

```

mcdp {

  simple_cell = catalogue {

    provides voltage [set of V]
    provides capacity [J]

    requires cost [$]
    requires mass [kg]

    # These two have some functions, but
    # non-dominating resources
    model1 | {1.5 V} | 1 MJ | 5 $ | 0.20 kg
    model2 | {1.5 V} | 1 MJ | 15 $ | 0.10 kg
    # This one gives 5V; it's cheap but will
    # need an adapter
    model3 | {5.0 V} | 1 MJ | 5 $ | 0.30 kg

  }

  cell_plus_converter = mcdp {
    provides voltage [set of V]
    provides capacity [J]
    requires cost [$]
    requires mass [kg]

    sub converter = catalogue {
      provides voltage_out [set of V]
      requires voltage_in [set of V]
      requires cost [$]
      requires mass [g]

      step_up1 | {5 V} | {1.5 V} | 5 $ | 20 g
      step_up2 | {12 V} | {1.5 V} | 10 $ | 20 g
      step_up2 | {12 V, 5 V} | {1.5 V} | 10 $ | 20 g
    }

    sub cell = simple_cell

    voltage <= converter.voltage_out
    converter.voltage_in <= cell.voltage
    mass >= cell.mass + converter.mass
    cost >= cell.cost + converter.cost
    capacity <= cell.capacity
  }

  sub battery = simple_cell ^ cell_plus_converter
  requires cost, mass for battery
  provides voltage, capacity using battery
}

```