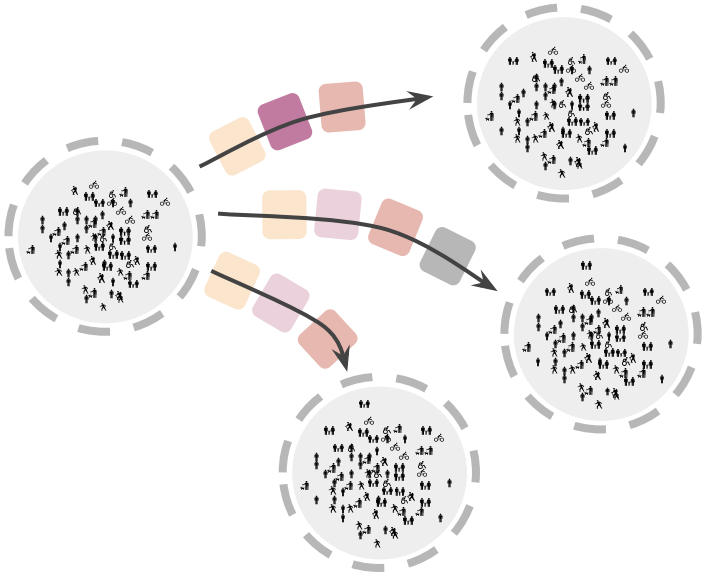
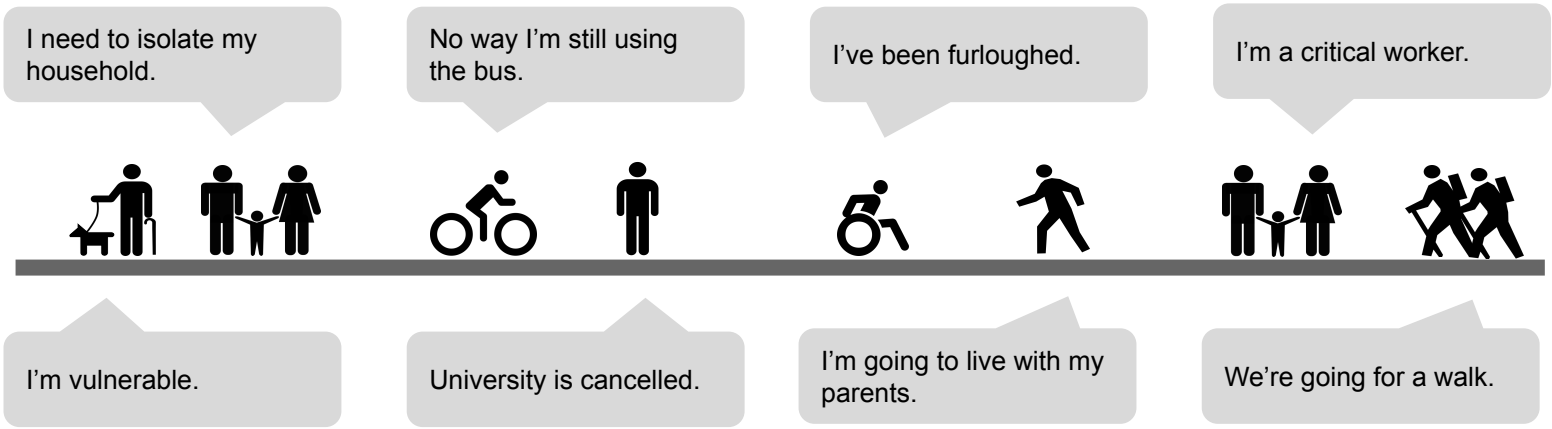
# Pandemic Activity Modeller/Modifier (PAM)

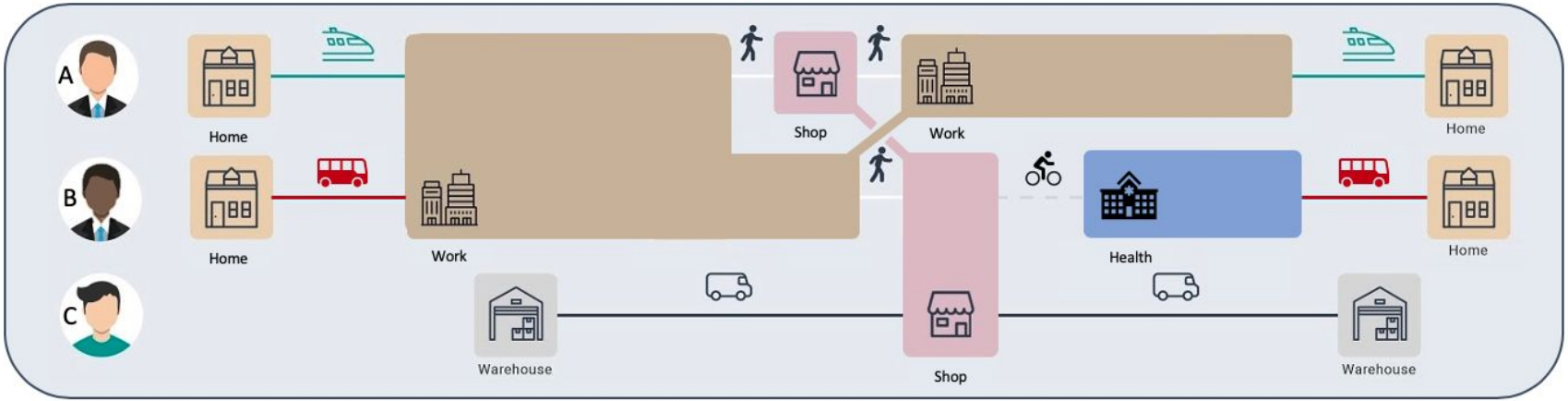


**MOTIVATION**: People are behaving differently, (i) new rules, (ii) new decision making and (iii) changes to employment:



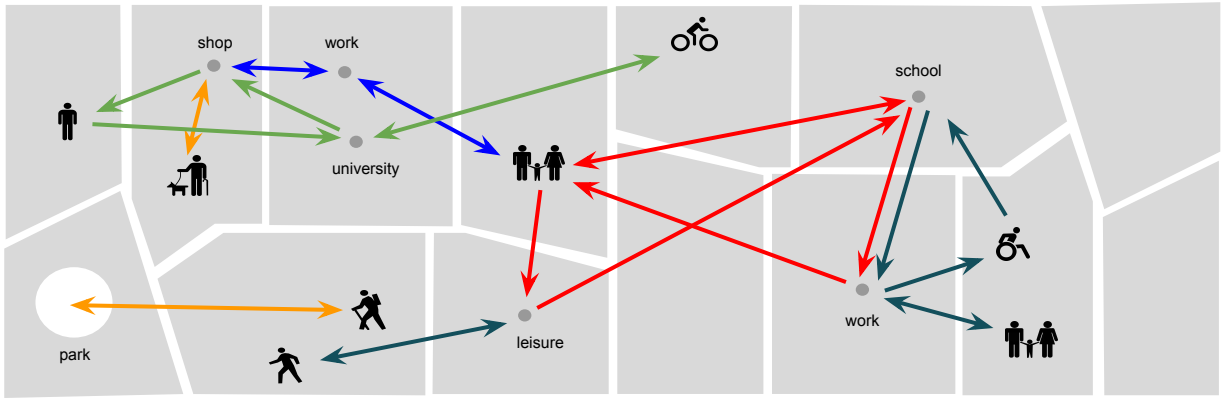

*Existing models are out of date and the rules/scenarios are changing rapidly.*

We work with **ACTIVITY PLANS**:



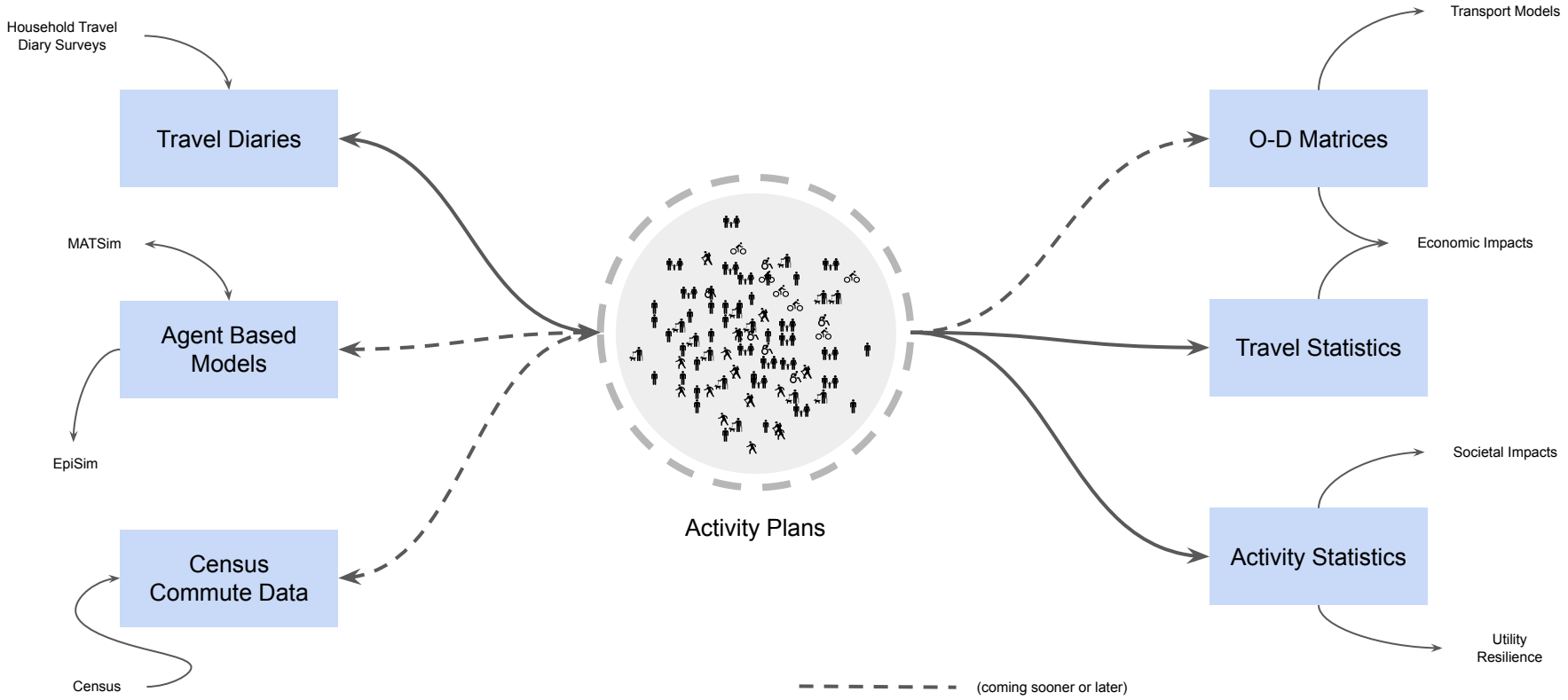

*Activity Plans include detailed disaggregate info about a population and its activities*

**ACTIVITY PLANS** are useful for modelling transport demand:




*… but also: any model or analysis that cares about where and when people are travelling or doing things, can make use of Activity Plans*

**PAM FEATURE (1)** - reading and writing to and from Activity Plans and other formats/outputs:



**PAM FEATURE (2)** - modifying activity plans using policies, for example:

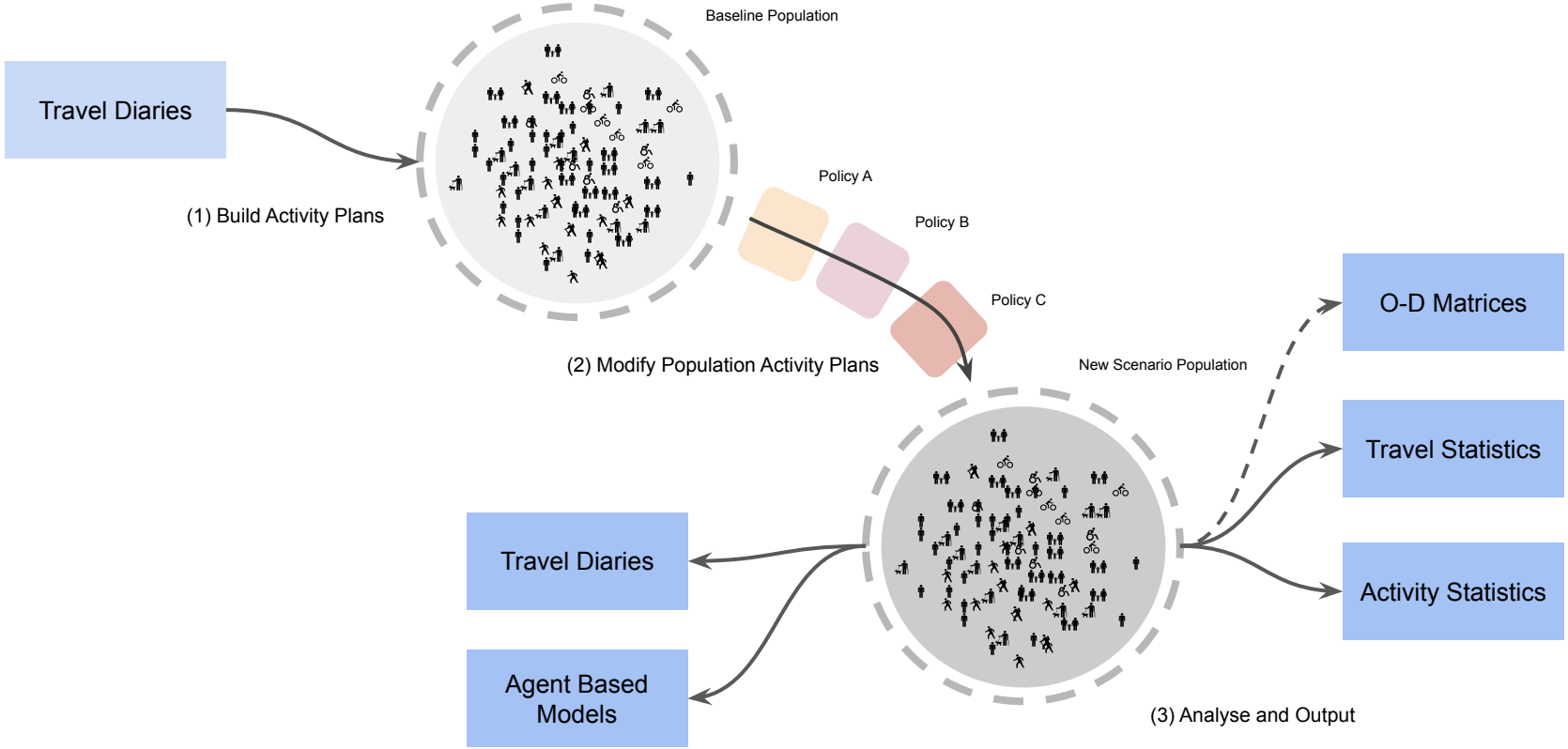
*if* **critical worker**; *isolate household with* **p** = 0.1, *else*; **p** = 0.05

*if not* **critical household**; *then remove all education activities*

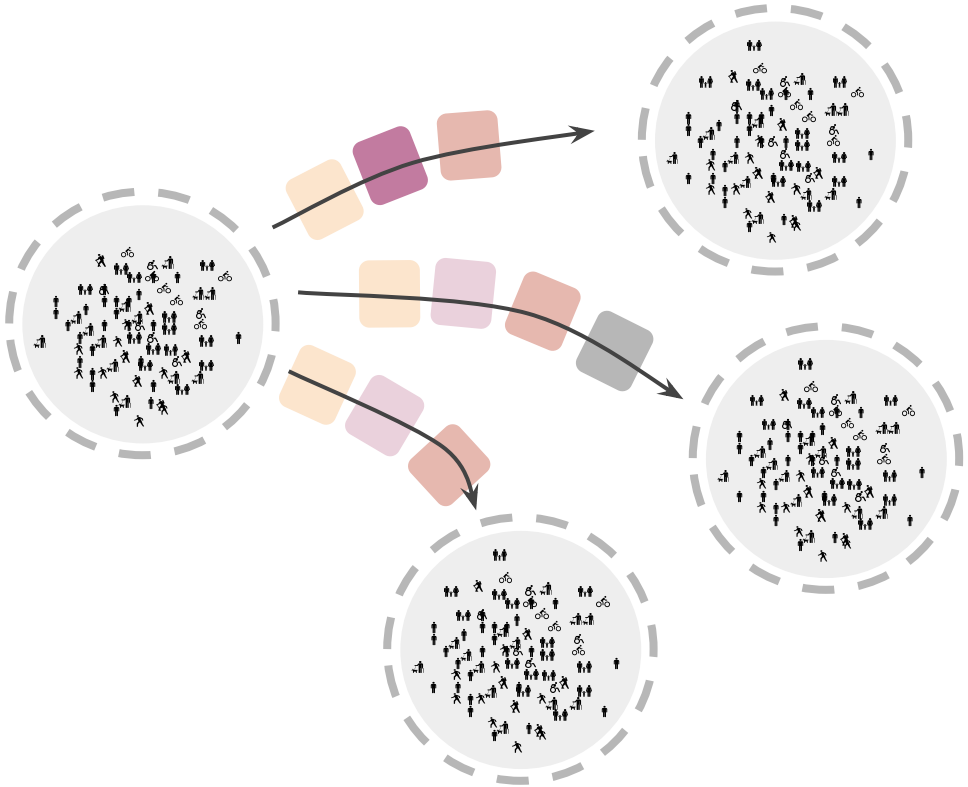
*if* **person age** > 50; *then isolate* with **p** = 0.2

*if* **income** > 50k; *remove work activity* **p** = 0.9

**PAM APPLIED** - eg:



**BUT** - PAM is a Tool - it doesn't know what's correct, or what the most likely scenarios are:



PAM is Open Source and needs help, we are looking for people to help with:

1. **Literature Review**/theoretical vetting by transport modellers/planners
   - ie. is the approach useful?
   - ie. does the approach sound theoretically ok? - is there any existing lit?
2. **Research** - what new policies do we need - mode shift?/add daily exercise?/activities closer to home? etc
3. **Data** - we need to try out policies and validate them with data
   - eg can we recreate Google mobility data for different cities with different rules?
4. **Python** dev of any level - get in touch please
5. **Got a use case?** or new output requirement? - let us know - we will add it to the project

We have more details about the project and how to get involved here:
https://github.com/arup-group/pam

Including an example notebook here:
https://github.com/arup-group/pam/blob/master/notebooks/pam-getting-started.ipynb

Feedback:
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