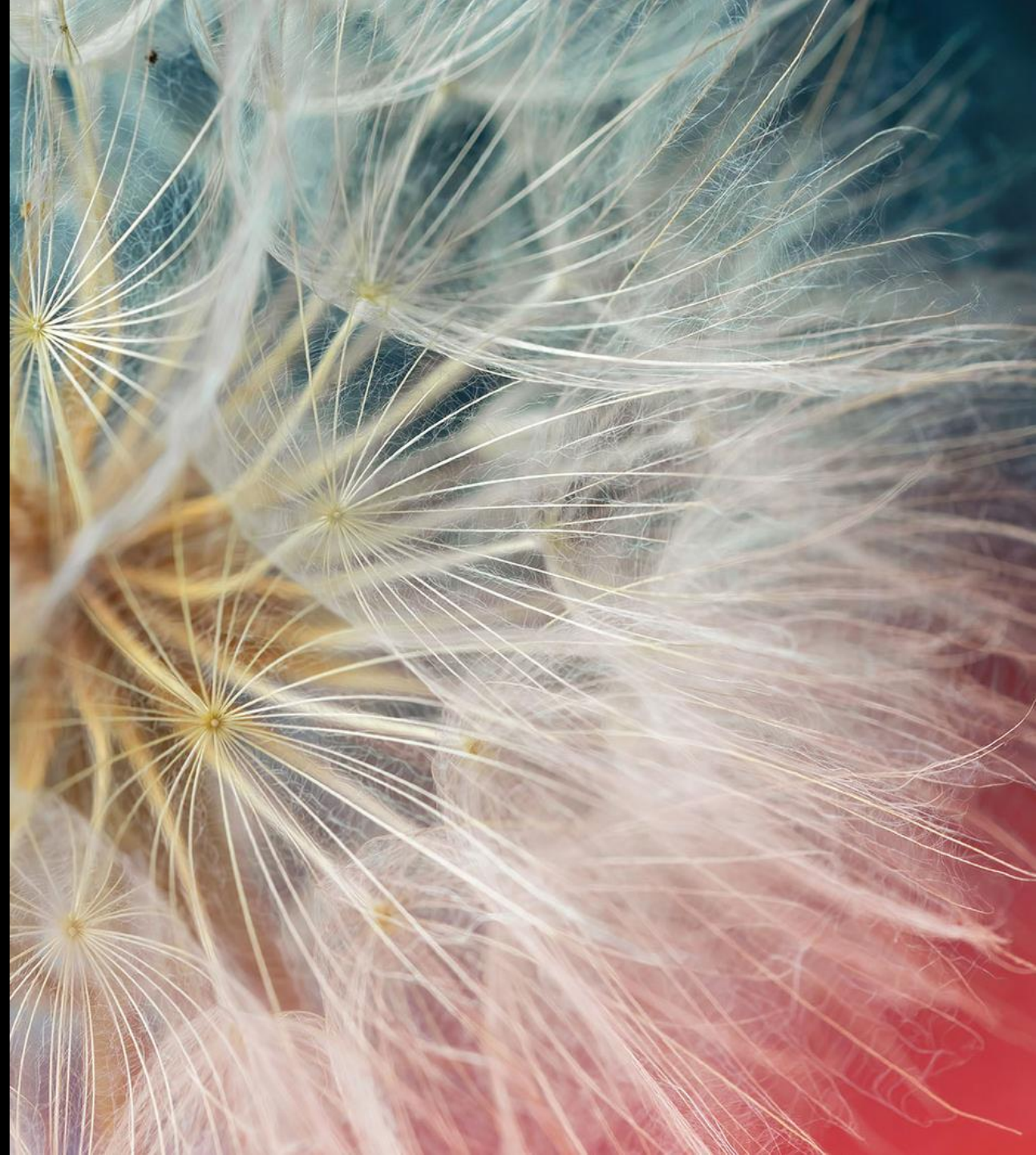# DATA MODELS & TRAVEL BEHAVIOR SURVEYS

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AGENDA

00 What?

01 Why?

WHAT?

Photo: flickr/Nicholas Cole

WHAT?

An actionable data dictionary rendered in code, e.g., Python.

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An actionable data dictionary rendered in code, e.g., Python.

You can, in an automated way, do things with it:
- Verify it's consistent with your data
- Create searchable HTML documentation
- Compute derived variables
- Describe the structure of the data
- Validate data from field instruments
- …

WHAT?

An actionable data dictionary rendered in code, e.g., Python.

Pydantic is a very popular data model package

WHAT?

```python
class Trip(PydanticModel):
    """
    Data model for a trip taken by a respondent.
    """

    inbound_or_outbound: NoneOrNan[e.InboundOutbound] = Field(
        ..., description="Whether the trip is inbound to the airport or outbound from the airport",
    )
    """
    Whether the trip is inbound to the airport or outbound from the airport.
    """

    origin_activity_type: NoneOrNanString[e.ActivityType] = Field(
        ..., description="Activity type at the origin of the trip to the airport"
    )
    """
    Activity type at the origin of the trip to the airport.
    """
```

WHAT?

```python
class InboundOutbound(IntEnum):
    """
    Integer mapping for inbound and outbound travel.
    """

    INBOUND_TO_AIRPORT = 1
    OUTBOUND_FROM_AIRPORT = 2
```

WHY?

Photo: flickr/Byron Hetrick

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I want to use the same data schema as other agencies so that our data can be easily combined.

THANK YOU

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