

**NSF /WHO conference
Ann Arbor May 2004**

**THE BONN WORKSHOPS
- A CHARTER FOR SAFE
DRINKING WATER**

Dr Bob Breach

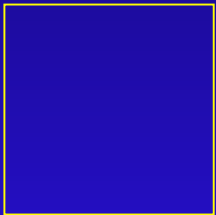
Head of Quality and Environment

Severn Trent Water

THE BONN 1 WORKSHOP- OCTOBER 2001



**AWWA -American
Water Works
Association**



**EUREAU- European
Union of Water
Operators**



**WSAA - Water
Services Association
of Australia**

**ASSURING DRINKING
WATER QUALITY IN THE
21ST CENTURY**

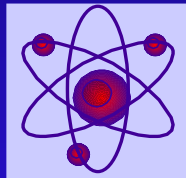
**ALTERNATIVE POLICY
APPROACHES**

Actively supported by WHO, EPA, EC etc

21st CENTURY QUALITY ASSURANCE

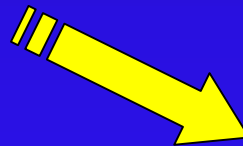
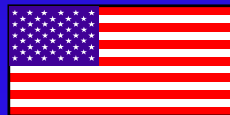
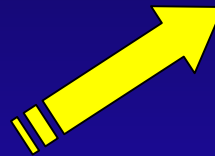
WHERE ARE WE AT PRESENT

Divergent approaches



The science

The same base
of knowledge



Different constitutional and
legislative systems

- Are the differences justifiable ?
- Are they based on historical accident or design ?
- How much should geography or constitution influence the outcome ?

THE CHALLENGE

Does the consumer believe it is safe ?

**Dealing with both the technical and
emotional perspective**

WHAT DO CONSUMERS WANT FROM THEIR WATER SUPPLY ?

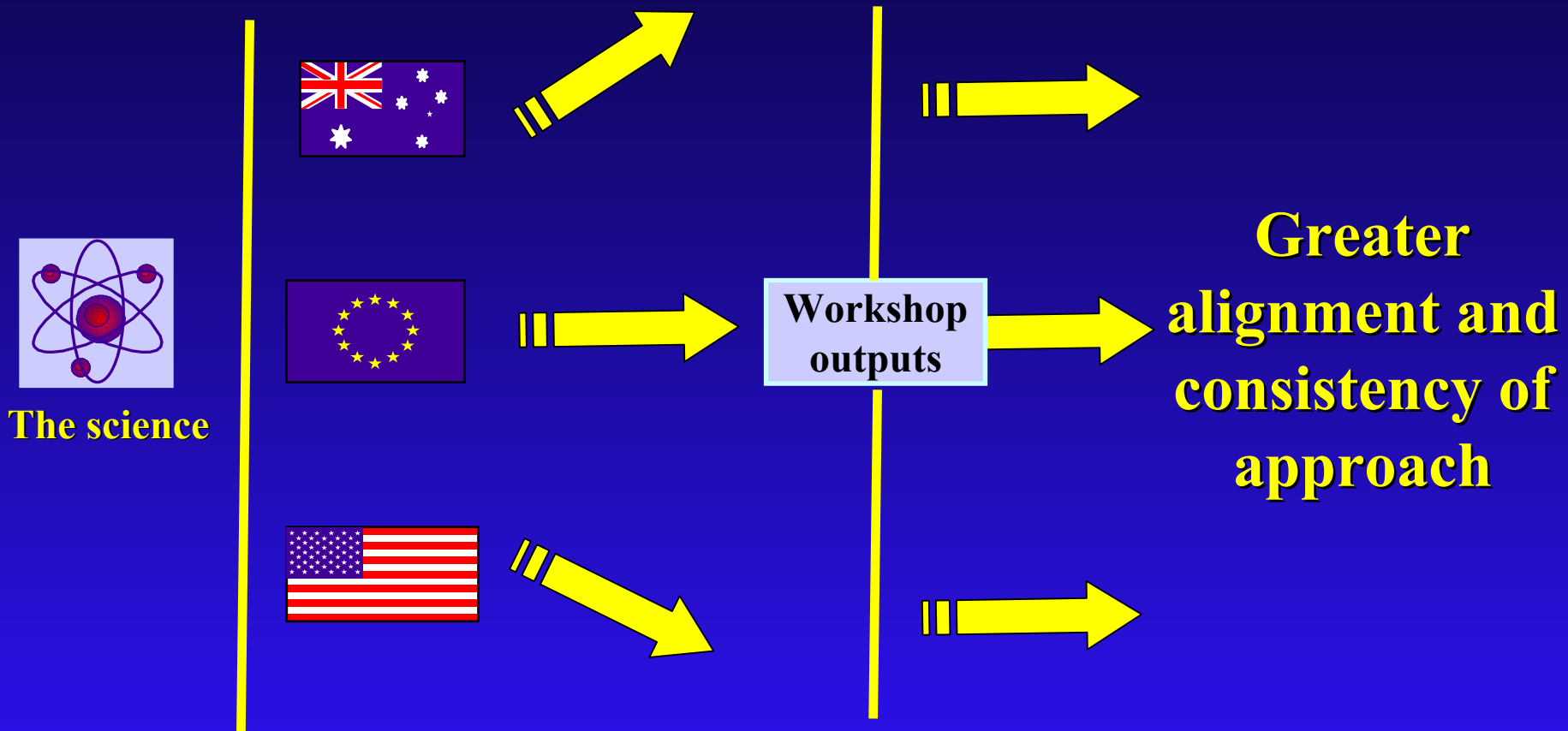
- **Must be "safe"**
 - free from “ harmful bugs”
 - free from “chemicals”
- **Taste and look good**
- **Continuously available at the right pressure**
- **Affordable**



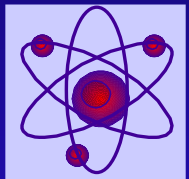
We are all in the vital business of public health protection

WHERE MIGHT WE GET TO

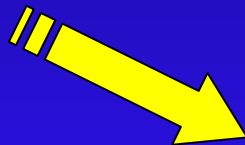
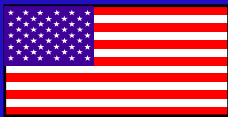
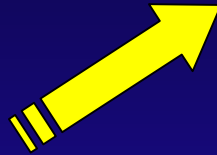
The Bonn 1 goal



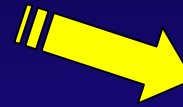
THE BONN 1 OUTPUTS



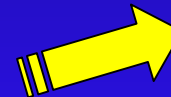
The science



Workshop
outputs



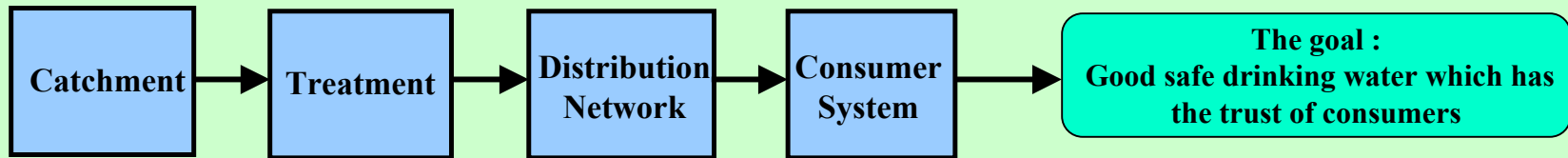
- The Bonn principles
- A draft “toolbox”



ASSURING DRINKING WATER QUALITY - THE GOAL

**Good safe drinking
water which has the
trust of consumers**

ASSURING DRINKING WATER QUALITY - THE CORE PROCESSES



Must manage the whole process from source to tap

Must manage the whole process from watershed to faucet

KEY CONCLUSIONS FROM BONN 1

Institutional arrangements

- Clarity of responsibility from source to tap
- Proper legal framework with independent regulation
- Transparency of process

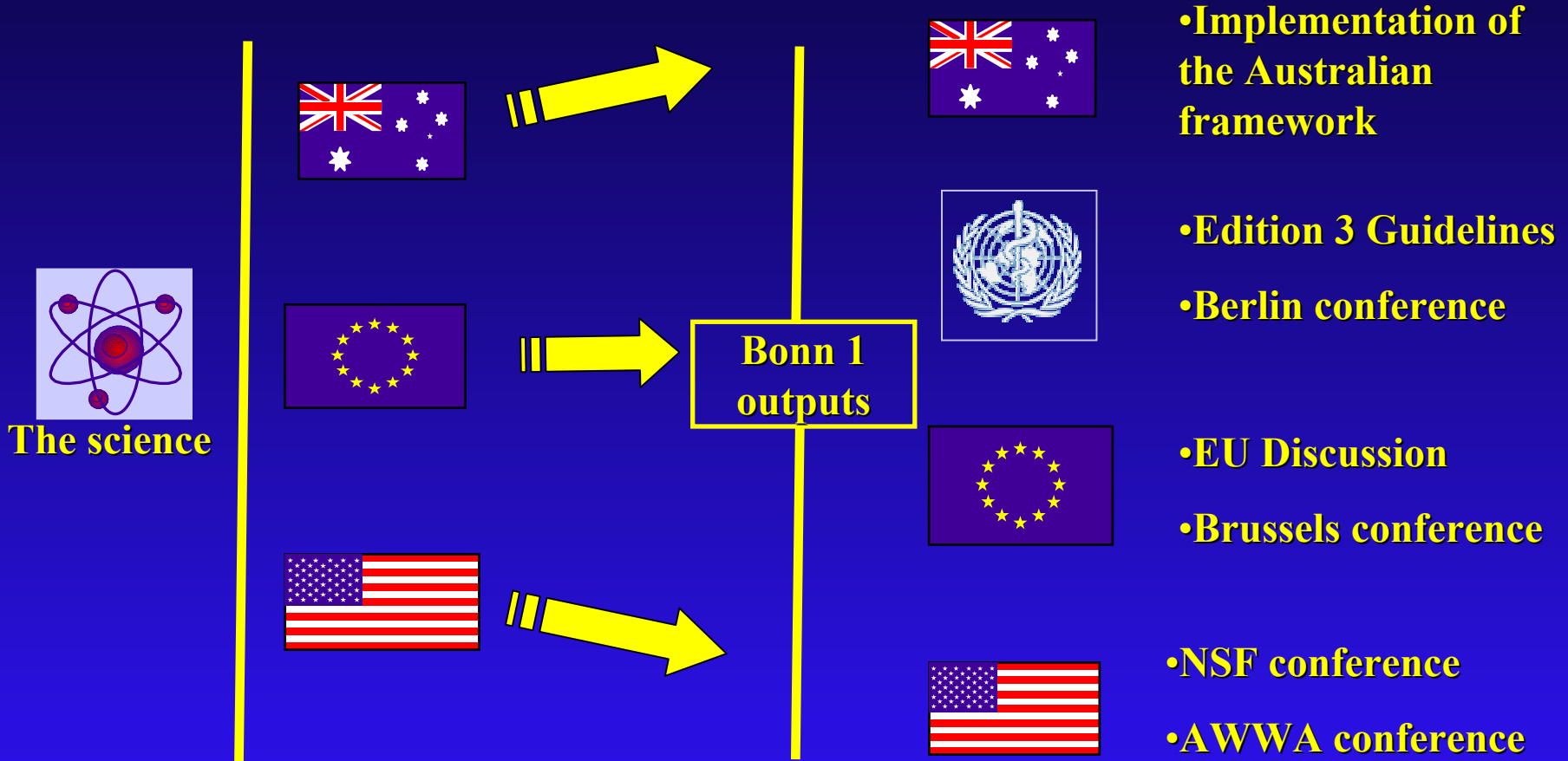
Management control systems

- Main elements
 - System wide risk based assessment from catchment to tap
 - Identification of most effective control points
 - Effective operational and management plans to deal with normal and abnormal operating conditions
- Critical to have measures to assess the effectiveness of controls

End product testing

- Will continue to play a key role but much greater emphasis on management control systems
- The number of parameters for which statutory output standards are set should be kept to the necessary minimum

WHAT HAPPENED AFTER BONN 1 ?



THE PURPOSE OF BONN 2

- **Understand developments since Bonn 1**
- **Review and update Bonn principles**
- **Produce a Charter which**
 - **encapsulates these principles**
 - **is consistent with and linked to the new WHO guidelines**



Coordinated by IWA plus all original sponsors

THE BONN 2 OUTPUTS

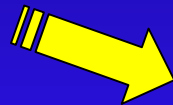
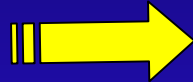
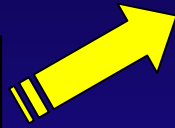
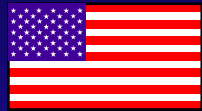
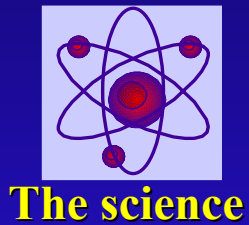
- **The Bonn Charter for safe drinking water**
- **The Bonn Charter implementation guide**

Closely linked to the new WHO guidelines

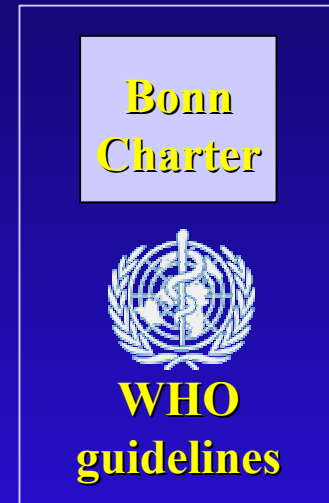
FROM BONN 1 TO 2

Bonn 1

Bonn 2



Bonn
principles
and toolbox



The global dimension

THE GOAL

**Good safe drinking
water which has the
trust of consumers**

Bonn 2 reaffirmed the goal

THE PROVISIONAL BONN FRAMEWORK

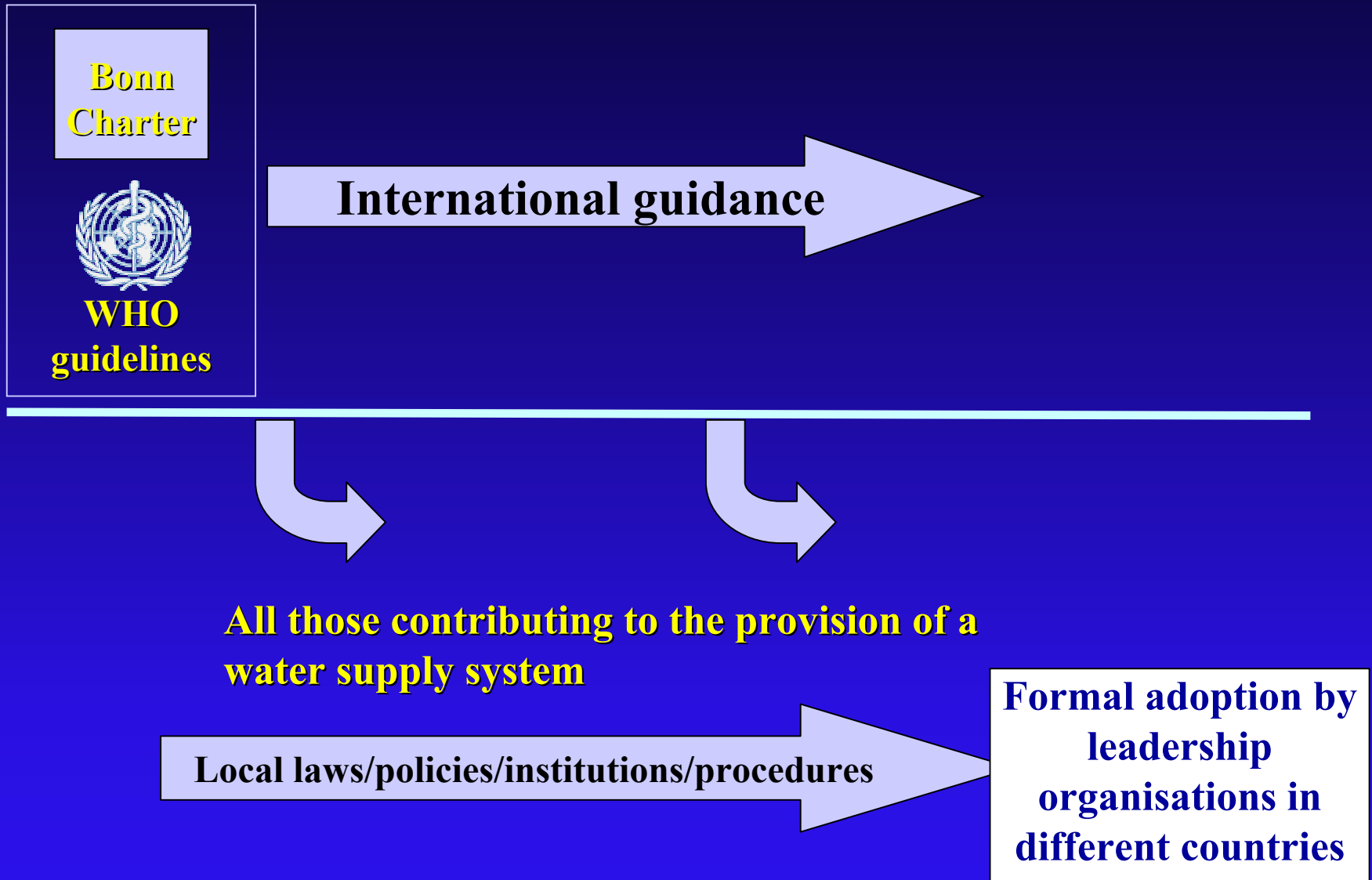


WHO IS THE CHARTER FOR ?

All those collectively contributing to the provision of a water supply system from catchment to consumer

In conjunction with the other stakeholders water suppliers are pivotal to the success of water quality management plans

THE FUTURE FRAMEWORK ?



PROMOTING THE CHARTER

- **Final document being produced**
- **Formal launch at IWA biennial conference in Marrakech**
- **What can be done at an international level ?**
- **What can be done at a national level ?**

**So what does this mean
in practice?**

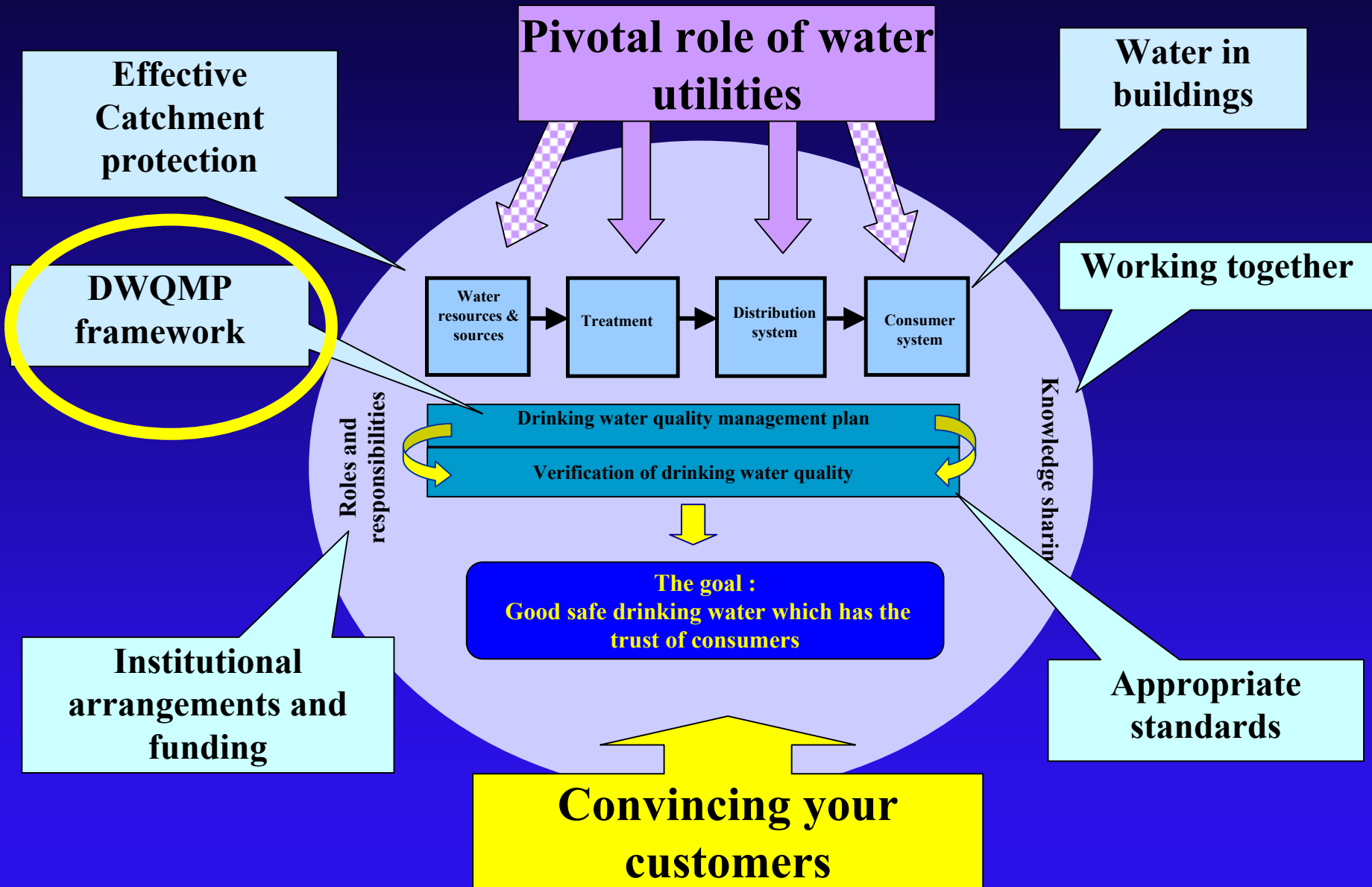
APPLIES TO ALL TYPES OF SYSTEM

- **Small systems – Simplified generic approach**
- **Large/complex systems – Tailored approach but based on common framework**

APPLIES TO ALL QUALITY ISSUES

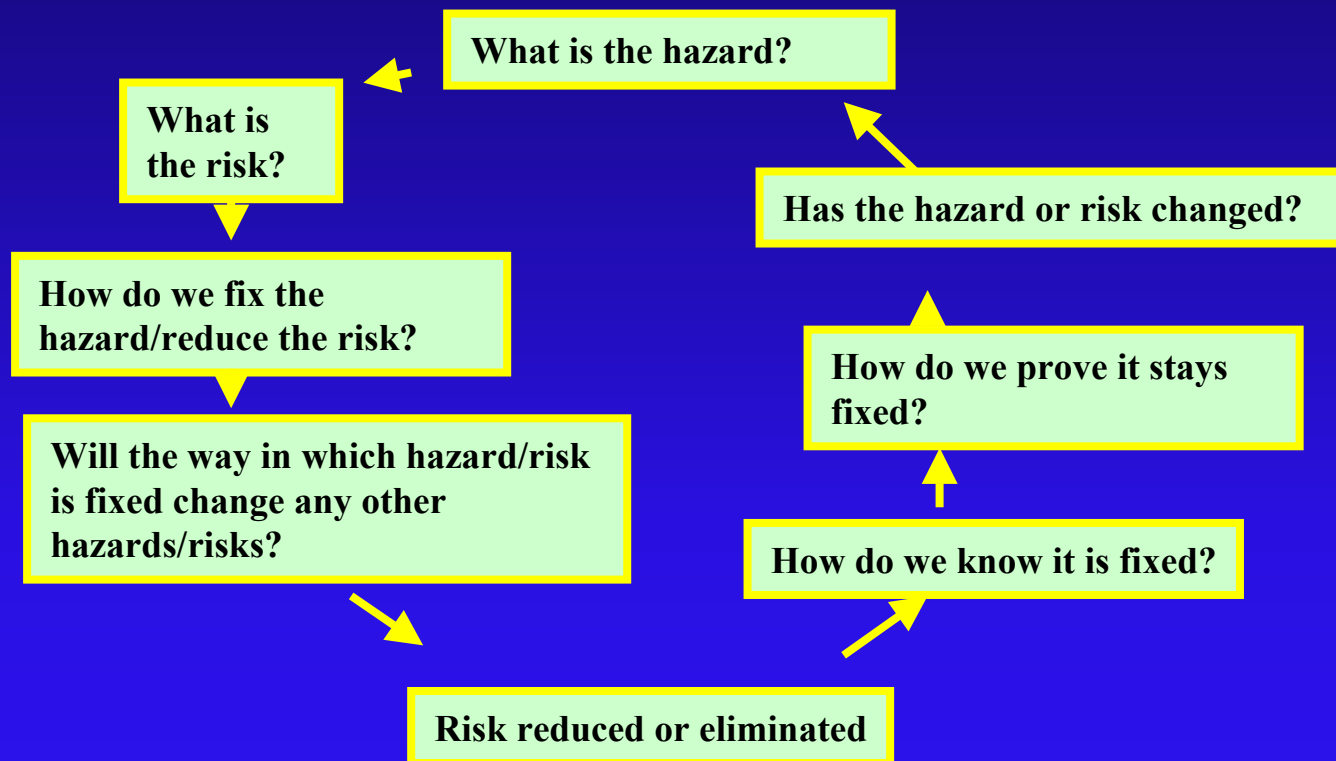
- 1. Microbiological – absolute safety**
 - **System wide appraisal of risks and effective controls**
- 2. Customer acceptability – appearance/taste**
 - **If customers do not like to drink our water how can they trust the things that they cannot detect**
- 3. Chemical – whether real or perceived eg**
 - **Algal toxins – effective controls without the need for lots of ineffective and complex monitoring**
 - **Endocrine disruptors – EU consensus emerging about the benefits of risk based approach**

THE BIG PICTURE

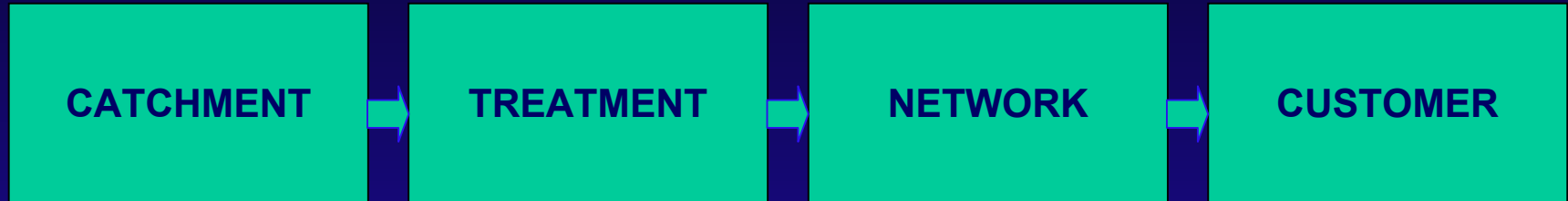


RISK ASSESSMENT/MITIGATION

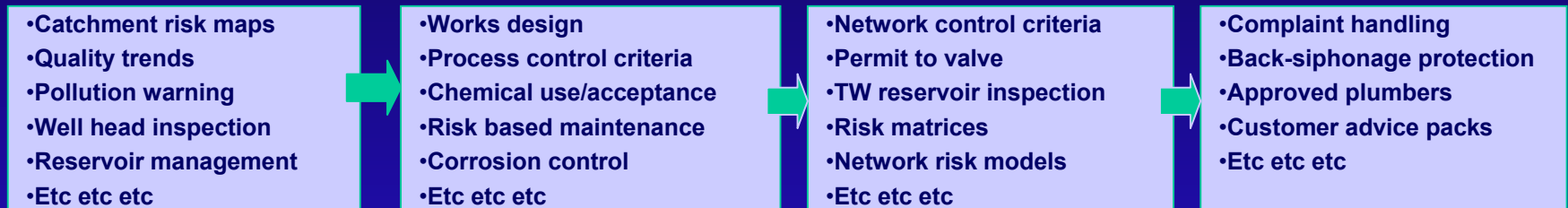
- DWQMPs are based on proactive risk assessment
- HACCPs are one but not the only effective form of risk assessment



WHAT MIGHT IT LOOK LIKE IN A LARGE UTILITY ?



Process focused DWQMP



Generic DWQMP

Eg : Security/Emergency plans/Hygienic work practice/Staff training/Materials use/Near miss reporting :assessment

Quality verification

- Process verification
- Operational monitoring
- Compliance monitoring

Transparency

Utility Board

Regulator

Health officials

Customers

WHAT DO CUSTOMERS GET OUT OF THIS ?



- Better drinking water
- Improved quality reliability
- Greater confidence in their supplies
- Greater confidence in their suppliers

Good safe drinking water which is trusted by them

WHAT DO COMPANIES GET OUT OF THIS ?

- **Satisfied customers who trust their suppliers**
- **Regulatory harmony**
- **Much greater due diligence if things go wrong**
- **More cost effective operation and monitoring**

Good safe drinking water which has the trust of customers

HOW DO WE REASSURE OUR CUSTOMERS ?

“Sex hormones in drinking water”

“Killer bug regularly detected in water supplies”



Think differently



SUMMARY



- **Considerable worldwide debate about a new approach to managing drinking water quality**
- **Common ideas becoming more aligned**
- **Evolution not revolution**
- **The Bonn Charter and WHO guidelines aim to provide a worldwide framework of best advice**
- **But leadership and specific implementation plans can only work at a local level**

We must continue to build consensus and momentum through dialogue



THANK YOU