

Community kitchens.
Catering

Kitchen definition

lat. coquina, coquere, "to cook"

room in the house where food is cooked

fire or furnace equipment

special cooking art of each country or chef

collective catering

preparation of food for a group of people

because of: urbanisation, social and technological factors

classification

by purpose

- for-profit (commercial)
- non-profit (social)

by public type

- traditional (commercial, no NC)
- collective (social, with NutrCrit)

by time

- direct (cooked → service)
- deferred (cooking → maintenance → service)

by kitchen type

- on-site integrated kitchens
- central kitchens

by its approach

- Market economy (commercial)
- independent enterprise
- franchising

- Cost economy (social)
- concession (external company)
- self-management

basic notions of restoration

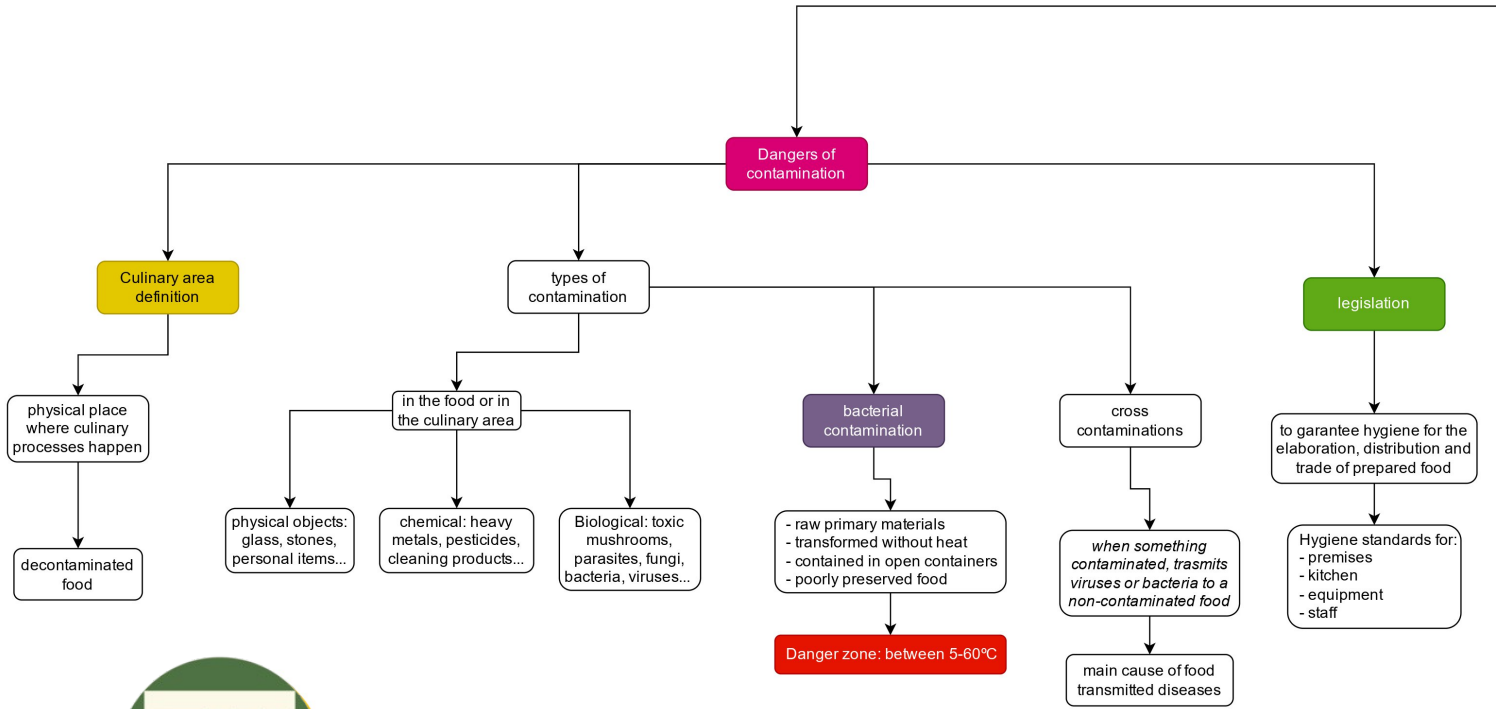
clients no wait, menu extra options, nutritional criteria, good presentation

- Fresh products (1st range)
- Canned products (2nd range)
- Frozen products (3rd range)
- Vacuum-packed (4th range)
- Heat-treated (5th range)
- Texturized products (6th range)

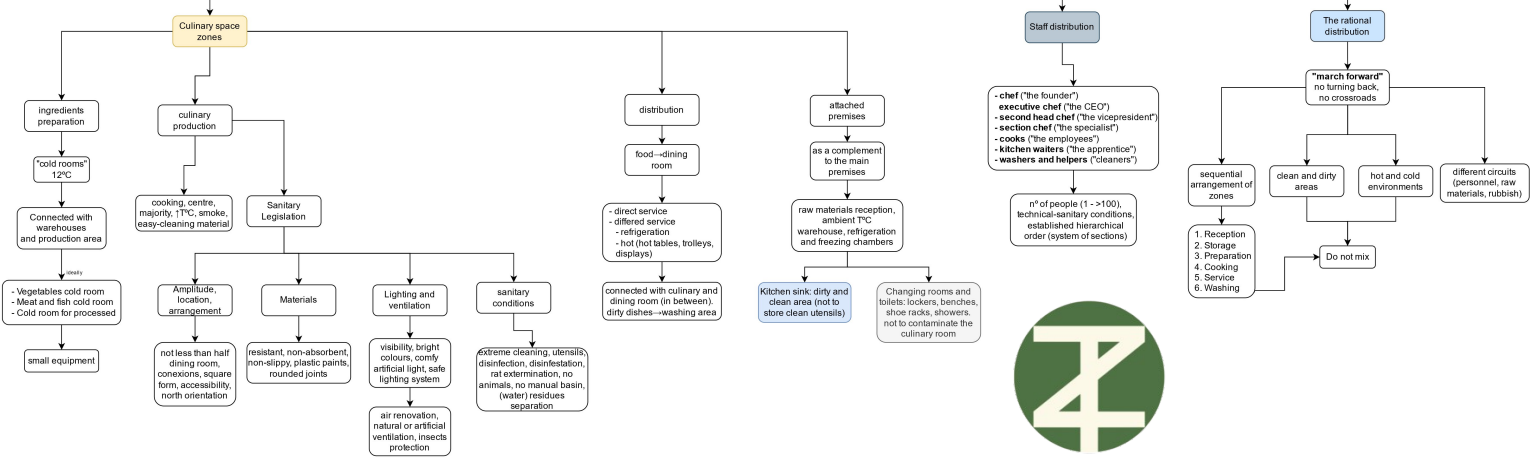
Central kitchens: ↑equipment, ↑people (staff), ↑hygienic control, hot zone & cold zone (dedicated areas), processes centralisation

- **chef** ("the founder")
- **executive chef** ("the CEO")
- **sous chef** ("the vicepresident")
- **chef de partie** ("the specialist")
- **cooks** ("the employees")





Culinary Area



Cooking

Definition

application of **heat**, from a **heat source** to the **food**, to transform it from **raw to cooked**, improving its **digestibility** and **organoleptic** properties

heat transfer

- movement between molecules (vibration)
- types
 - conduction
 - convection
 - radiation

Aroma vs Smell

- Smell: chemical compound through nose
- Aroma: chemical compound through retronasal route

Food Chemistry

Water: everywhere

Fat: FA → taste. Smoke point → acrolein (toxic)

Carbs: sweet taste, base and structure. Maillard reaction 140°C and caramelisation 170°C

Gluten → fluffiness and elasticity

Proteins: Maillard reaction (browning) → acrylamide (toxic)

Osmosis and diffusion

Osmosis: water flow from **hypotonic** to **hypertonic** through a semi-permeable **membrane**

Diffusion: 2 solutions with different concentrations **equalise** on contact. **NO membrane** (milk and cocoa powder)

animal vs plant cell: vacuoles, chloroplasts, internal pressure

meat

doneness

well done: ↑water loss, hard to chew, ↓juicy

rare: hard to chew, dangerous (m.o.)

medium rare: the best, ↑digestibility, ↓nutrient loss

colour

white fibres

sudden and rapid movement

glycogen

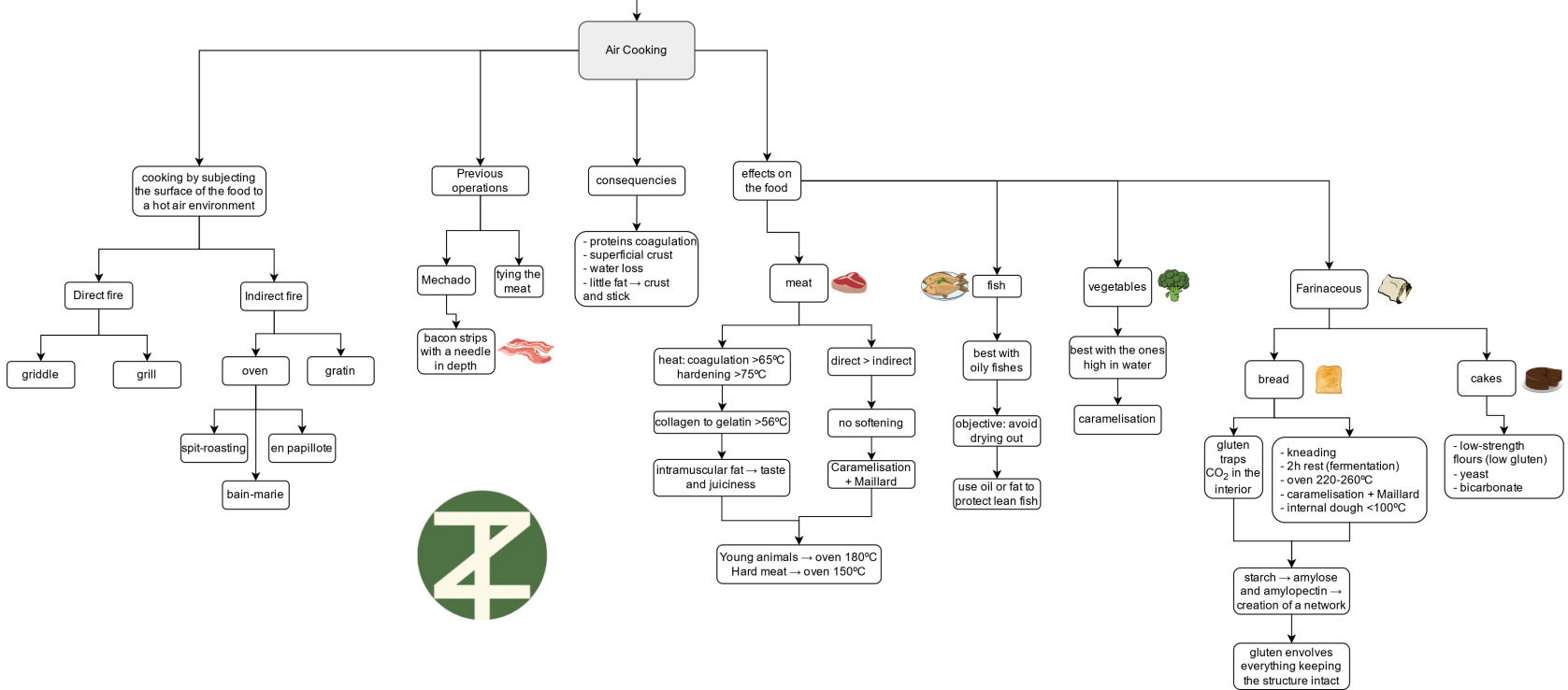
red fibres

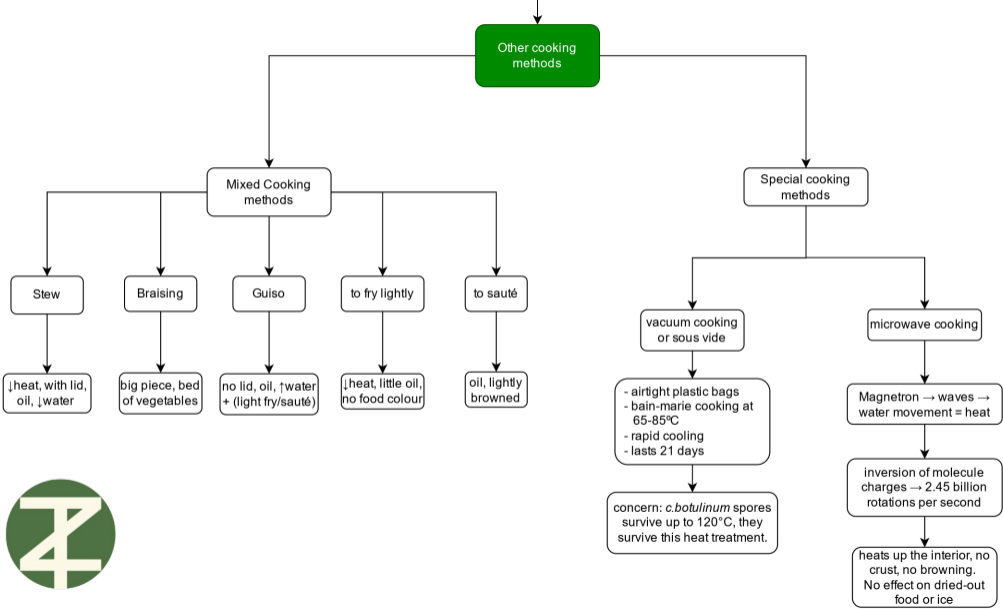
slow and persistent movement

fat

Myoglobin
- unoxygenated →purple
- oxygenated →red
- oxidised →brown
- with NO →pink
- with CO →pink







Water Cooking

blanching or bleaching

incomplete cooking of food in boiling water for ↓time

poached

slow cook in a liquid just under its boiling T°C

poached fish

salt, (TMA + ammonia) = bad smell

fish sensitivity to heat

fibres work at ↓T°C under water

↓collagen, between fibres, gelatin ↓T°C

poaching is the best way to cook fish

better to add some acid to counter the bad smell (lemon)

boiled

complete cook in a liquid reaching its boiling T°C

food addition:

with cold water

with already boiling water

legumes, potatoes, soups

vegetables, pasta

- avoid evaporation
- water quantity changes
- cooking time changes

steaming

cooking with water vapour

high pressure

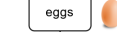
- leave 1/3 pot empty
- ↓T°C when vapour escapes
- let it cool down

normal pressure

raised rack with food on top

cooking foods with water

eggs



in their shell

boiling is not optimal → white comes out and overcooked

hot water → egg coagulation

62°C white coag.
71°C yolk coag.

green yolk

H₂CO₃ → CO₂ (escapes) = ↑pH

fresh egg: S + CO₂

old egg: H₂S (smell)

alkalinity → aa's lose sulphur

sulphur + iron = ferrous sulphide (green)

vegetables



tubers texture

- harinose texture
- waxy texture

vegetables flavour

cruciferous ↑sulfur compounds

overcooking = ↑H₂S ↓taste

pigments

H⁺ displaces Mg²⁺ from chlorophyll (green to brown)

bicarbonate (alkali) keeps the green

boiling water ↓time

removes vitamins

destroy browning enzymes

legumes



boil ↑heat 5-10 min, no lid

destroy impurities, no foam

- salt at the end (do not peel)
- water 3x legumes (3:1 ratio)
- Soaking (not in lentils/peas)
- cooking time from boiling

Meat and fish



for ↓quality meat with ↑collagen and fat

best way to cook fish (poached) → no harm to myotomes and myosepta



