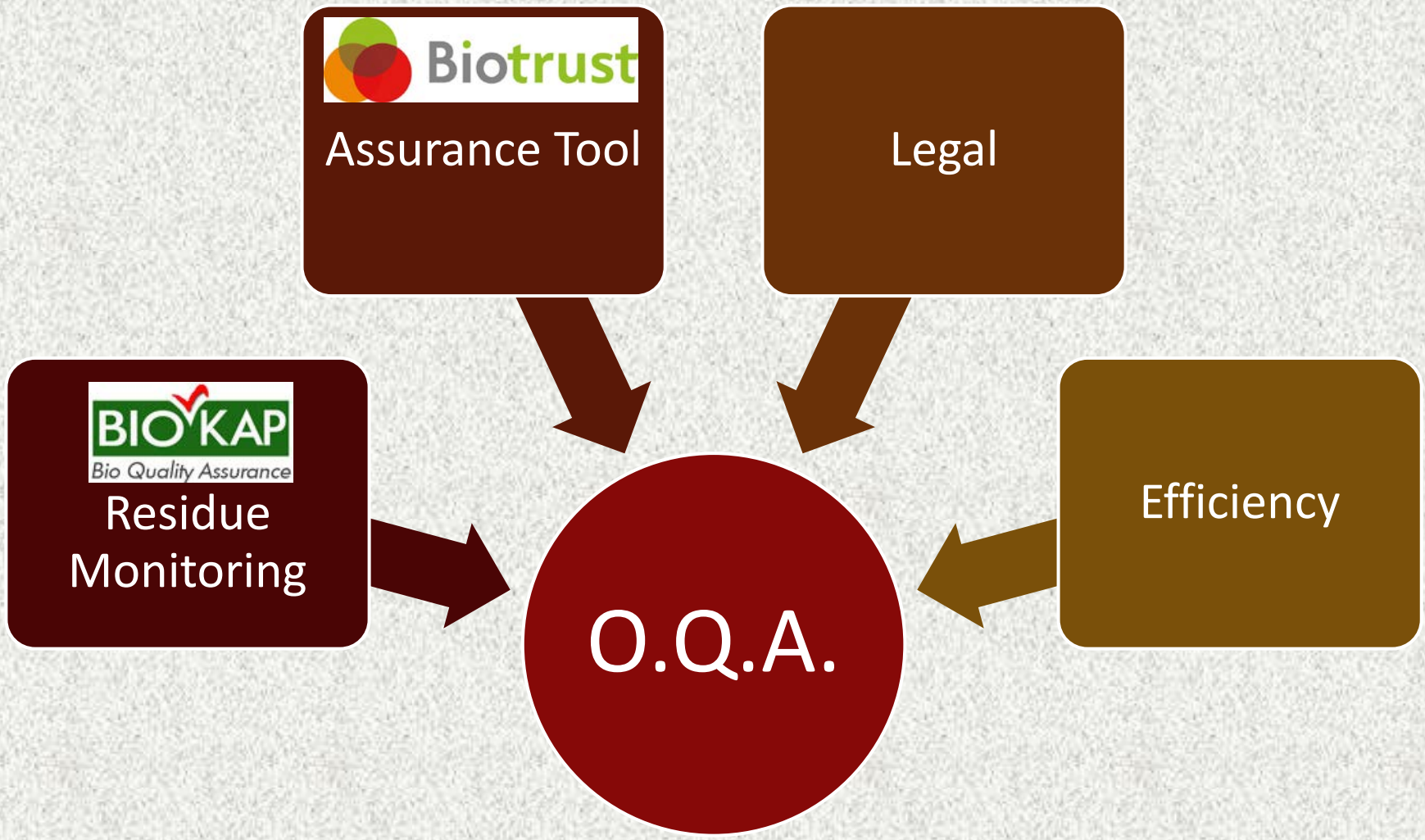
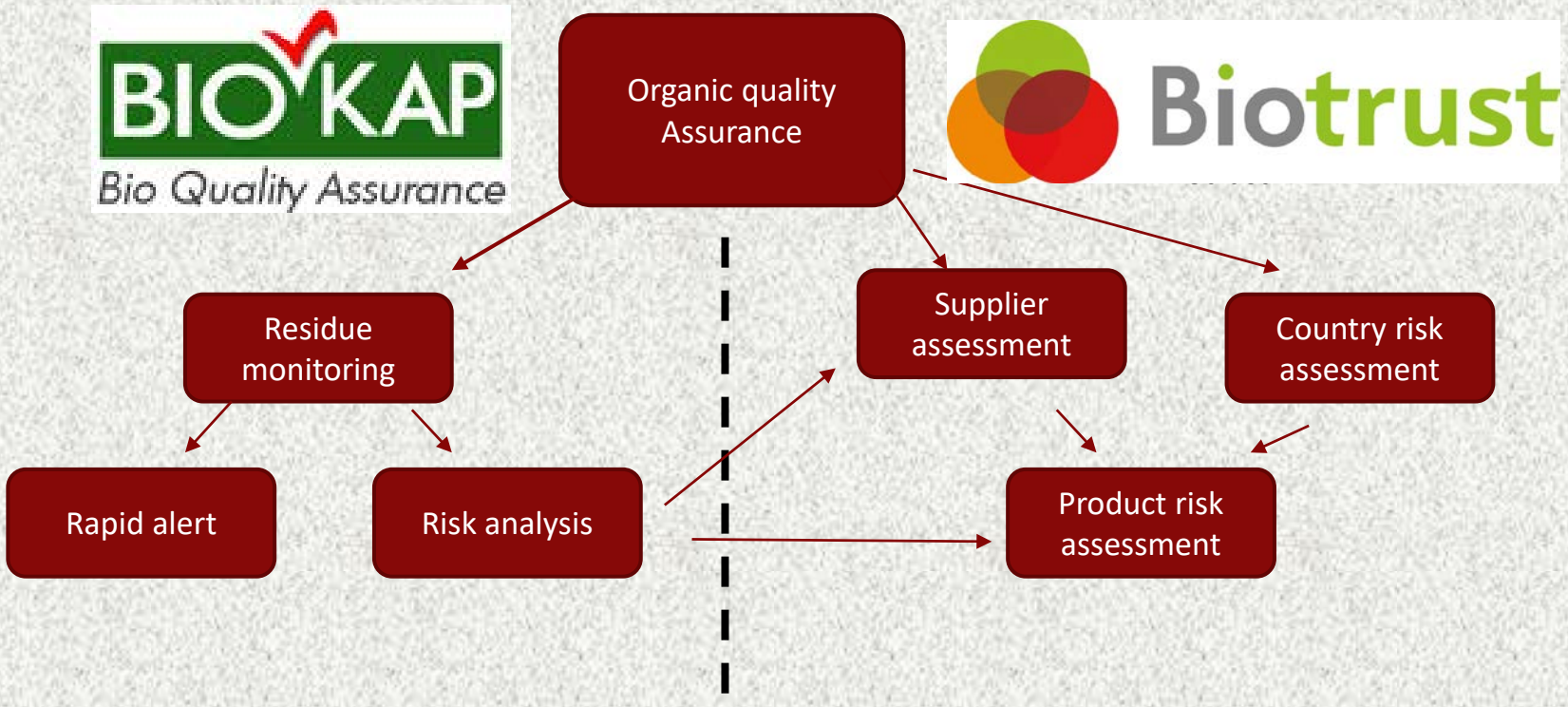
Operators perspective for residue analyses and sampling

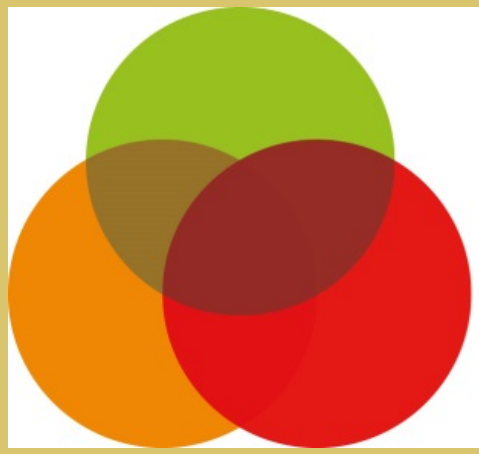
Bavo van den Idsert

BioKap and BioTrust



BioKap and BioTrust





Biotrust

Webbased tool for organic risk assesment

www.biotrust.bio

Aims and objectives

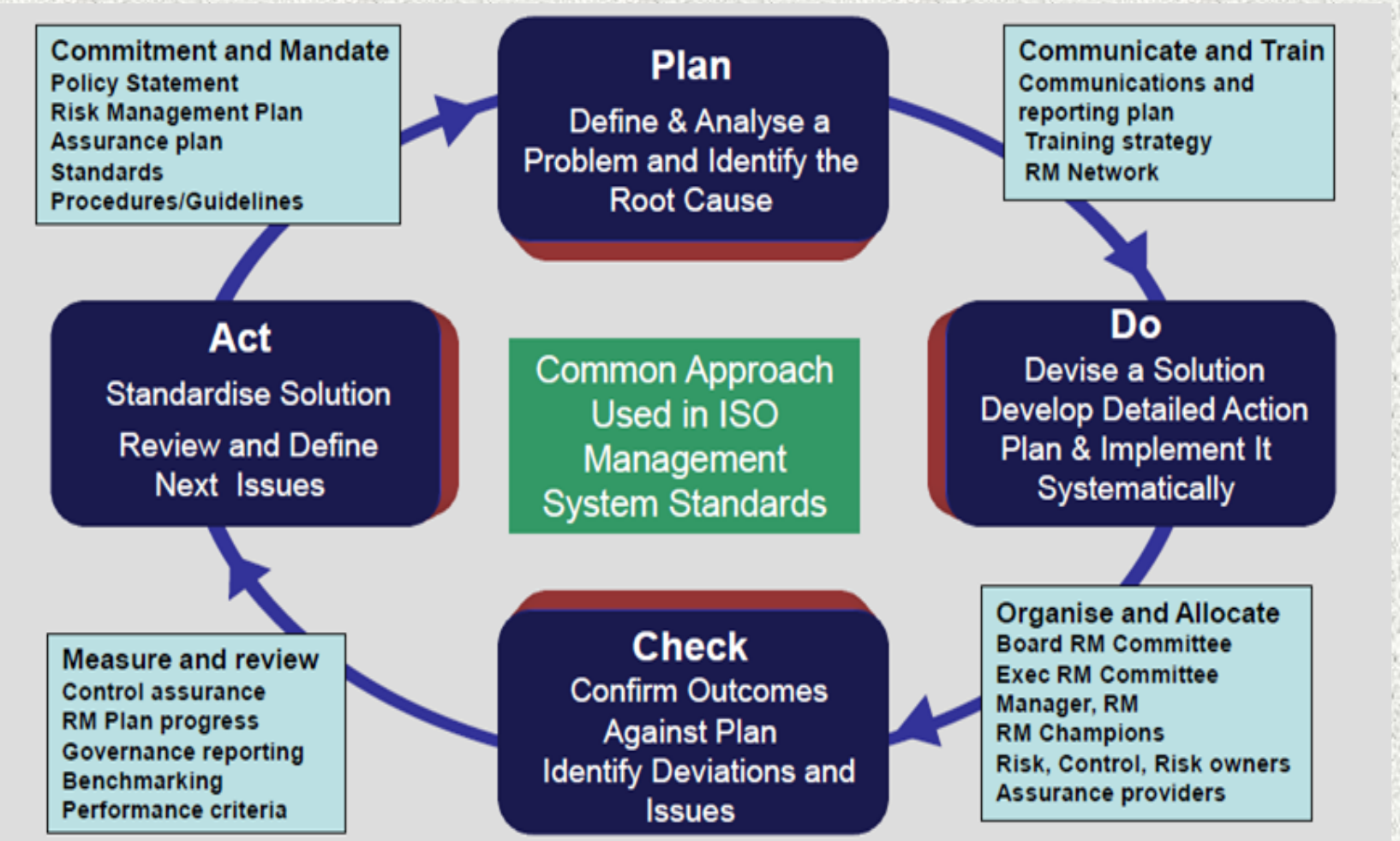
- Risk based priority setting for verification of raw material risks
- Risk based process control based on open source
- Practical tool that can be used in existing QA systems
- Risks comparable and discussable among active members
- Demonstrable
- Meets the requirements of the organic law
- Cooperation and exchange between companies possible

Approach to Food Fraud Prevention

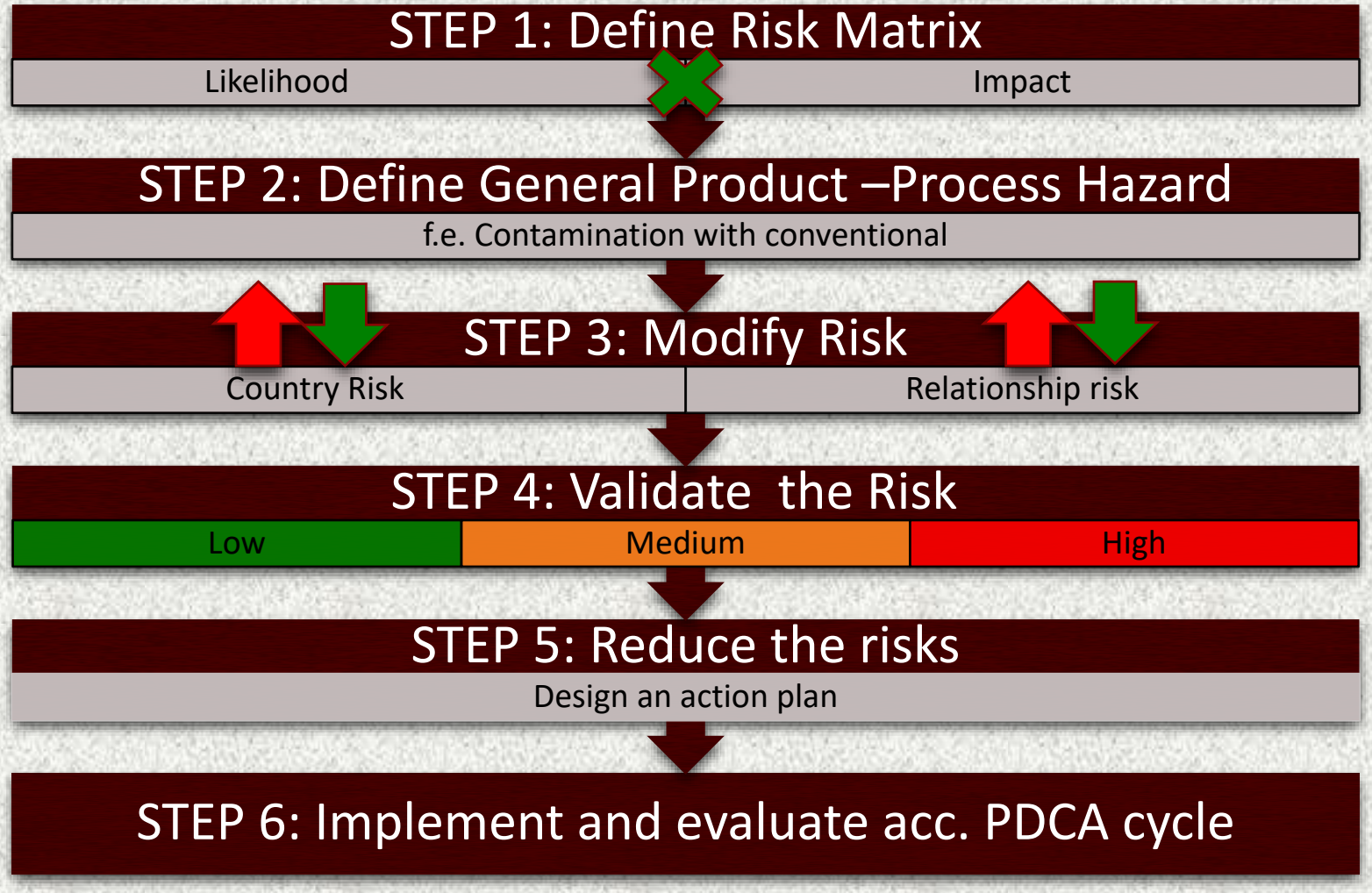
Food Safety	Food Defence	Food Fraud
HACCP Hazards	**TACCP** Threats	**VACCP** Vulnerabilities
Prevention of **unintentional / accidental adulteration** • Science based • Food borne illness	Prevention of **intentional adulteration** • Behaviourally or ideologically motivated	Prevention of **intentional adulteration** • Economically motivated

GFSI

PDCA cycle


Commitment and Mandate
Policy Statement
Risk Management Plan
Assurance plan
Standards
Procedures/Guidelines
Plan
Define & Analyse a Problem and Identify the Root Cause
Communicate and Train
Communications and reporting plan
Training strategy
RM Network
Act
Standardise Solution
Review and Define Next Issues
Common Approach Used in ISO Management System Standards
Do
Devise a Solution
Develop Detailed Action Plan & Implement It Systematically
Measure and review
Control assurance
RM Plan progress
Governance reporting
Benchmarking
Performance criteria
Check
Confirm Outcomes Against Plan
Identify Deviations and Issues
Organise and Allocate
Board RM Committee
Exec RM Committee
Manager, RM
RM Champions
Risk, Control, Risk owners
Assurance providers

BioTrust process: 6 steps



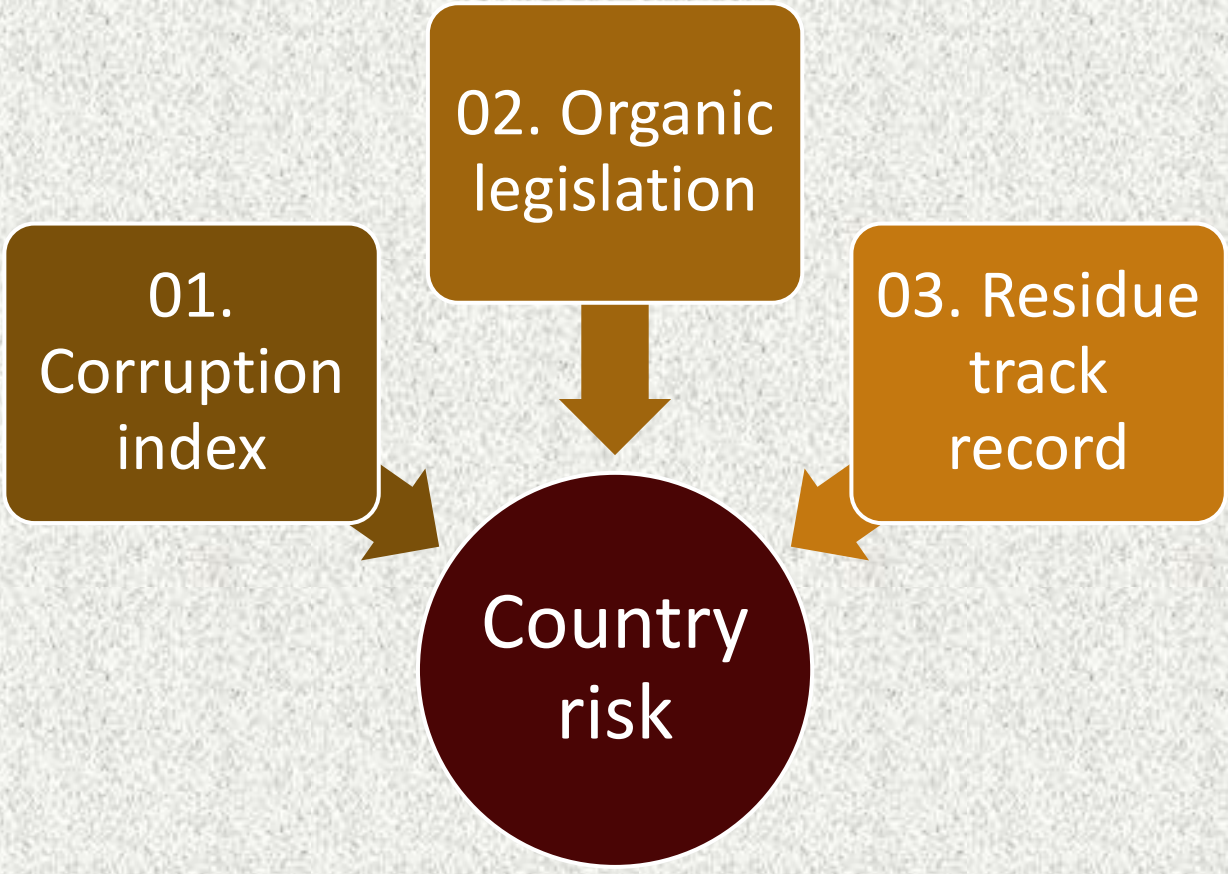
o Step 1: define the risk matrix

Description	*Extra clarification*	Impact				
A non-conformity with long term consequences and violation of the organic principles. Or a systematic non-conformity with implication on multiple products	*Impact on more products or lots over a longer period, likely to cause media attention, e.g.: high residue levels, large scale mixture with regular, systematically violation of the legislation*	**3**	**Low**	**Medium**	**High**	**High**
A non-conformity with (in)direct implication on the product	*Impact on one product or lot, likely no media attention, e.g.: low residue levels around limits, GGO below 0,9*	**2**	**Low**	**Low**	**Medium**	**High**
A non-conformity with no (direct) implication on the product	*No impact on the product, e.g.: administration*	**1**	**Low**	**Low**	**Low**	**Medium**
		Likelihood	**1**	**2**	**3**	**4**
		Description	Very small	Small	Medium	High
		% of non-conformities	<1	<5	<10	>10

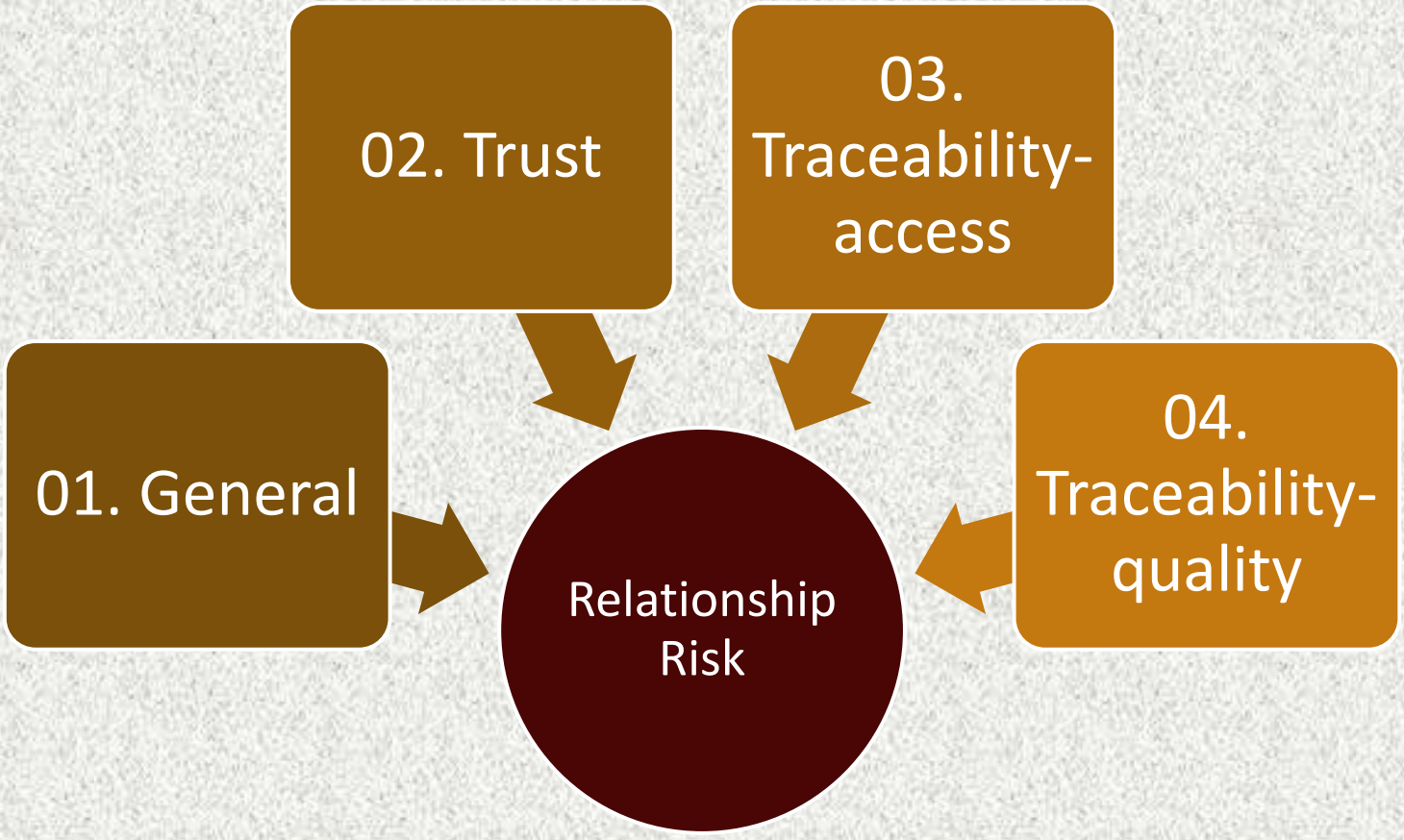
o Step 2: define the general hazards

Proces	Proces section	Proces section	Hazards	Impact
primairy sector	crop and feedcrop	cultivation	inconversion product sold as organic	3
primairy sector	crop and feedcrop	cultivation	use or misuse of not permitted basic materials (seeds)	3
primairy sector	crop and feedcrop	cultivation	use or misuse of not permitted fertilizers	2
primairy sector	crop and feedcrop	cultivation	incorrect application of crop rotation	2
primairy sector	crop and feedcrop	cultivation	use of not permitted ground covers	2
primairy sector	crop and feedcrop	cultivation	use of not permitted pesticides	2
primairy sector	crop and feedcrop	cultivation	use of not permitted crop enhancers	2
primairy sector	crop and feedcrop	cultivation	use of not permitted products for cleaning and sanitazion/decontamination of installations or buildings	2
primairy sector	crop and feedcrop	cultivation	not permitted crops cultivated on substratum	2
primairy sector	crop and feedcrop	cultivation	use of sanitazion/decontamination products during substratum cultivation	2
primairy sector	crop and feedcrop	cultivation	use of not permitted "dekaarde"	2
primairy sector	crop and feedcrop	cultivation	use of not permitted raw materials in substratum	2
primairy sector	crop and feedcrop	cultivation	presence of GGO in raw materials used in substratum	2
primairy sector	crop and feedcrop	cultivation	insufficient seperation between organic and regular plots	3
primairy sector	crop and feedcrop	cultivation	cultivation of the same crop as organic and regular on the same farm	3
primairy sector	crop and feedcrop	cultivation	exceding the duration of use regular livestock on a plot	2
primairy sector	crop and feedcrop	cultivation	exceding the nitrogen/hectare using livestock	2
primairy sector	crop and feedcrop	administration crop and feed	insufficient or no cultivationplan for past en present year	1
primairy sector	crop and feedcrop	administration crop and feed	insufficient or no fertilize administration	1

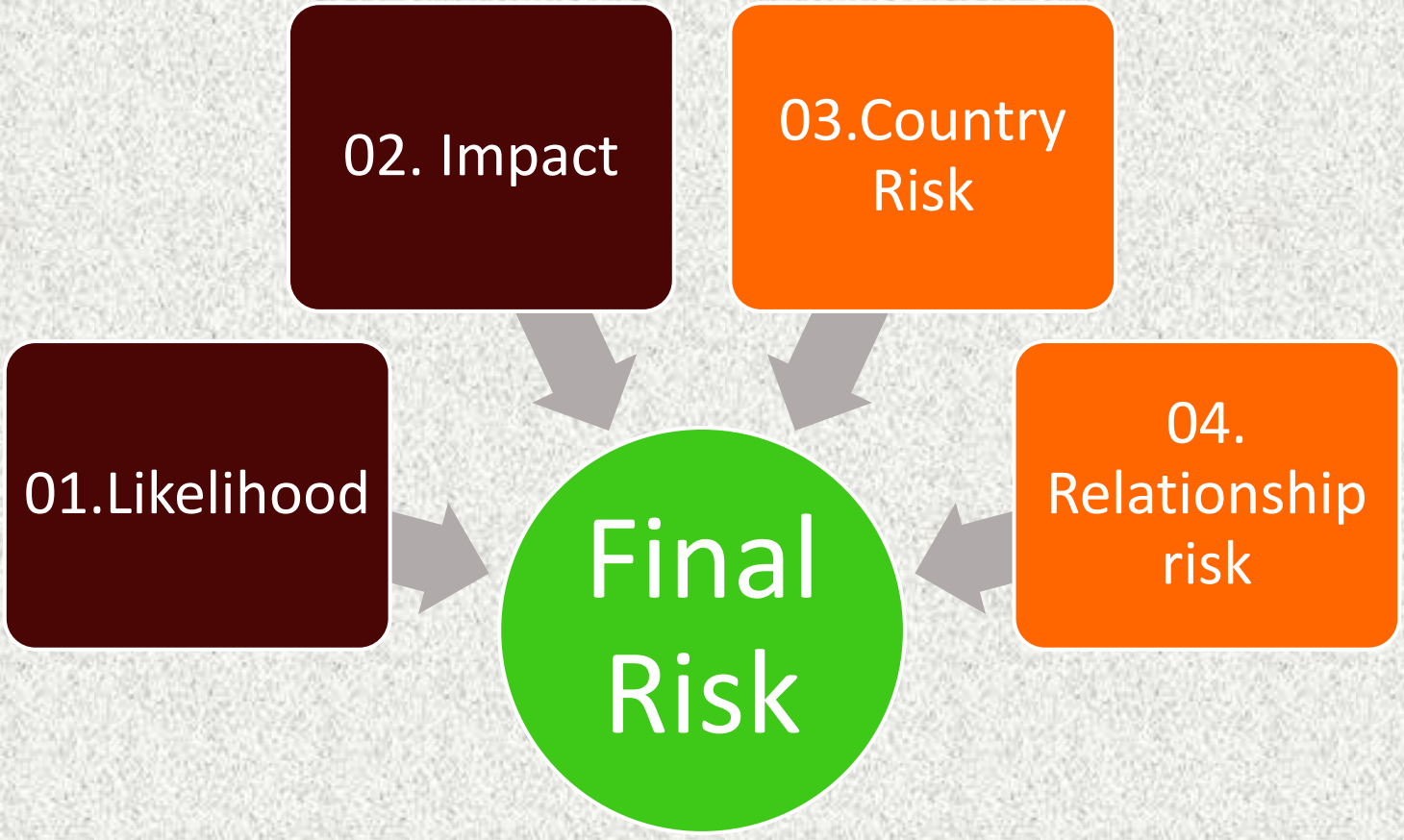
o What do we know of the country?



o What do we know of our relation?



Final Risk


02. Impact
03.Country Risk
01.Likelihood
Final Risk
04. Relationship risk

STEP 5: Final Risk output

		Risk Analysis								
Raw material	**Hazard**	**Impact**	**Likelihood**	**Likelihood motivation**	**Country Risk Factor**	**Relationship Risk factor**	**(Country + 2*Relationship)/3**	**Likelihood with Country and Relationship**	**Total Raw material Risk**	**Which verification measurements are necessary?**
apricot	contamination conventional	3	2	difficult crop	1,2	1,4	1,3	2,7	MEDIUM	audit supplier
apricot	contamination conventional	3	2	difficult crop	0,5	1	0,8	1,7	LOW	

Actual practices at trading operators

- I. Apply risk-based matrix with the following parameters:
  - Relationship & knowledge about the supplier: + 5 years = low risk
  - Risks related to the specific product / ingredient
  - Risk of the country of origin
  - Risk in the chain of transport, storage and transparacy till source
  - History of the supplier
  - Minimal control frequency per supplier / ingredient-product
- II. Follow new developments with substances based on labs and market-info
- III. Aim to reduce the pressure on increasing number of analyses

Something about sample taking

- In general only systematic approach towards ingredients (and not the end product).
- Experiences that residues can pop-up after processing steps (very disturbing and confusing when the ingredient was free from substances).
- Operators in general still working with concentration factors.
- In general the way of sampling is very much depending on the type of product.
- In most cases operators choose for representative samples: take different samples from the whole batch and put the together as one representative sample.
- Operators keep a second sample in case a quality issue appears (brought forward by a buyer abroad).
- There are no real sampling requirements from CB's towards operators.
- Challenges ingredients for processed food are much higher than for fresh products