

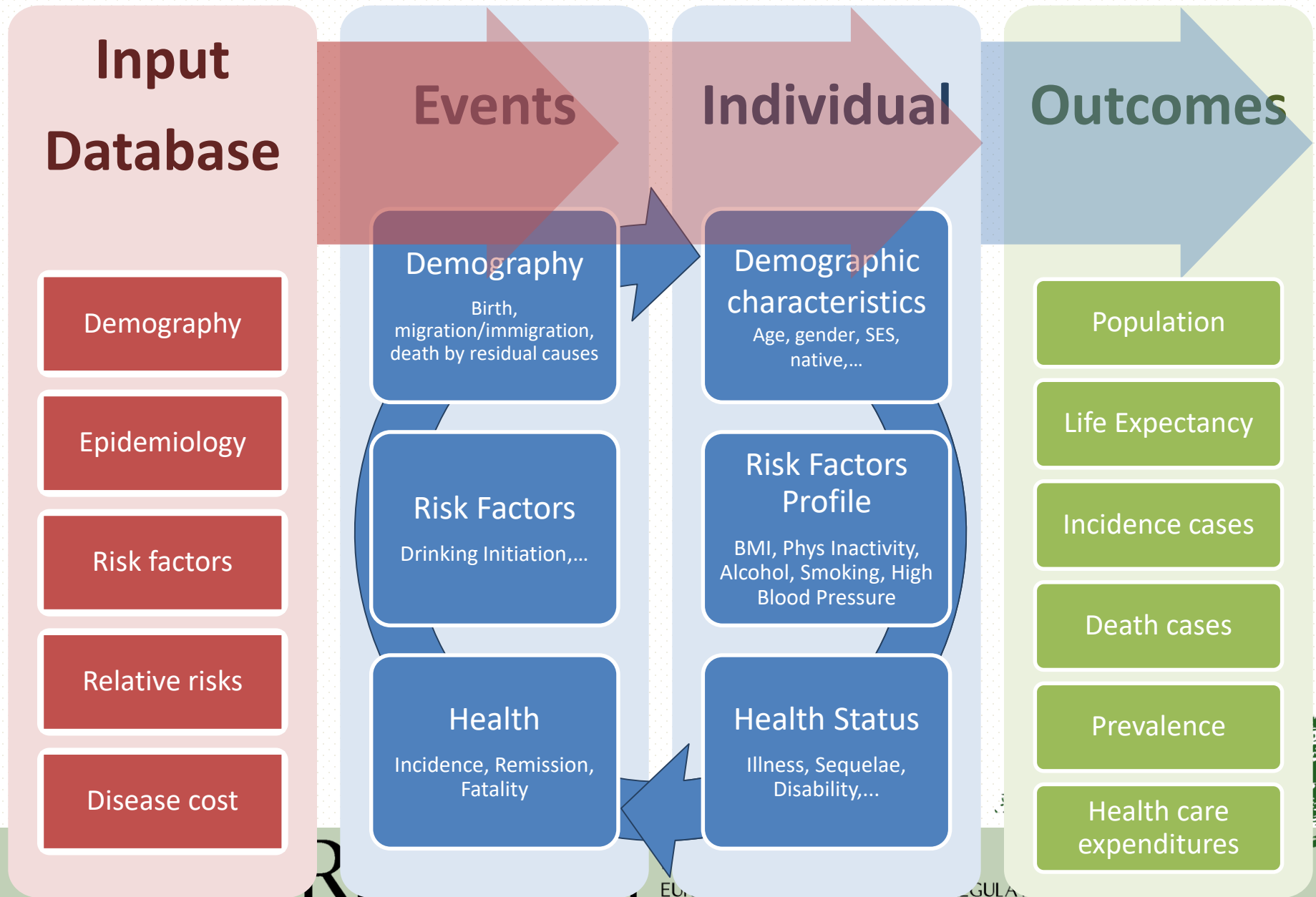
MICROSIMULATION: GENERAL PRINCIPLE AND INTEGRATING SCENARIOS



FORESIGHT AND MODELLING FOR EUROPEAN HEALTH POLICY AND REGULATION

Marion Devaux, OECD
FRESHER FINAL CONFERENCE
7 December 2017, Brussels

THE MICROSIMULATION MODEL



8 MAJOR DISEASES AND 6 RISK FACTORS MODELLED TO CAPTURE THE BURDEN OF NCDs

Diseases	Behavioural Risk factors					Physiological RFs
	BMI	Physical inactivity	High Blood Pressure	Smoking	Alcohol	Diabetes
CVDs	X	X	X	X	X	X
Diabetes	X	X		X	X	
COPD				X		
Cancers	X	X		X	X	
Cirrhosis					X	
Injuries					X	
Musculoskeletal Disorders	X					
Dementia/Depression						



FRESHER

FORESIGHT AND MODELLING FOR
EUROPEAN HEALTH POLICY AND REGULATION



VALIDATION: THE MODEL ACCURATELY REPRODUCES HISTORICAL TRENDS



Demography: Population structure by age and sex represented for the historical period 1990-2015



Epidemiology: Prevalence and incidence of diseases represented for the historical period 1990-2015



Risk Factors : Prevalence of Risk Factors by population groups for the historical period 1990-2015






FRESHER

FORESIGHT AND MODELLING FOR
EUROPEAN HEALTH POLICY AND REGULATION



USE OF THE MODEL

-  Baseline projections (not primary aim)
-  Scenario projections
-  Assessing policy interventions



ASSUMPTIONS OF THE BASELINE PROJECTIONS

Demography-
driven

People live longer and the share of elderly people will increase

Risk factors

No prediction of changes in risk factors by age and gender
Held constant as of 2015

Relative risks of
diseases

No prediction of changes in relative risks by age and gender
Held constant as of 2015



FRESHER

FORESIGHT AND MODELLING FOR
EUROPEAN HEALTH POLICY AND REGULATION

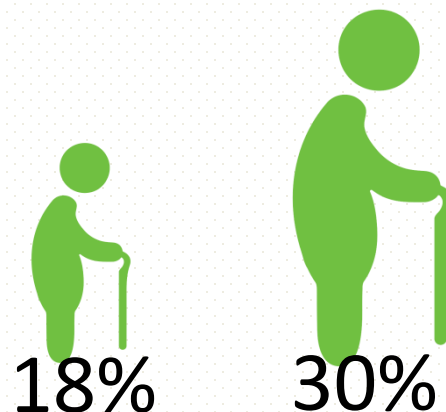


POPULATION STRUCTURE WILL CHANGE IN 2050

Age pyramid, Europe, (baseline projections)



Share of people aged 65+
2015 2050



Source: Analysis based on a new model developed at OECD for the FRESHER project, 2017




























FRESHER

FORESIGHT AND MODELLING FOR
EUROPEAN HEALTH POLICY AND REGULATION

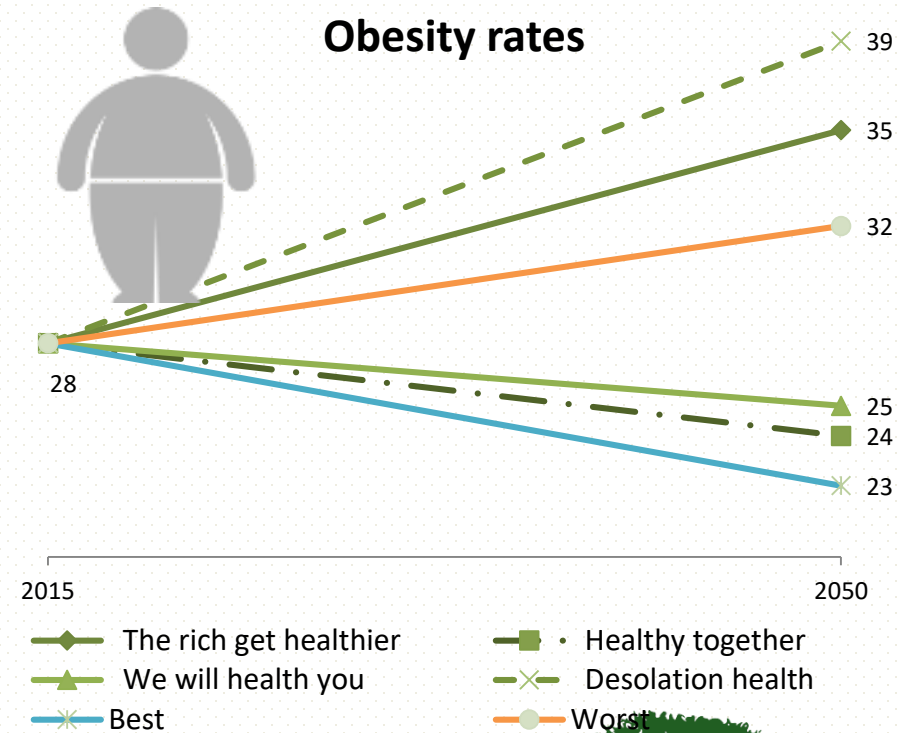
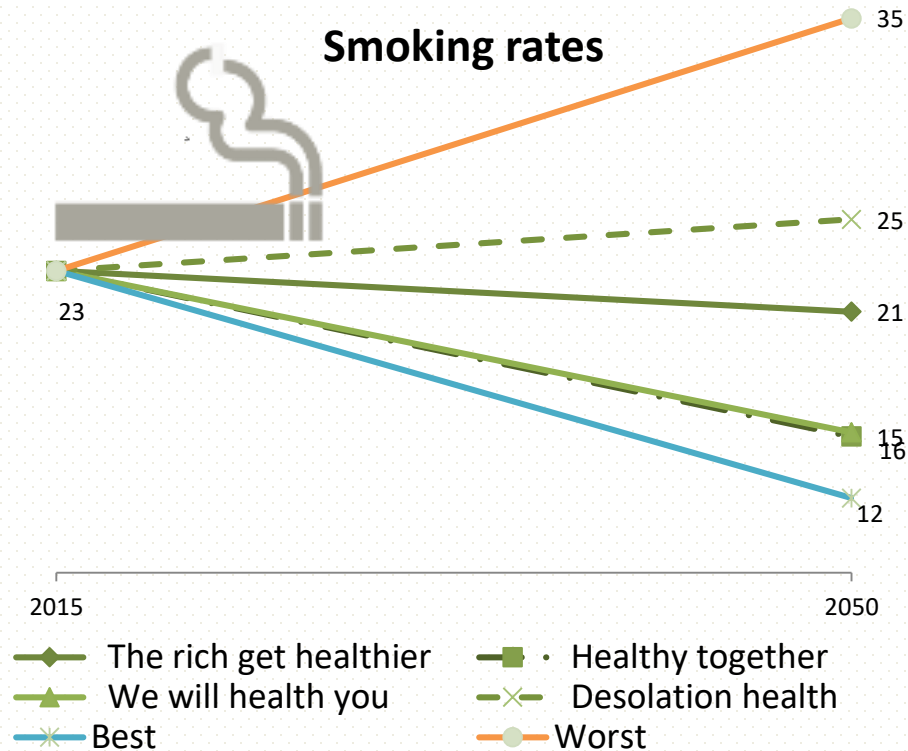


EXPERTS PREDICTED THE RISK FACTORS EVOLUTION IN THE 4 SCENARIOS

- 🌳 Expert's consultation, 2017
- 🌳 For each scenario: Expert's prediction of the level of risk factors in 2050
- 🌳 91 valid answers (average)

	The Rich Get Healthier	Healthy Together	We Will Health You	Desolation Health
 Obesity				
 Inactivity				
 Smoking				
 Drinking				
 Hypertension				

EXPERT'S EVALUATION OF RISK FACTORS IN THE 4 SCENARIOS

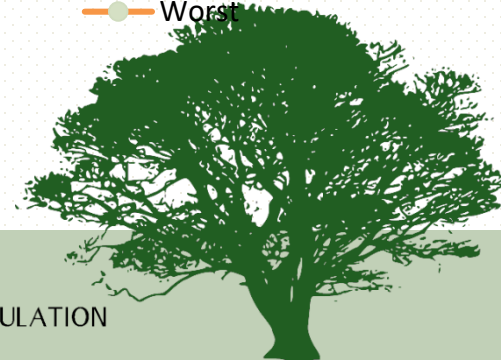


Source: Expert's survey, 2017

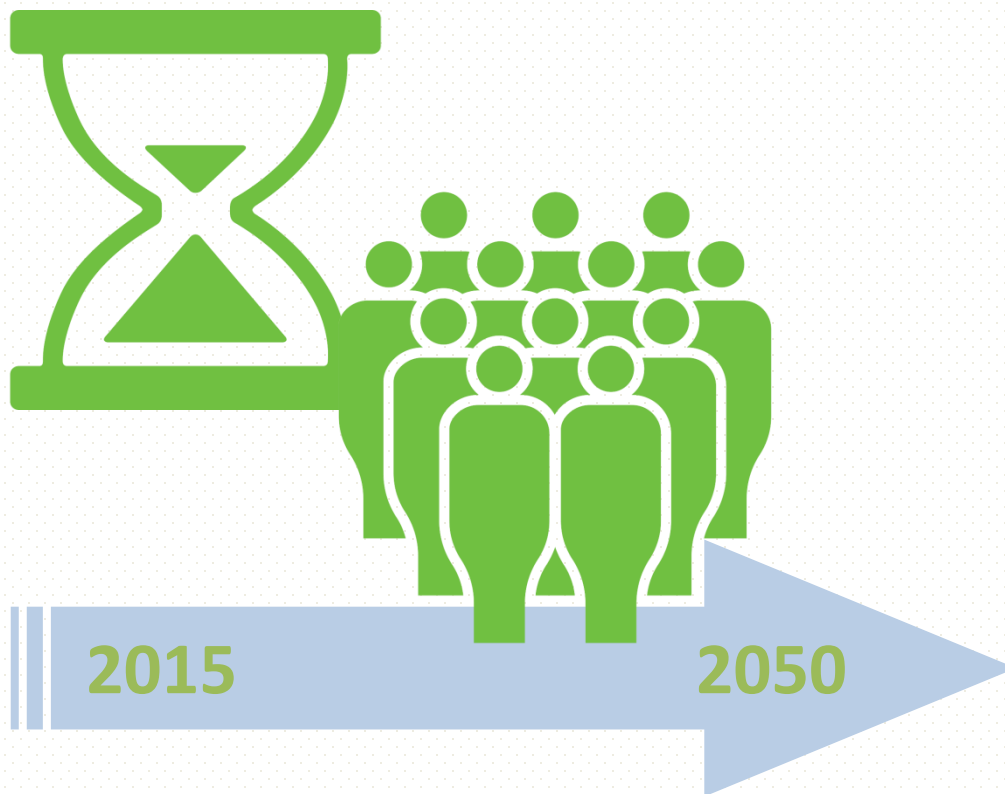


FRESHER

FORESIGHT AND MODELLING FOR
EUROPEAN HEALTH POLICY AND REGULATION



RUNNING THE MODEL



FRESHER

FORESIGHT AND MODELLING FOR
EUROPEAN HEALTH POLICY AND REGULATION



 Thank you



FRESHER

FORESIGHT AND MODELLING FOR
EUROPEAN HEALTH POLICY AND REGULATION

