

3M Science.
Applied to Life.™

Common Challenges of a Global Respiratory Protection Program

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Standardized Respiratory Protection Programs

Top benefits and challenges

Benefits



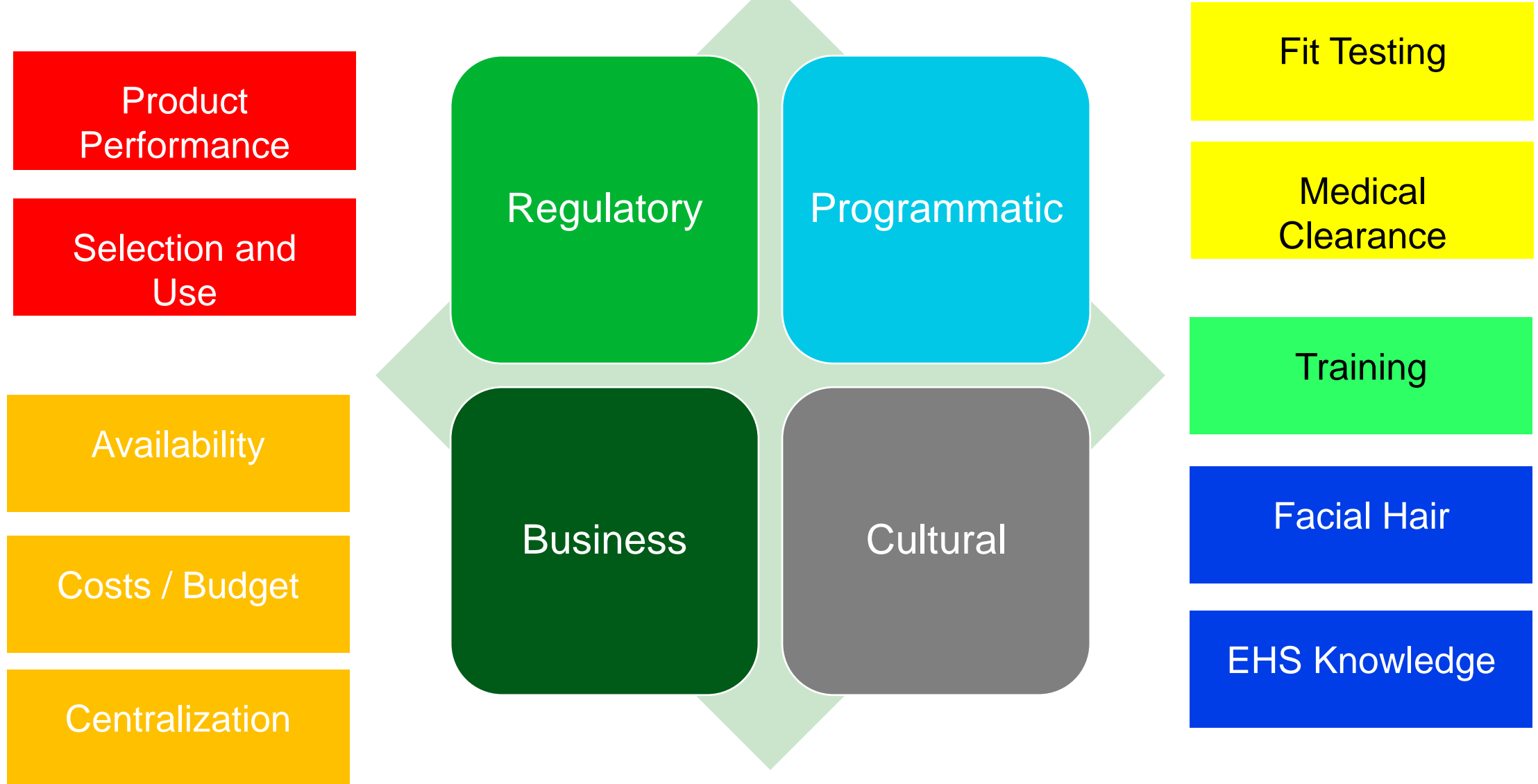
- Consistent protection
- Consistent metrics
- Operational efficiency

Challenges

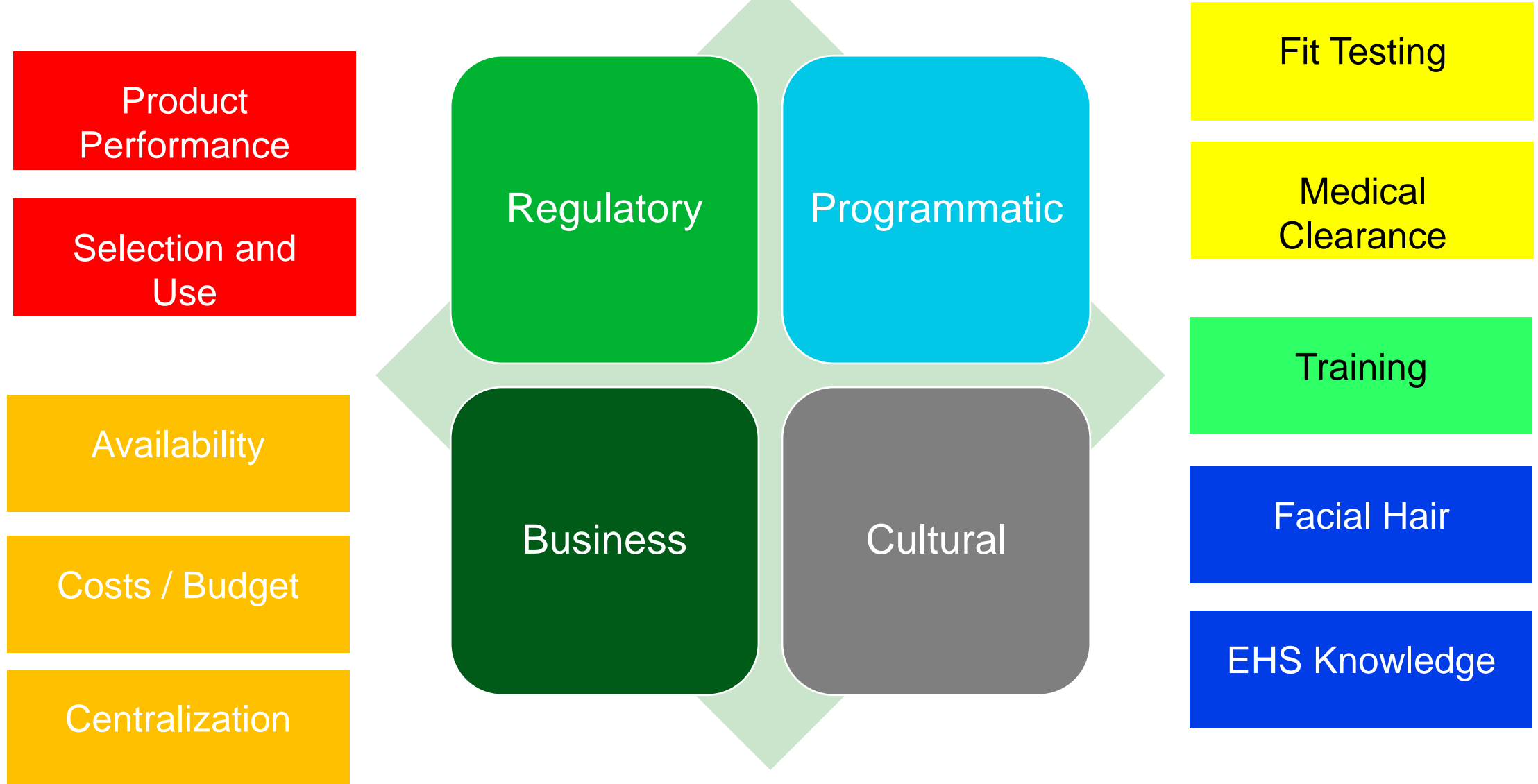


- Regulatory differences
- Product availability
- Local decision making

Key Considerations in a Global Respiratory Protection Program



Key Considerations in a Global Respiratory Protection Program



Respiratory Protection Standards

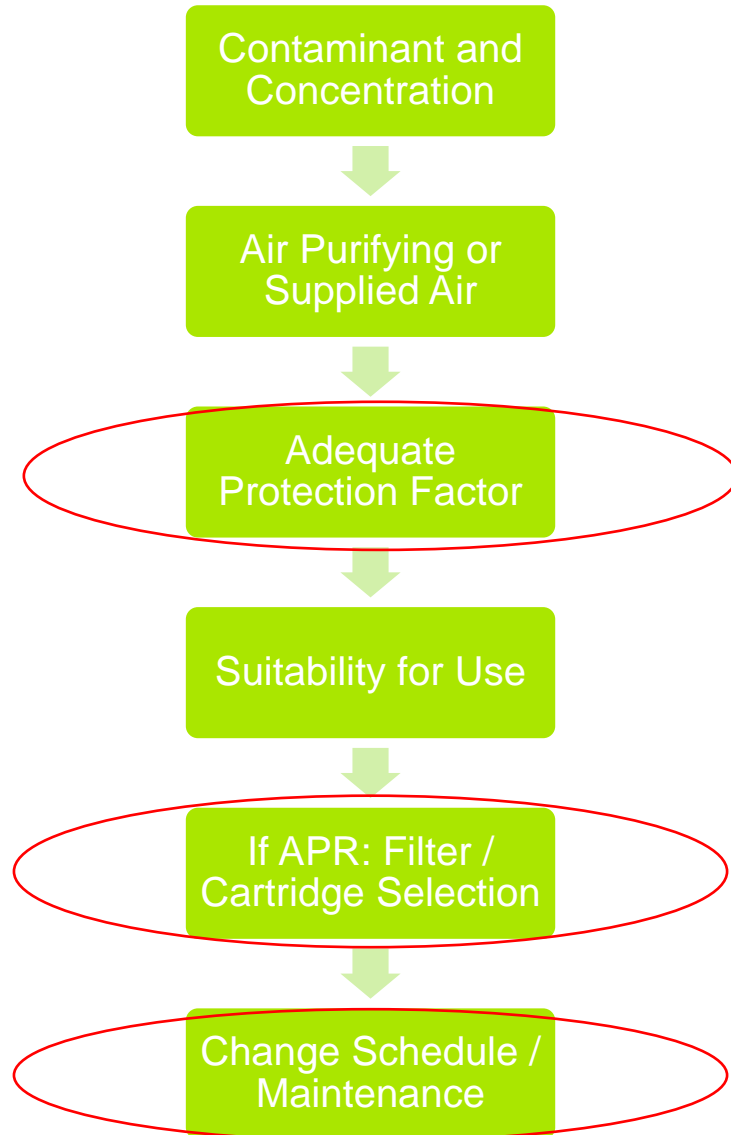
Product Performance

- Two main approaches: NIOSH and CE/EN
 - NIOSH
 - CE/EN
- Asia / Latin America
 - Accept NIOSH or CE/EN
 - Use approved test reports with local mark
 - Create their own



Protection is the Key

Respiratory Protection Standards



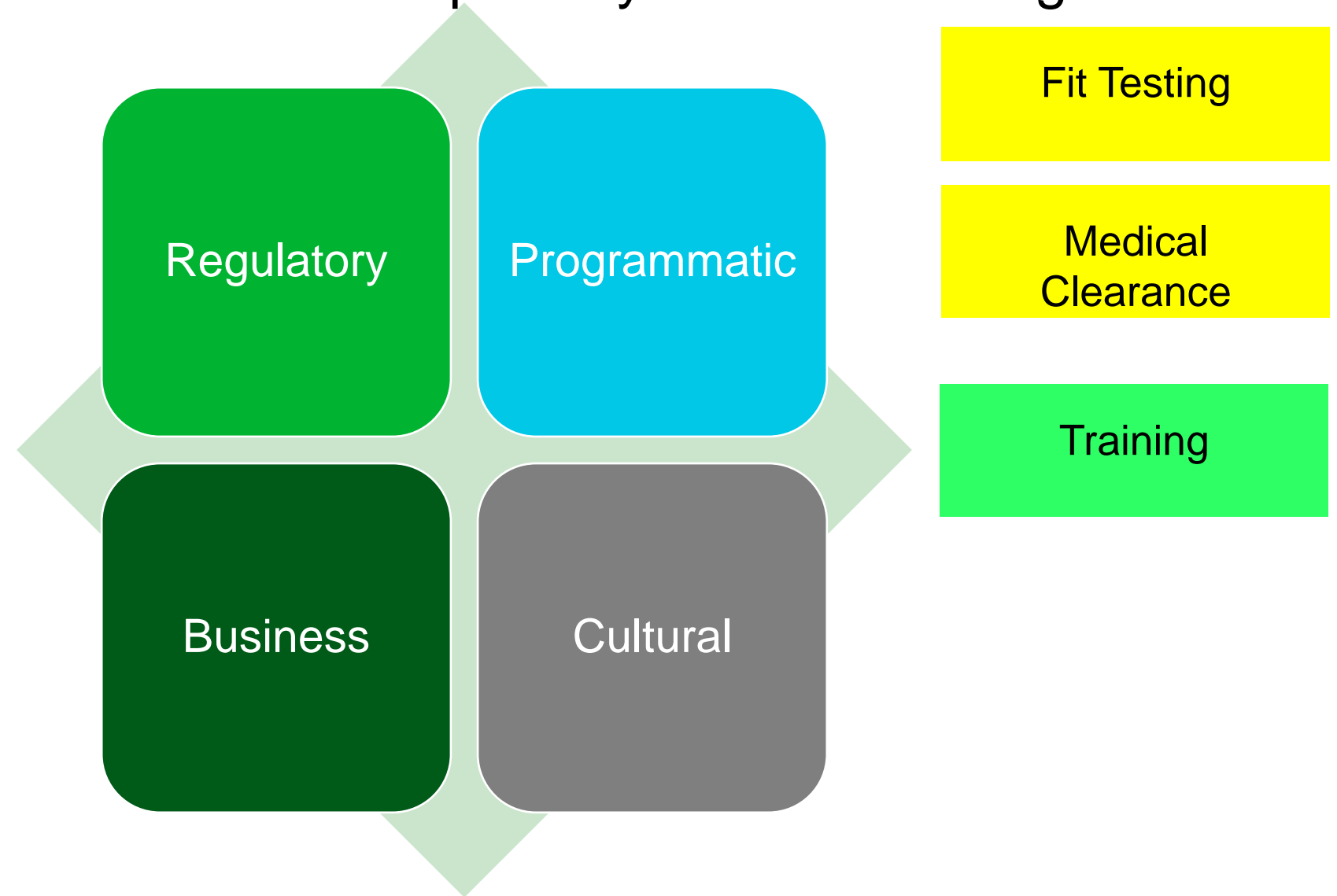
Selection and Use

- **Filter / Cartridges**
 - Differing performance standards and occupational exposure limits may result in differences in service life
- **Protection factors**
 - Assigned at the local / country level
 - May default to laboratory test values (e.g. Nominal Protection Factors)

APF Comparison

Respirator	OSHA APF	EN 529 NPF	UK APF	China APF
■ Half Mask PAPR				
<i>EN P1</i> <i>KN/P 90</i>	NA	4	4	50
<i>EN P2</i> <i>N,R,P95</i> <i>KN/P 95</i>	NA	12	10	50
<i>EN P3</i> <i>N,R,P99/100</i> <i>KN/P 99)</i>	50	48	20	50
■ Full Facepiece PAPR				
<i>EN P1</i>	NA	5	10	200-1000
<i>EN P2</i> <i>N,R,P95</i> <i>KN/P 95</i>	NA	16	20	200-1000
<i>EN P3</i> <i>N,R,P99/100</i> <i>KN/P 99)</i>	1000	1000	40	200-1000

Key Considerations in a Global Respiratory Protection Program



Fit testing

Decisions:

- Required or suggested?
- Qualitative or quantitative or both?
- Qualification/selection of fit tester
- Procedure, if not locally regulated
- Frequency



Benefits

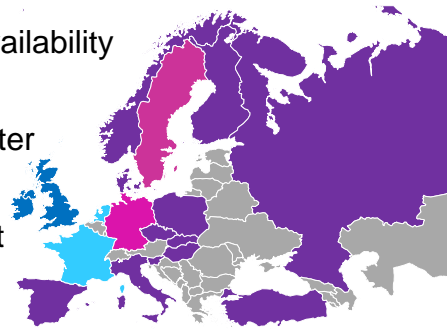


Challenges



- Documented individual fit
- Great training tool
- Important to pick size and model
- Required in some countries

- Equipment availability
- Trained fit tester
- Time and cost



Medical Clearance

Decisions:

- Required, suggested, not an element?
- On-line or in person?
- Qualification / selection of medical professional
- Procedure, if not locally regulated
- Frequency



Benefits



Challenges



- Ensure medical capability
- Required in a few countries

- Local HR policies
- Local privacy laws
- Qualified medical professionals

Training



Hazards

- Health effects content can be standardized but exposure limits are locally set



Respirator Use, Maintenance

- Use and maintenance can usually be standardized but facilities and local regulations may dictate specific training



Delivery Method

- Presentations, on-line courses and videos can be shared globally but need to be in local language
- Time needs to be allowed for the content



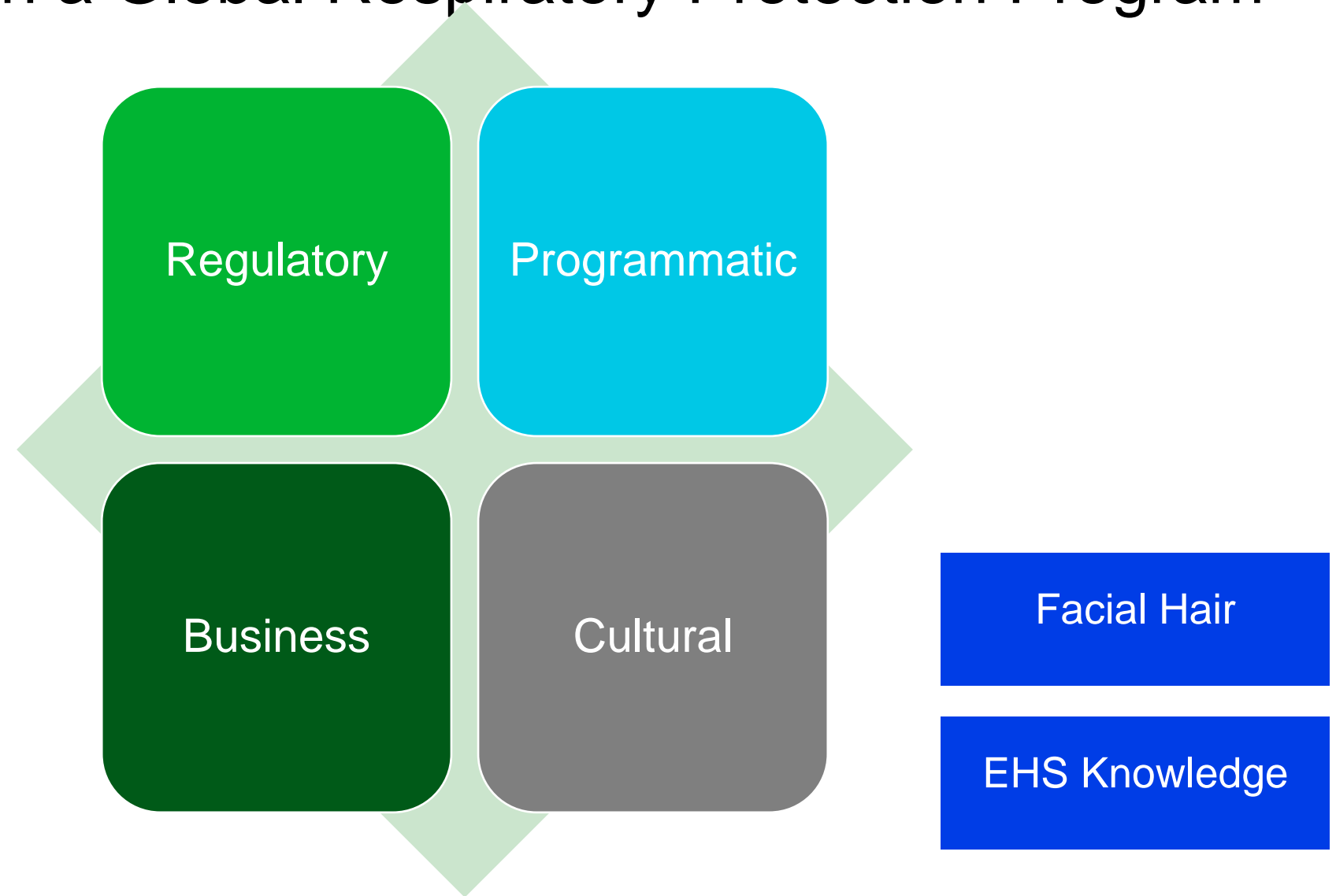
Frequency

- Global guidelines can be set as long as they accommodate local regulations. Local facility culture must also be considered

Content should be relevant, consumable and interesting

Presenter / Source should be credible and engaging

Considerations in a Global Respiratory Protection Program



Facial Hair

- “Clean shaven skin” is required for a good seal with air purifying respirators
- Many men have facial hair for religious or personal reasons
- One of the most difficult policies to enforce, even when regulations require
- Only choices for employees with facial hair in the sealing surface are
 - Shave “daily”
 - Strengthen engineering controls
 - Different work area / work tasks
 - Powered air purifying respirator with hood or helmet / loose fitting facepiece
- Need a very clear global policy



“67 percent of men surveyed in NY have beards”

“41 percent of US men who use shaving products don’t shave daily, including half of men age 18-24 (50 percent) and those age 45-54 (51 percent).”

http://www.huffingtonpost.com/2015/06/26/beard-study-new-york_n_7671860.html

<http://www.mintel.com/press-centre/beauty-and-personal-care/razors-down-41-of-us-men-dont-shave-daily-with-one-quarter-agreeing-beards-are-fashionable>

Occupational Hygiene Knowledge

Knowledge level may vary

- Availability of training
- Experience in position

Consultants may need to be vetted

IOHA Member Associations

Member organisations are highlighted in dark blue



January 1st to December 31st, 2016

Countries offering certification or licensing

- United States,
- UK
- Japan,
- Netherlands,
- Australia,
- Finland,
- Canada,
- South Africa,
- Sweden
- Mexico



Most CIHs by Country

- USA and Territories
- Canada
- China
- Australia
- Singapore
- South Korea
- Malaysia
- India
- Saudi Arabia
- UK and Territories



<http://ioha.net/>
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4292192/>
<http://www.abih.org/sites/default/files/downloads/2016%20ABIH%20Statistics.pdf>

3M's *Internal* Global Respiratory Protection Plan

3M Global Safety & Health Plan Overview

As required by the 3M Safety & Health Policy, the 3M Global Safety & Health Plan (GSHP) provides a management system to address safety and health risks and compliance obligations applicable to each company location. It applies to all 3M locations worldwide and provides an overview of the various safety and health elements required.

While the GSHP covers the most common safety and health risks, it is not inclusive of all risks. Therefore, it is implicit in this plan that locations understand and manage their risks and comply with all applicable local government regulations.

All locations are required to complete an annual self-assessment of the elements that apply to them. Detailed requirements for implementing the GSHP are documented in the GSHP Self-Assessment available through the EHS Work Center. See the *EHS Management System User Guide* for detailed instructions on completing and submitting the annual self-assessment.

The elements of the GSHP are as follows:

1.1 Location Safety and Health Plan Description

A written location-specific Safety and Health Plan designed to manage the facility's safety and health risks is required. The plan shall document the management systems and procedures for implementing each applicable element of the Global Safety and Health Plan.

1.1.1 Leadership Attributes

Leadership Attributes describe how Site Leadership integrates EHS performance into goal-setting.



3M Respiratory Protection Manual

Version 3



3M's Global Respiratory Protection Manual*

“This manual supports the program and provides enough information for Respiratory Protection Program Administrators to develop, implement, and maintain the program at their facilities. It provides guidance on [developing the written program and assistance in selecting appropriate respiratory protection, conducting training, fit testing, and respirator medical evaluations, appropriate recordkeeping, and regular program evaluations.](#) This manual also provides assistance for making choices related to the program, as well as discussions of implications of those choices.

The manual will identify [minimum requirements, and good practices.](#) Ensure that you are also [following local regulations](#) for respirator selection and use.”

*3M's internal plan for 3M employees

3M's Global Respiratory Protection Program Elements*

"The Global Safety and Health Plan requires that all 3M facilities where respirators are used develop a respiratory protection program. The program includes the following requirements:

* Determine the need for the use of respirators through documented **exposure assessments** and if respirators are being used voluntarily.

* If respirator use (required or voluntary) is authorized, a qualified **Respiratory Protection** professional has the authority to effectively

* Develop a **written program** that outlines where and how respirators are used and by whom. See Appendix A: Sample Respiratory Protection Program for an example of a written program.

* Annually **evaluate the program** to determine if it meets these general requirements.

* Choose respirators that adequately **protect employees** and meet 3M and local requirements.

* Conduct respirator **medical evaluations** for all employees who wear respirators.

* Conduct **annual training** for employees required to wear respirators.

- Sets clear program direction
- Allows for local requirements
- Have not set global Protection Factors

... use respirators under voluntary use and have access to **information** about

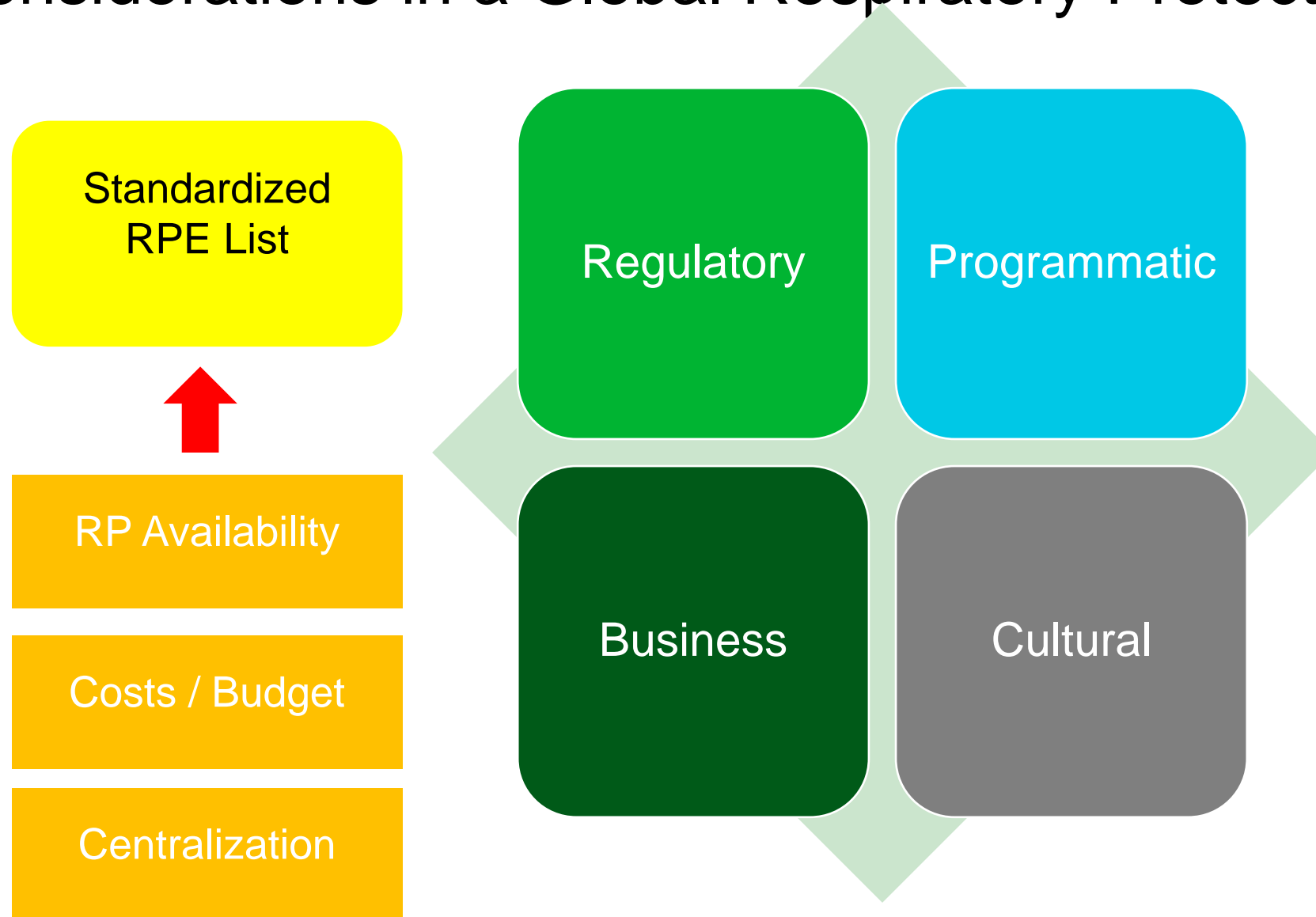
... **conduct annual fit-testing** for employees required to wear respirators, using fit-testing protocols that are recognized and approved.

* Develop **cartridge/filter change schedules** for air purifying respirator uses.

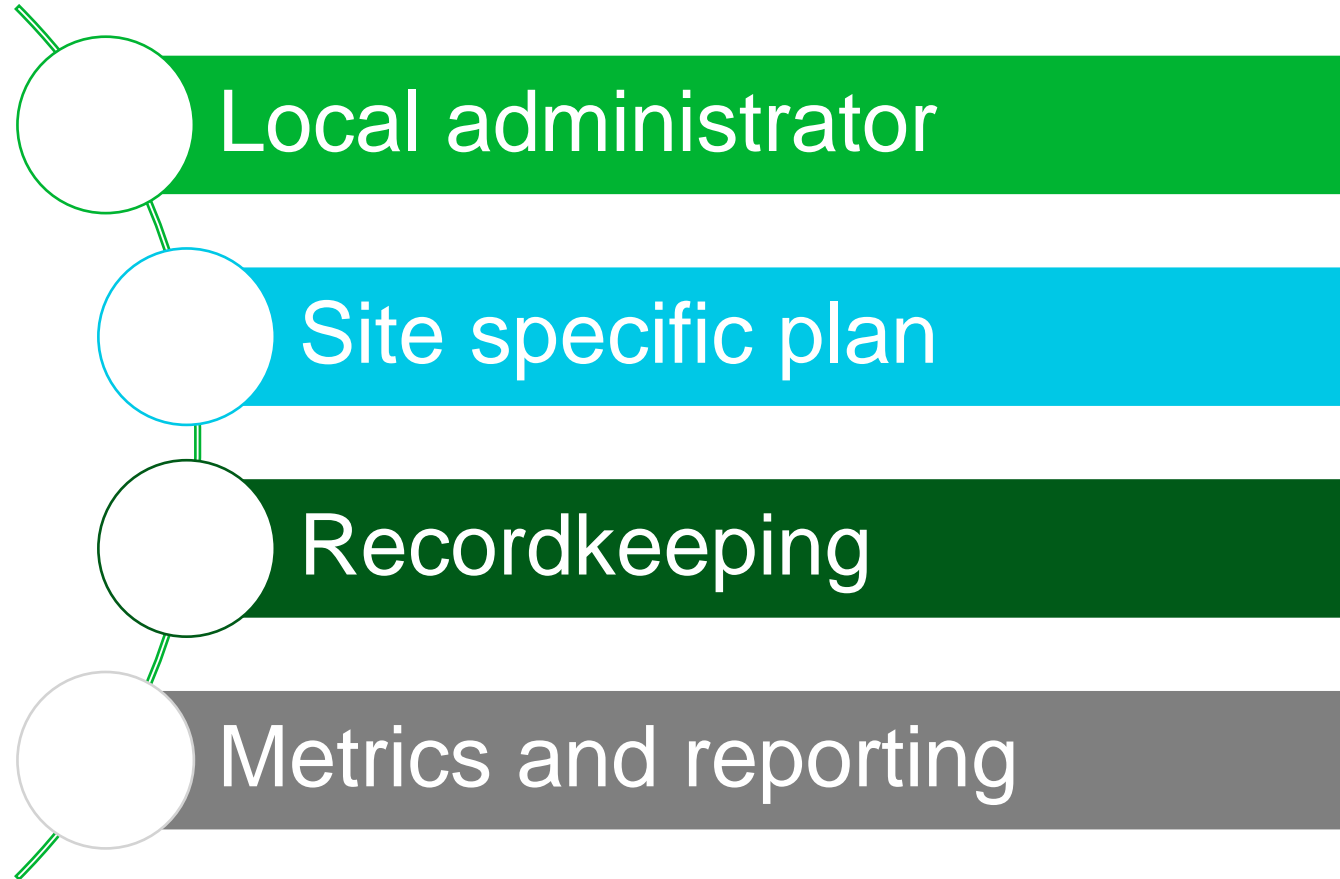
* Establish **procedures** for inspection, care, storage, cleaning, sanitizing, and maintenance of respirators. "

Based on US OSHA Regulations

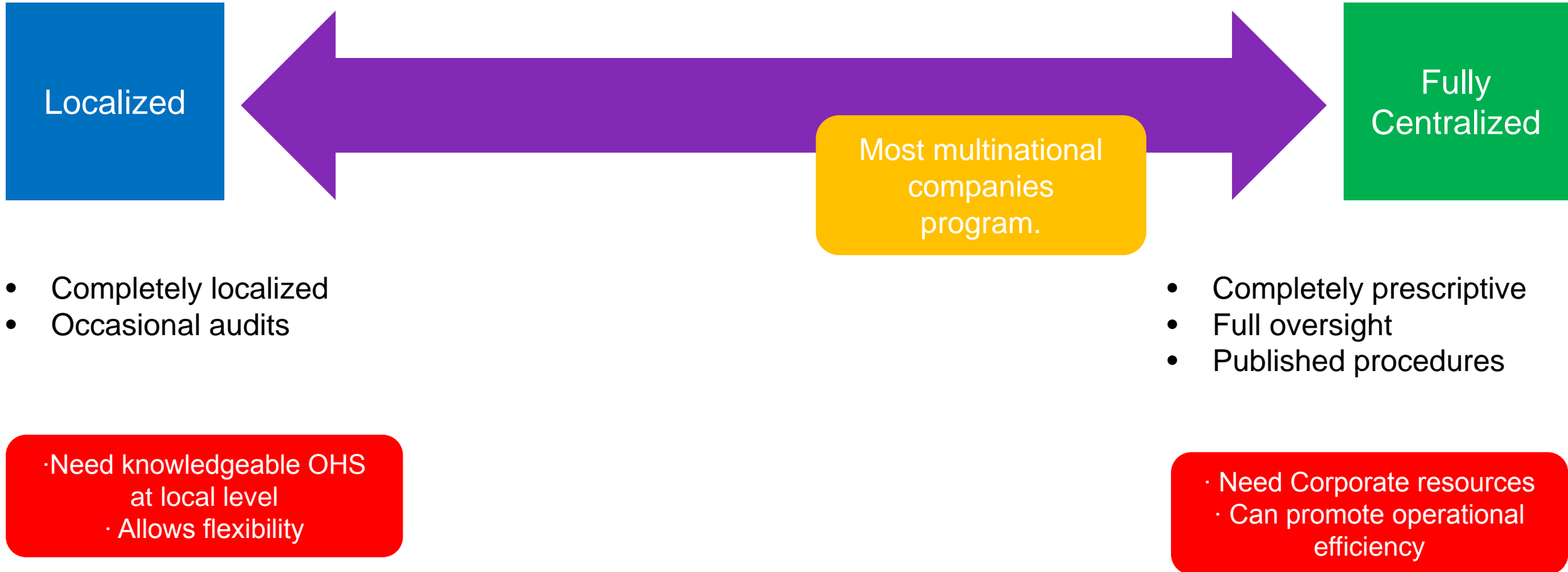
Considerations in a Global Respiratory Protection Program



Implementation



Global Respiratory Program



Summary



Global Strategy, Local Implementation

Thank you