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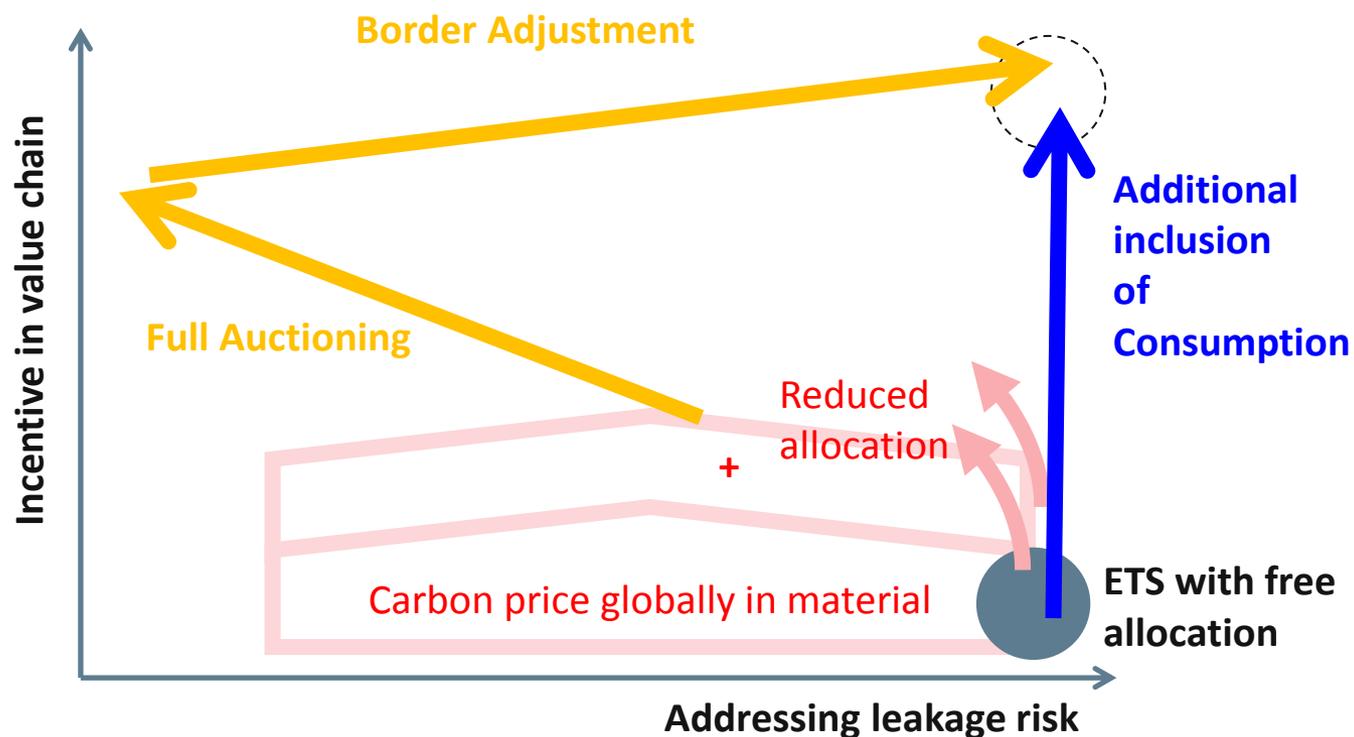
## Three options to extend carbon pricing to value chain

### Incentives for

Climate friendly production with incremental cost

Efficient material use and substitution

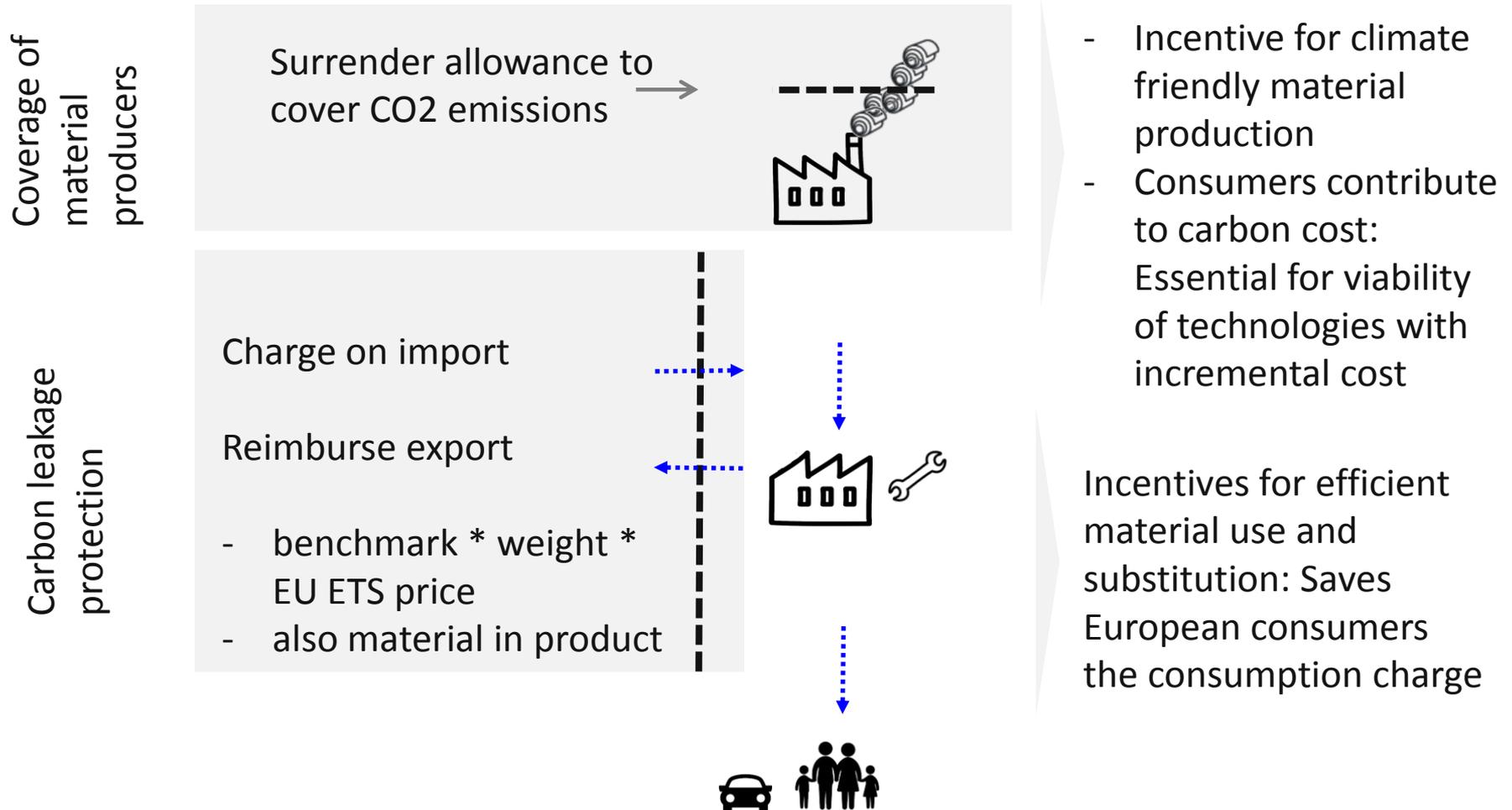
Production efficiency and fuel shifting



### Three options for leakage protection in post Paris world of differentiated carbon prices:

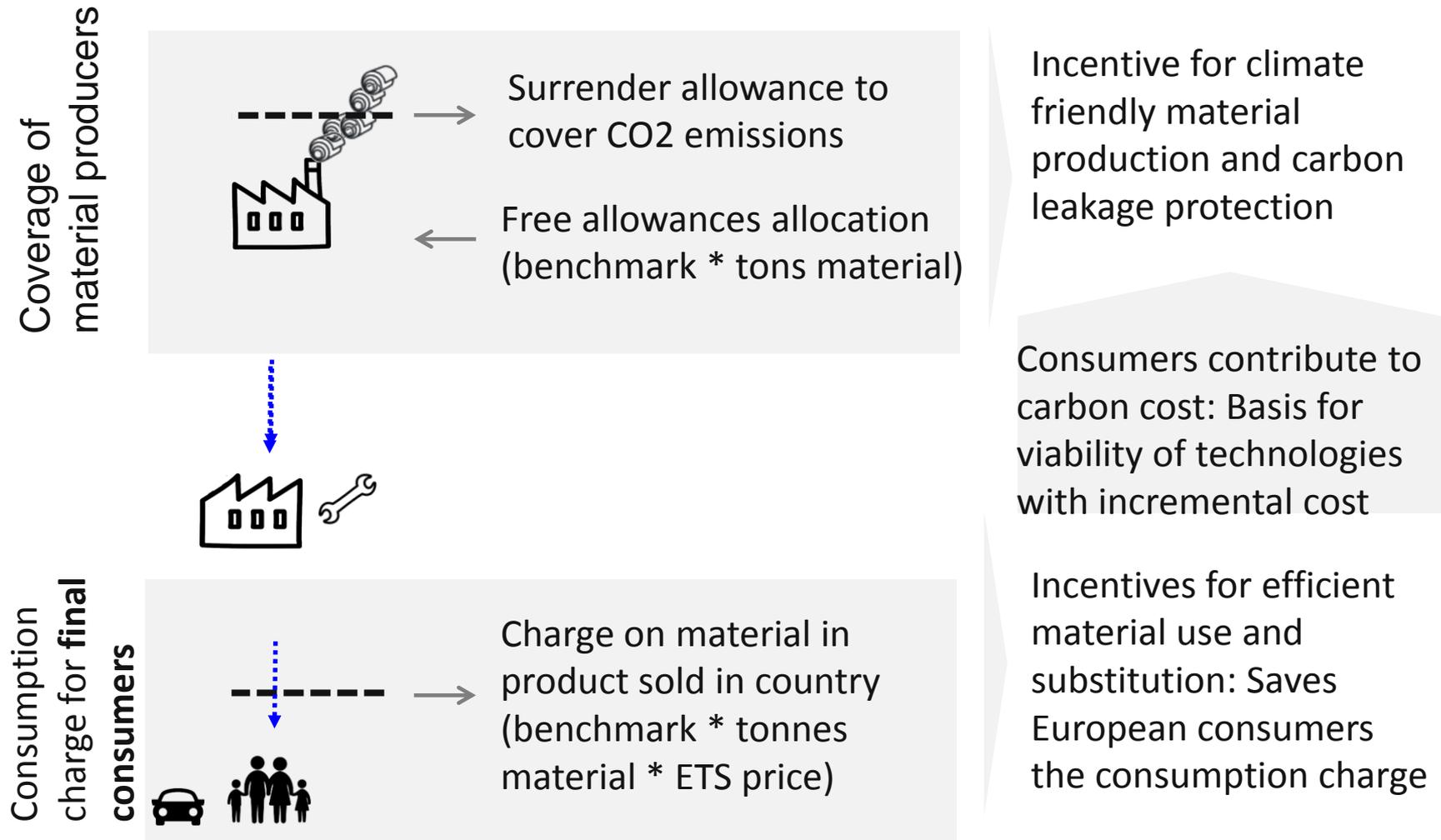
0. Iterative increase of carbon price in traded materials with reduction of free allocation
1. Full auctioning for incentives backed by Border Adjustment for leakage protection
2. Free allocation for leakage protection & Inclusion of Consumption for incentives

## Option 1: Border related approaches - politically or economically difficult



**For WTO compatibility (Art 3 GATT), use best available technology benchmark in combination with full auctioning to avoid discrimination**

## Option 2: Inclusion of Consumption of basic materials in carbon pricing



**IoC restores carbon price signal to be effective for all mitigation opportunities**

-> More mitigation opportunities can be realized at lower cost

**IoC creates different administration requirements**

-> Fraud risk is limited, allowing for simplified administrative procedures

**Effective carbon price provides clarity for strategic choices of companies**

-> Makes ETS more effective in supporting innovation and investment

**Producers of materials covered by IoC receive free allocation at full benchmark**

-> Shifts the focus of debate from carbon leakage protection to innovation

**IoC builds on international experience and avoids lock-in with national systems**

-> Pool data for better benchmarks and thus stronger incentives

-> Once carbon prices converge, free allocation with IoC can be easily abandoned

**IoC makes the carbon price effective for climate friendly innovation and investment in the materials sector**

## A quick example – South Africa

- Key dilemma for South Africa – large basic materials sector (aluminium, iron and steel, cement, ferroalloys, PGMs, etc etc.) based on high-carbon infrastructure.
- Complex, competing development and investment priorities (like most countries)
- Majority of emissions (around 50%) come from coal-fired electricity; also cheapest (actually cheaper than coal) mitigation option; within the next decade not much pressure to address the industry sector per se
- Transition will be slower – South Africa is a “technology taker” in many areas
- Mitigation policy will be led by planning process in the electricity sector
- BTAs or carbon footprint metrics would potentially severely penalise SA industry
- Consumption charge would mitigate against carbon leakage, provide technology incentives to EU industry (much of it is owned by the SAME companies as SA) which would be utilised later by SA industry, allow for nationally-determined transition led by electricity
- Consumption charge in SA would quarantine energy-intensive industry, send right signals to SA markets