



Ricardo
Energy & Environment

Economic Analysis of the Impacts of the EU Chemicals Strategy for Sustainability (CSS)

Commission Workshop
21/03/2022



Phase 1	Phase 2
<i>February 2021 – December 2021</i>	<i>December 2021 – June 2022</i>
<p>Addition of hazards to the CLP Regulation (EC) No. 1272/2009</p> <p>Extension of the Generic Risk Approach (GRA)</p>	Requirements for Polymer Registration
	PFAS ban
Mixture Assessment Factor (MAF)	Ban on exports
	Extension of REACH Registration requirements to low tonnage substances
	Essential Use (Qualitative)

- Assesses business impacts, no assessment of human health or environmental costs or benefits
- The work has followed the European Commission’s Better Regulation Guidelines where possible
- Representative of the sector: Contributions from over 100 companies representing 67% of the EU-27 chemicals output

List of substances to be Regulated



- 12,068 substances
- Identified through publicly available sources, including the ECHA databases e.g. REACH registration

	SVHC (CMR 1A,1B; EDC; PBT/vPvB; PMT/ vPvM)	GRA (Resp. Sens. 1, 1A, 1B; STOT RE/SE 1, 2; immunotoxic; neurotoxic)	SoC (CMR 2; Skin Sens. 1, 1A, 1B; aquatic chronic 1, 2)
Current- C	1944	3462	8062
Future- F1	1352	389	49
Future- F2	4023	1380	56
Any assignment	5907	4601	8123

Step 1

- **Define and characterise the baseline scenario** i.e. the pre-CSS or “Do Nothing” scenario

Step 2

- **Review and screen the commitments made by the EC** in the CSS –policy proposals– to confirm which are most impactful (incl. modules selected by Cefic)

Step 3

- **Map and screen business and economic impacts** (Tool#19 of EC BRG) and confirm most significant impacts for in-depth assessment

Step 4

- **Assess the most significant impacts quantitatively and/or qualitatively**, e.g. net increase in compliance and administrative costs associated with regulatory change, etc.

Step 3

• **Map and screen business and economic impacts** (Tool#19 of EC BRG) and confirm most significant impacts for in-depth assessment



Priority	Key Impact sub-categories	Indicators selected as proxies for these key impact sub-categories
Primary Impacts	<ul style="list-style-type: none"> • Operating costs and conduct of business (e.g. substantive compliance costs) • Administrative burdens on businesses (e.g. costs associated with notification obligations or other administrative activities) • Position of SMEs (e.g. burden on small firms and impacts on their financial sustainability, etc.) • Innovation and research (e.g. stimulation or hindrance of investment in chemical alternatives, etc.) • Macroeconomic environment (e.g. consequences on economic growth and employment) • Employment (e.g. number of jobs created or lost) 	<ul style="list-style-type: none"> • Sectoral output or production value or turnover (€ billions), where possible by business size (Turnover) • Sectoral Gross Value Added (€ billions), approximately capturing the sector’s contribution to Gross Domestic Product) (GVA) • Gross investment (€ billions) (CAPEX) • Operating expenditure (€ billions) (OPEX) • Research and Development expenditure (€ billions) (R&D) • One-off or recurring regulatory costs (€ billions), where possible by business size (Regulatory burden) • Number of jobs supported by the sector (Number of jobs) (Employment)

Step 3

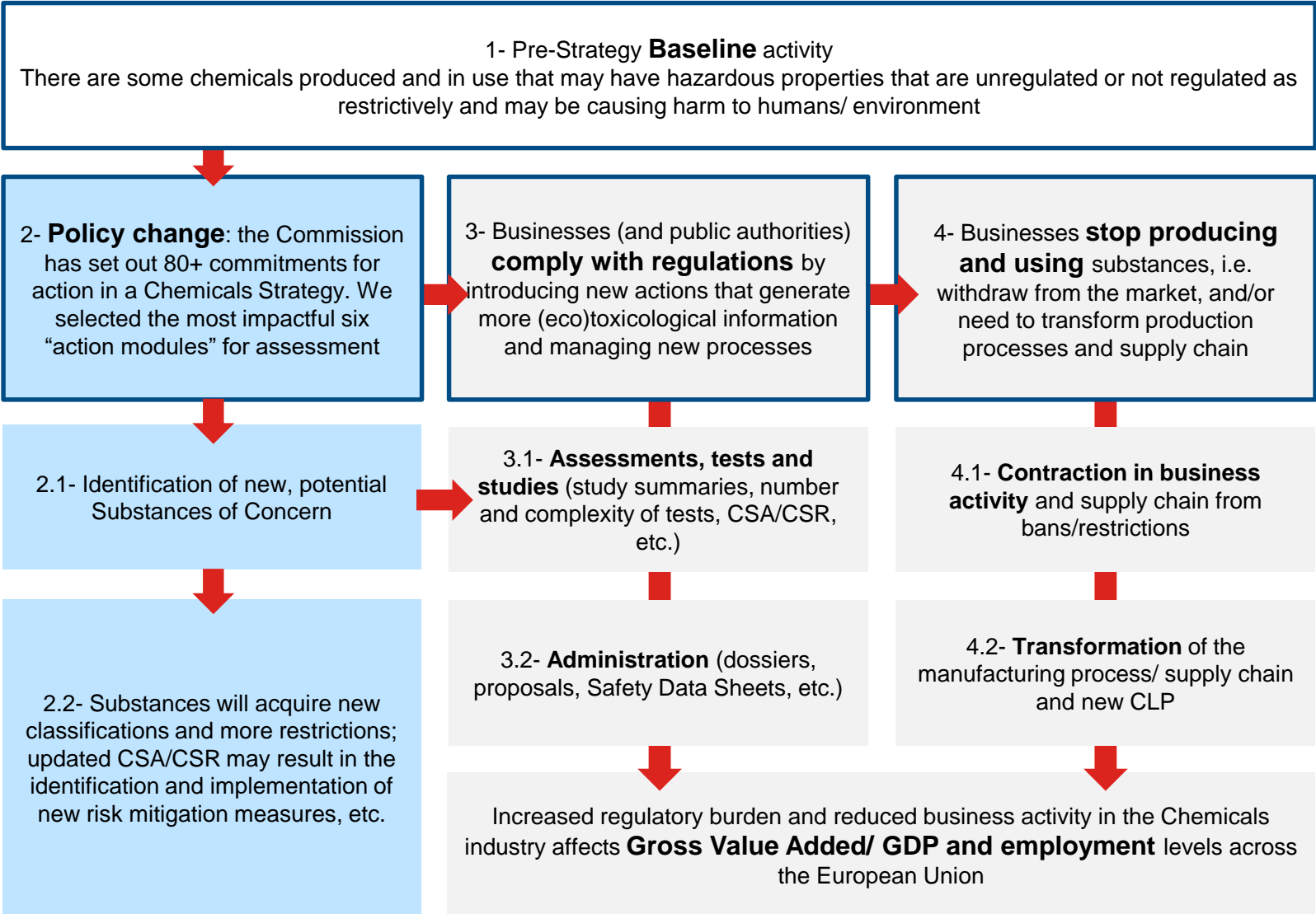
- **Map and screen business and economic impacts** (Tool#19 of EC BRG) and confirm most significant impacts for in-depth assessment

Priority	Key Impact sub-categories	Indicators selected as proxies for these key impact sub-categories
Secondary Impacts	<ul style="list-style-type: none">• Trade and investment flows (e.g. imports or exports effects)• Competitiveness (sectoral) of businesses (e.g. effects on the market share and comparative advantages in an international context)	Considered qualitatively and captured indirectly as part of the analysis of turnover and GVA (since exports contribute to the sectoral turnover and GVA in the EU).

Assess the most significant impacts quantitatively and/or qualitatively

Colour scheme

- Baseline
- Policy change
- Business/ economic impacts



Mitigation measures applied by companies (substitution/reformulation) is included in the scenarios

Baseline scenario

- Business as usual – i.e., CSS is not applied, CLP remains the same and GRA is not extended.

Scenario 1

- **Scenario 1** considers the **addition of hazard classes to CLP and extension of the GRA** over a gradual implementation timeline (market withdrawal except where substitution / derogation is possible).

Scenario 2

- **Scenario 2** assumes a 5-year implementation timeline of the GRA and CLP changes to the GRA and CLP (as per CSS Action Plan) and assumes businesses can respond immediately.

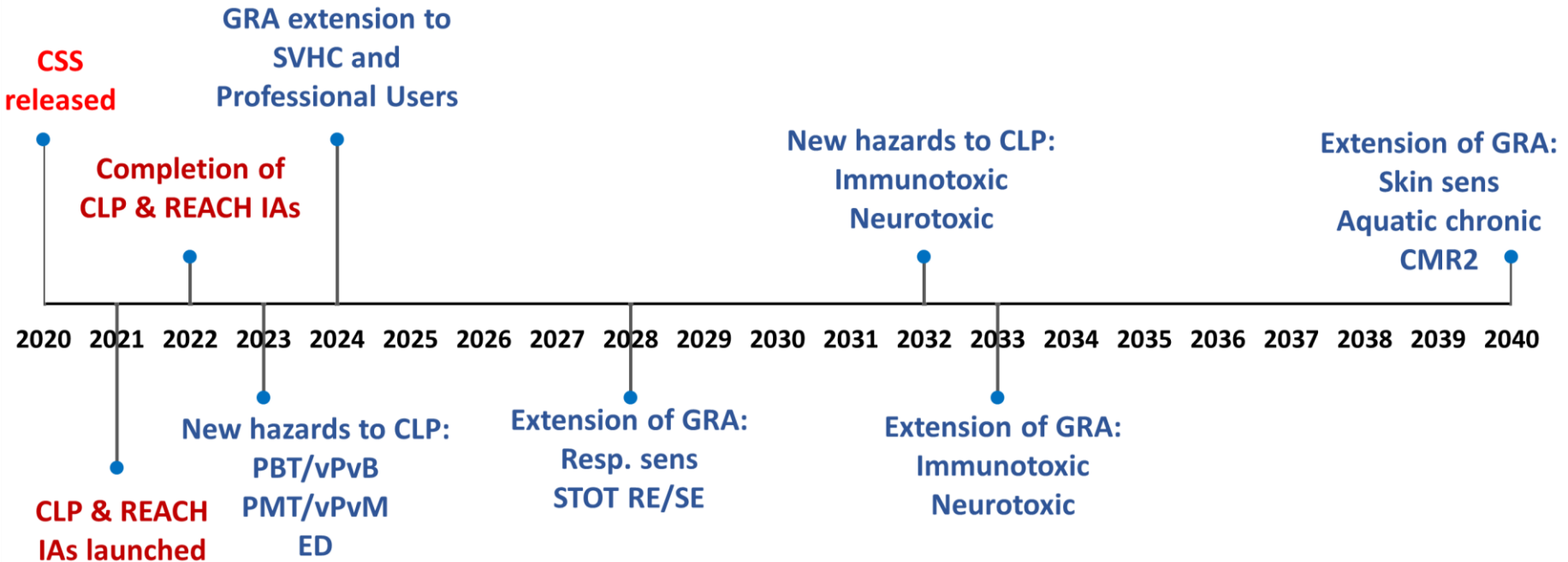
Scenario 3

- **Scenario 3** considers policy changes are implemented quickly such as in Scenario 2, but shows the impact on businesses who cannot bring substitutes to the market in a timely manner

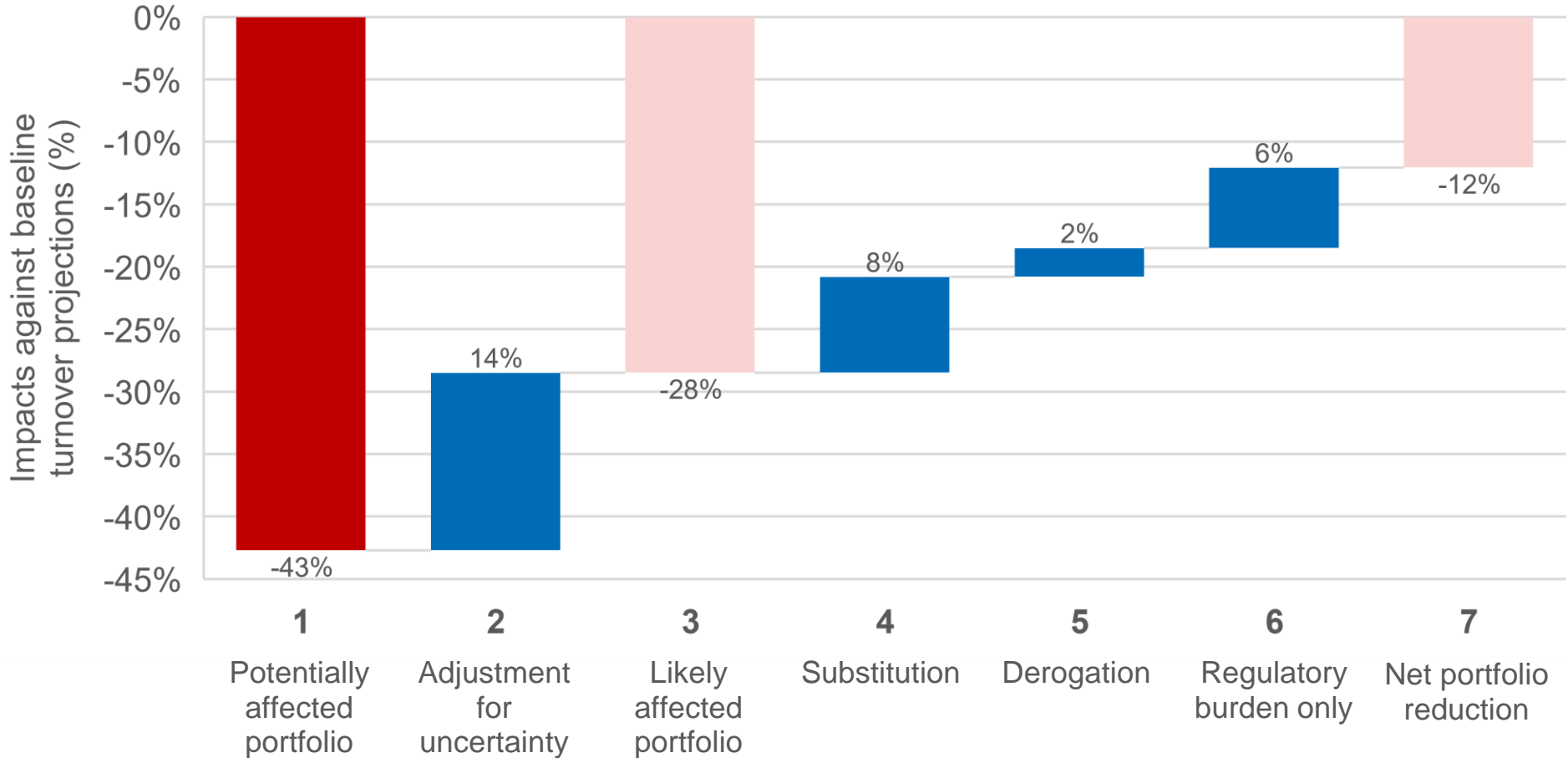
Assumptions for Analysis

- 1. **Two timelines** used in the analysis of impacts,
 - a) **5 year implementation**
 - b) **Phased approach to implementation**
 - i. Based on the Action Plan in the Annex to the CSS, updated based on expert judgement to reflect discussion in the CARACAL and the need for Commission Impact Assessments to be completed.

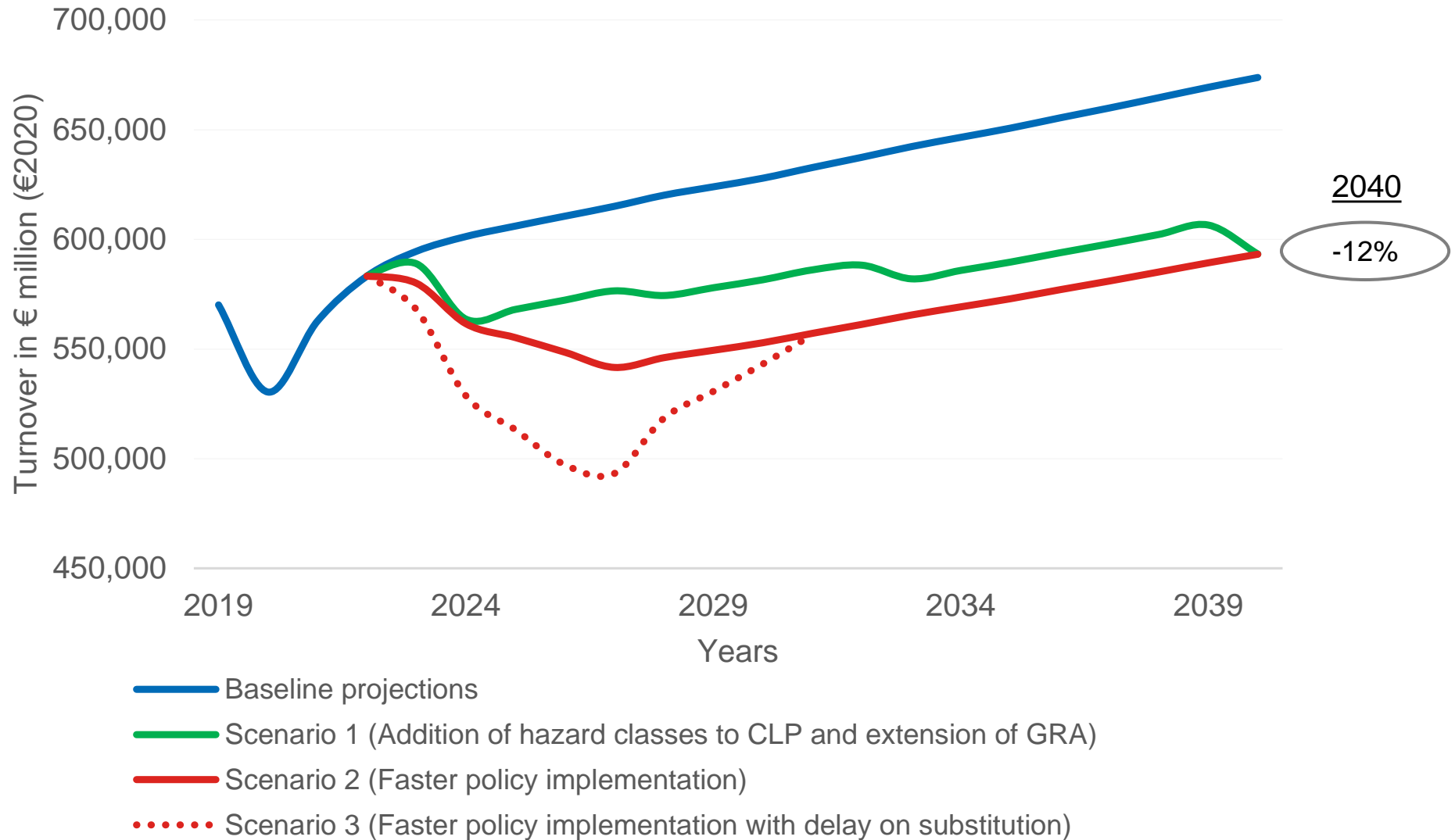
Scenario 1



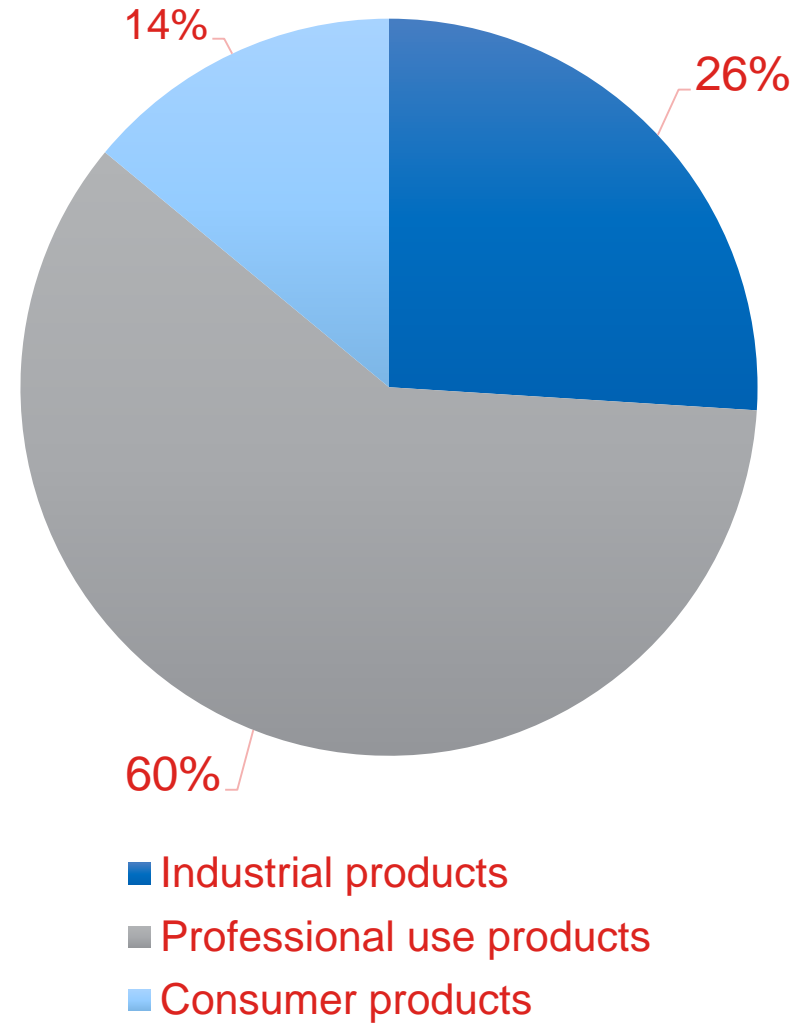
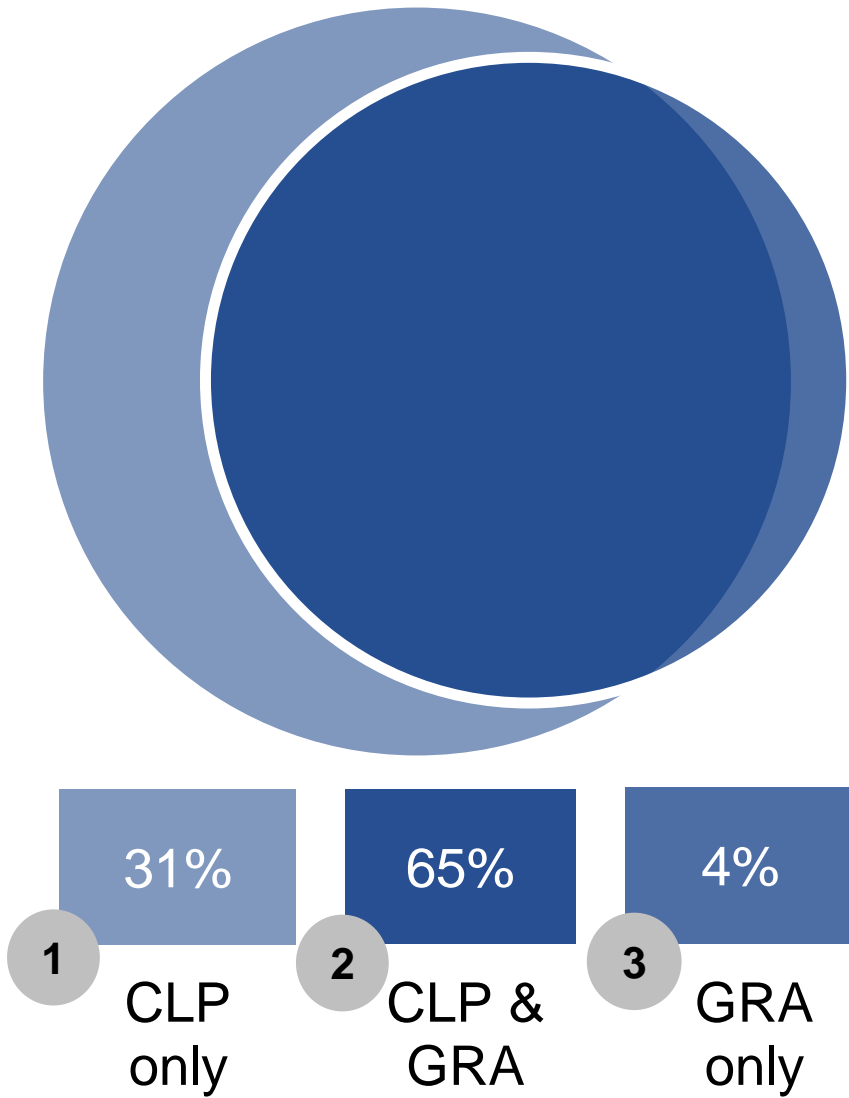
Turnover - Size of the potentially affected product portfolio



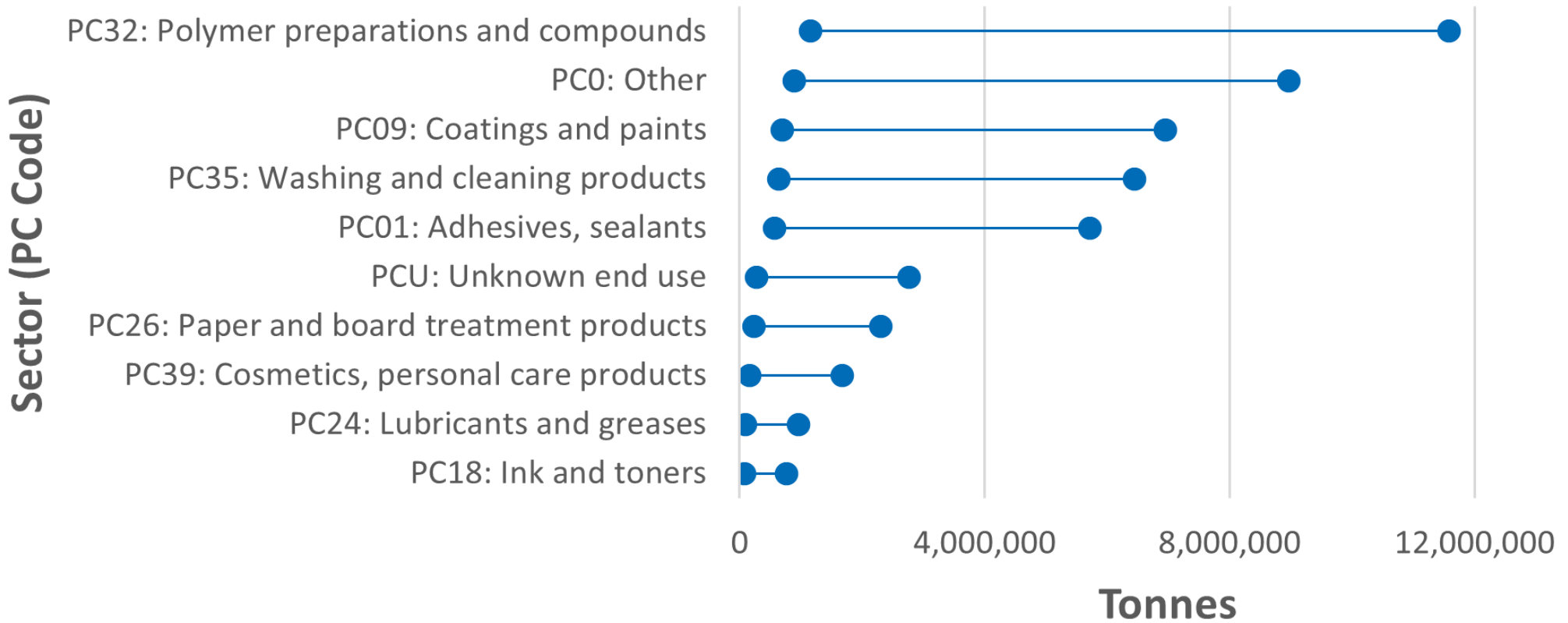
Turnover



Themes (business or economic indicators)	Scenario 1 (Addition of hazard classes to CLP and extension of the GRA)	Scenario 2 (Faster, 5-year implementation timetable)	Scenario 3 (Faster implementation timetable with delay on substitution/ reformulation)
Turnover (first order effects)	A loss of €47 billion per year on average against the baseline	A loss of €67 billion per year on average against the baseline	A loss of €81 billion per year on average against the baseline
Total GVA contribution (direct, indirect, induced)	A loss of €40 billion per year on average against the baseline	A loss of €57 billion per year on average against the baseline	A loss of €68 billion per year on average against the baseline
Regulatory burden	An additional annualised burden of €434 million each year over the period	An additional annualised burden of €518 million each year over the period	An additional annualised burden of €518 million each year with a delay
Total employment contribution (direct, indirect, induced)	77,000 fewer jobs, on average, when compared to the baseline in any given year	106,000 fewer jobs, on average, when compared to the baseline in any given year	126,000 fewer jobs, on average, when compared to the baseline in any given year



Affected Sales Volume (Tonnage) by Sub-sector



Study Limitations

1. **Uncertainty of policy proposals.** The actions outlined in the CSS remain considerations of a strategy and are subject to ordinary legislative procedure. No formal decision has been made on the implementation of these policy proposals by the Commission and discussion is ongoing.

2. **There are known unknowns.** These include:
 - How technological progress may affect the EU chemicals sector and whether and how this would interact with the impacts of legislation.
 - How grouping of chemicals will affect the speed of regulation.

- 3. Data available is in some cases limited and biased to large firms.** Limited historical evidence of relevance and data gathered through the consultation exercises is restricted by the sample of respondents and their understanding and assessment of how the policies considered may affect their operations. The sample comprises a disproportionate number of large firms (84 large vs 17 SME), while they are a minority in the sector (800 out of 28 thousand). However, the sample covers two-thirds of the sector's turnover, thus being overall representative of the sector's average.
- 4. Complexity of actions taken in response to regulatory change.** The extent to which these impacts affect sub-sectors and businesses, and how these businesses may respond, will vary, including whether businesses will discontinue, reformulate or substitute the use and manufacture of certain products. Any of these actions will incur transitional and/or recurring costs when compared to the baseline.

Any questions



Weighting of Future Hazard Classifications

- In order to estimate the number of substances that may be classified over the next 10, 15 and 20 years, the following steps have been taken:
 1. Calculate the number of harmonised classifications that have been granted since 2015 and the number of ED and PBT/vPvB decisions that have been made (versus the number of proposals submitted);
 2. Determine the average number of classifications granted per hazard classification since 2015;
 3. Calculate the number of years since 2015 in which hazard classifications have been granted (e.g. for respiratory sensitisers cat. 1, classifications have been granted in 75% of years since 2015);
 4. F2 classifications have been given a probability for classification based on expert judgement on available evidence;
 5. Multiply the average CLH by 10, 15, 20 years to form an estimate of CLH without grouping in order to account for classification of substances over the assessment time period (until 2041);
 6. Calculate the percentage of F1 classifications on the List of Substances to be Regulated to go through if grouped (4% of grouped substances moving forward to CLH, based on the grouping approach used in the 2021 ECHA Integrated Regulatory Strategy report) and the average CLH without grouping;
- To allow for years where no classifications are granted, for each classification multiply the results so far by the percentage calculated in step 3 e.g. 75% of years with classification decisions for respiratory sensitisation cat. 1..