

Privacy Expectations and Preferences in an IoT World

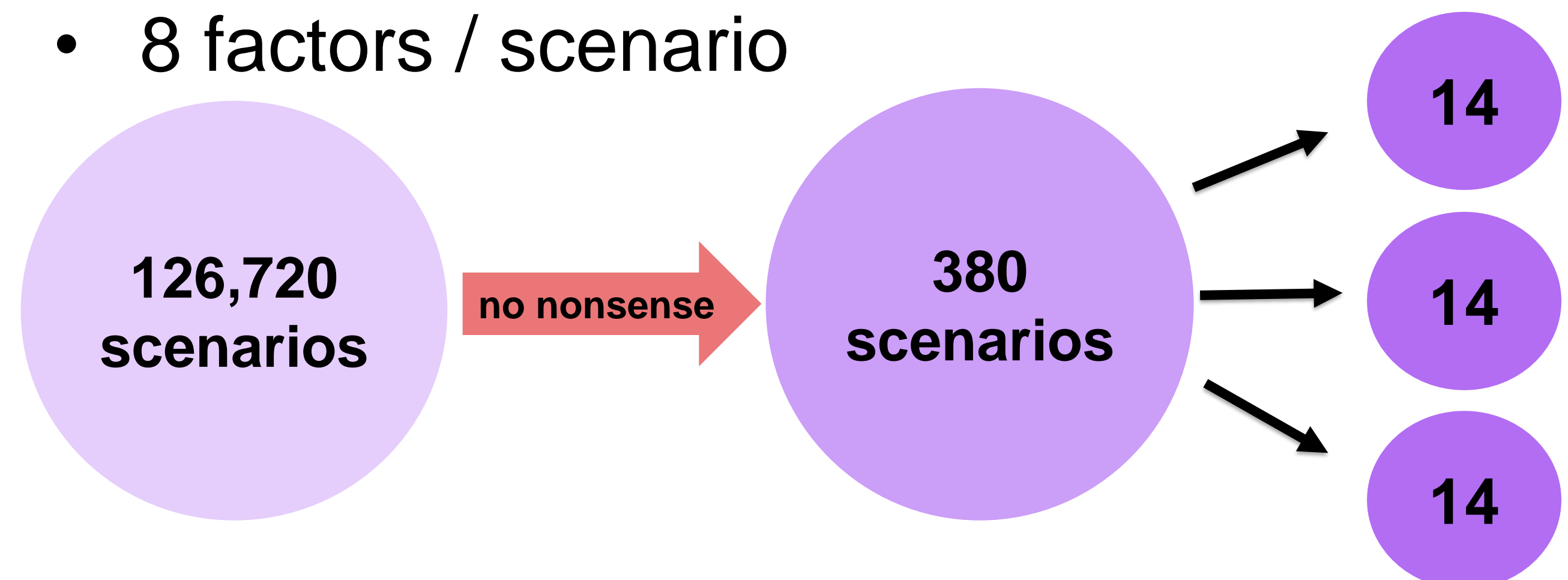
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Motivation

- Build tools that
 - Increase transparency
 - Give users control over their data
- Research Questions
 - How can we model users' privacy preferences?
 - How do different privacy factors contribute to the users' comfort and their desire to allow/deny a data collection?

Approach

- Vignette study
- 1007 Mechanical Turk participants
- 8 factors / scenario



Results

- Many factors contribute to comfort and decision-making:
 - Location: library, workplace
 - Data type: presence, biometrics
 - Retention time: forever, week
 - User benefit: user, data collector
 - Purpose of data collection

- Comfort level

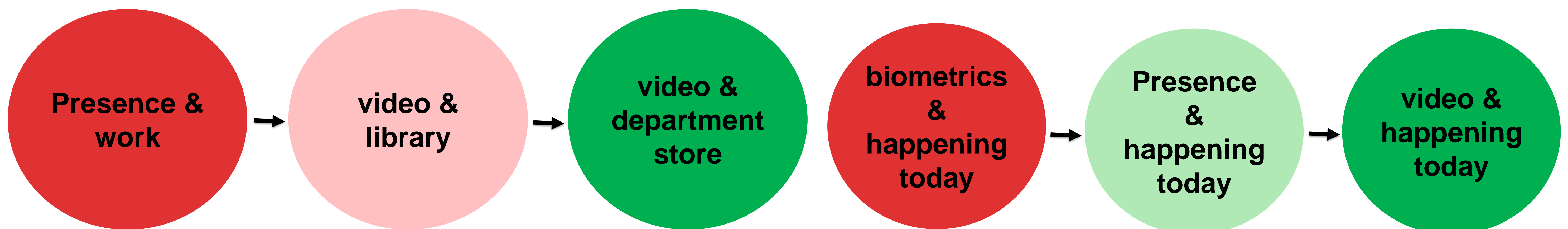
	Identifying data	Presence	Specific position	Video	Camera	Fingerprint scanner	Facial recognition	Iris scanner	Presence sensor	Smartphone	Smart watch	Temperature sensor
Very comfortable	3%	17%	4%	6%	6%	1%	6%	3%	15%	5%	4%	21%
Comfortable	10%	31%	15%	18%	18%	6%	15%	8%	30%	18%	14%	32%
Neither comfortable nor uncomfortable	10%	23%	16%	15%	15%	7%	15%	8%	22%	19%	15%	23%
Uncomfortable	32%	19%	37%	25%	25%	39%	30%	30%	20%	34%	38%	16%
Very uncomfortable	45%	11%	28%	36%	36%	47%	35%	50%	13%	25%	29%	8%

- Desire to get notification



	Department store	Friend's home	Home	Library	Public restroom	Workplace	Forever	Purpose satisfied	Unspecified	Week	Year
Very comfortable	7%	10%	8%	7%	7%	11%	7%	11%	7%	10%	8%
Comfortable	18%	22%	15%	17%	15%	25%	16%	24%	17%	20%	20%
Neither comfortable nor uncomfortable	15%	17%	13%	15%	16%	19%	16%	17%	15%	16%	17%
Uncomfortable	28%	22%	20%	31%	29%	28%	28%	25%	29%	27%	27%
Very uncomfortable	32%	28%	44%	30%	32%	17%	33%	23%	32%	26%	27%

- Desire to allow / deny



less more