY	<i>INDEX OF PARTICIPATION IN DAILY LIFE</i>
CAPABILITY		PEOPLE WITH DISABILITIES	INCREASED LIFE- OPPORTUNITIES THROUGH ACCESS TO HEALTH, EMPLOYMENT, EDUCATION, SOCIAL OUTLETS ...	PERIODIC RANDOMIZED SAMPLE SURVEY	<i>INDEX OF HEALTH, EDUCATION, AND WELLNESS</i>
CAPABILITY		PEOPLE WITH DISABILITIES	INCREASED SUBJECTIVE WELL- BEING	PERIODIC RANDOMIZED SURVEY	<i>INDEX OF SUBJECTIVE WELL-BEING</i>

INFLUENCE OF CAPABILITY INDICES

- Human Development Index now an official government statistic in many countries
- Annual publication has been found to inspire serious political discussion and renewed efforts, nationally and regionally, to improve lives
- Examples: United States AHDI; Roma in Central Europe; Mapuche populations in Mexico

INFLUENCE OF CAPABILITY INDEXES: American Human Development Index



CONCLUSIONS

- **To achieve economically sustainable accessibility:** Trigger a virtuous circle of self-sustaining investment in accessible technology and design
- **To trigger virtuous circle:** Ensure sufficient capital investment and R&D in accessibility
- **To ensure sufficient capital investment and R&D:** Need strong narrative on benefits and quantitative framework
- **Adoption of framework** can be comprehensive to maintain broad focus
- **Quantitative application of framework** can be gradual depending on nation-state and agency resources and data