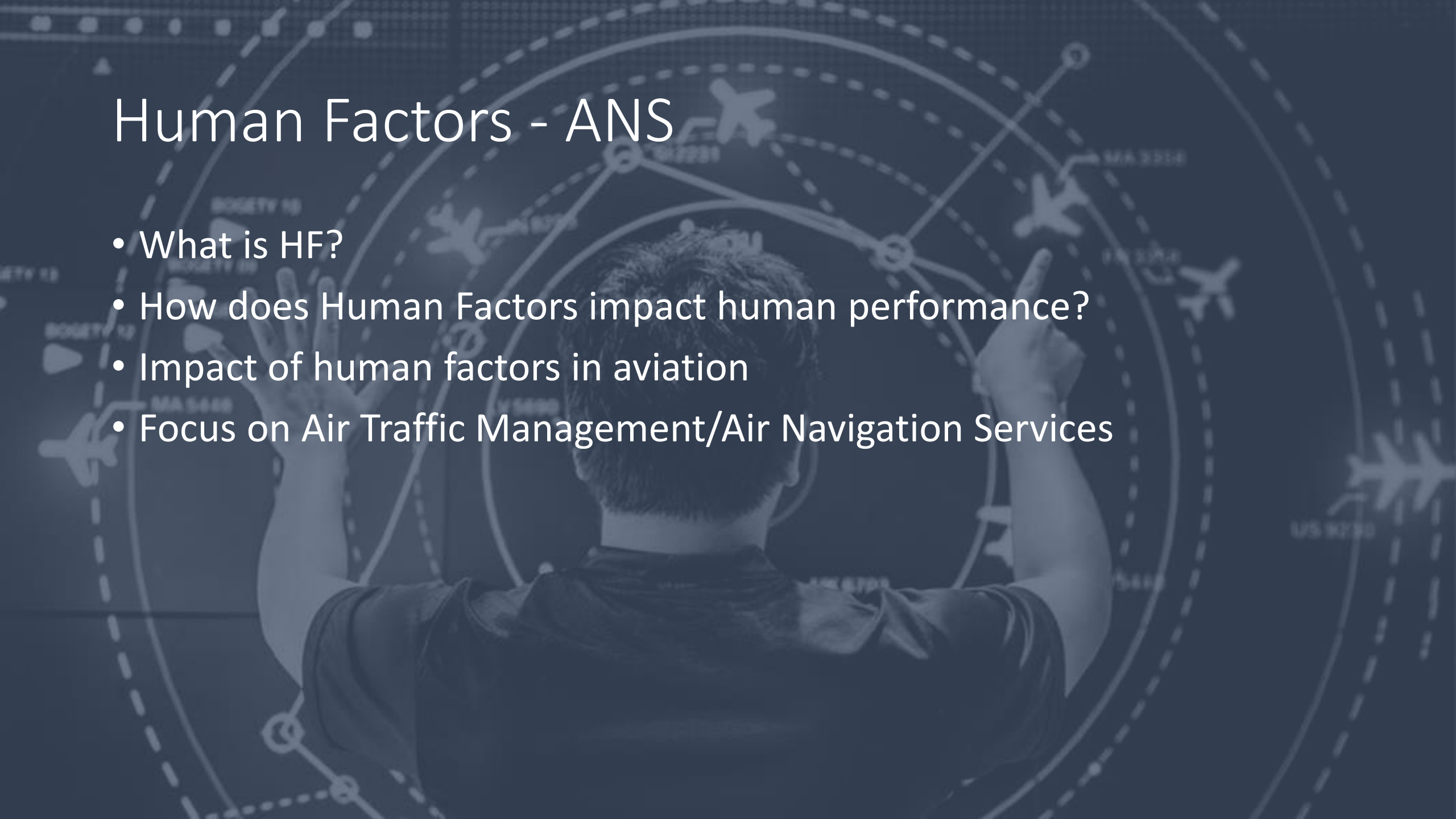# Human Factor – Focus on Air Navigation Services
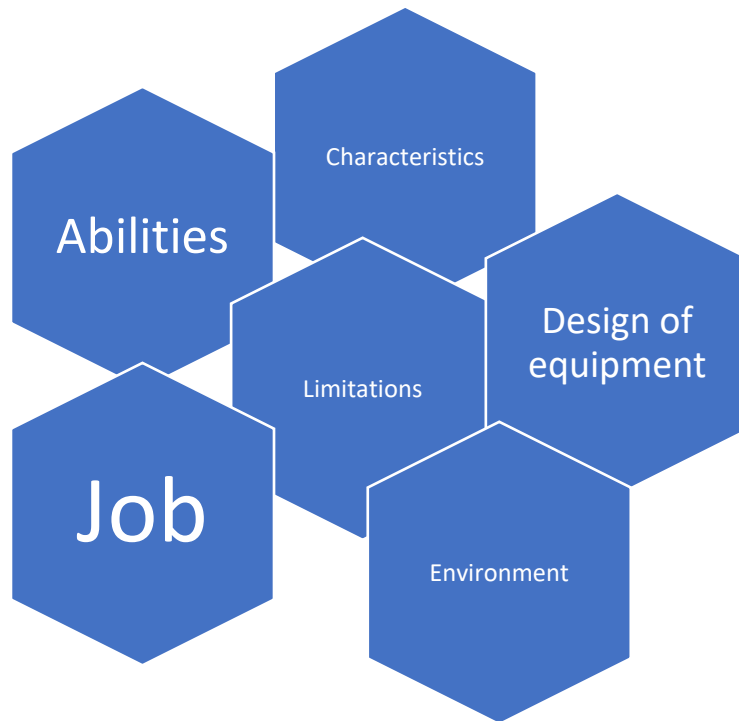
Chaitrani Heeralall

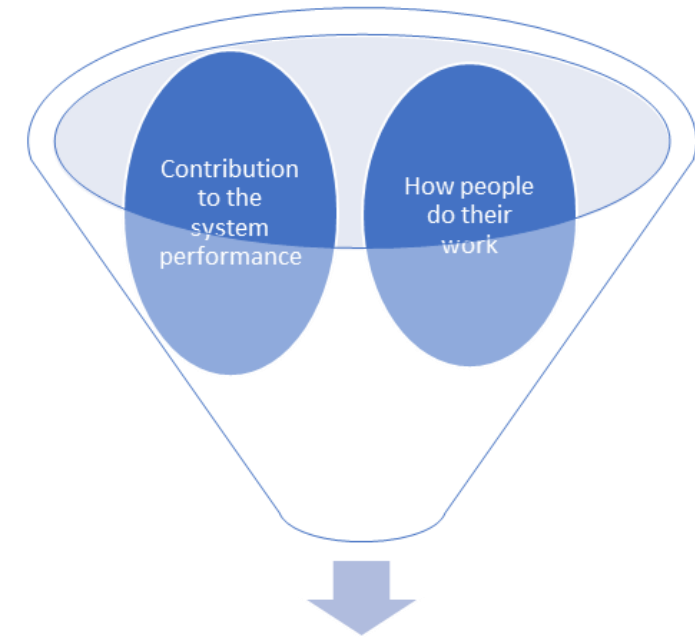Deputy Director General – Regulatory Affairs

Human Factors - ANS

- What is HF?
- How does Human Factors impact human performance?
- Impact of human factors in aviation
- Focus on Air Traffic Management/Air Navigation Services

Human Performance vs Human Factors

Human Factors

Human Performance

Impact of human factors in aviation

HUMAN ERROR HAS CONTRIBUTED TO 70% OF COMMERCIAL AIRCRAFT HULL LOSS ACCIDENTS N AVIATION, (BOEING)

3% IS ATTRIBUTED TO MAINTENANCE (WWW.MDPI.COM)

6-10% IS ATTRIBUTED TO ATC (NATIONAL ACADEMY OF SCIENCE)

Human Factors in Aviation

Design
Build
Approve
Maintain
Operate

Human Factors – Focus in ANS

ICAO objective ANS

Safety, Capacity and Efficiency

2024
102% passenger traffic projected in comparison to 2019.(ACI)
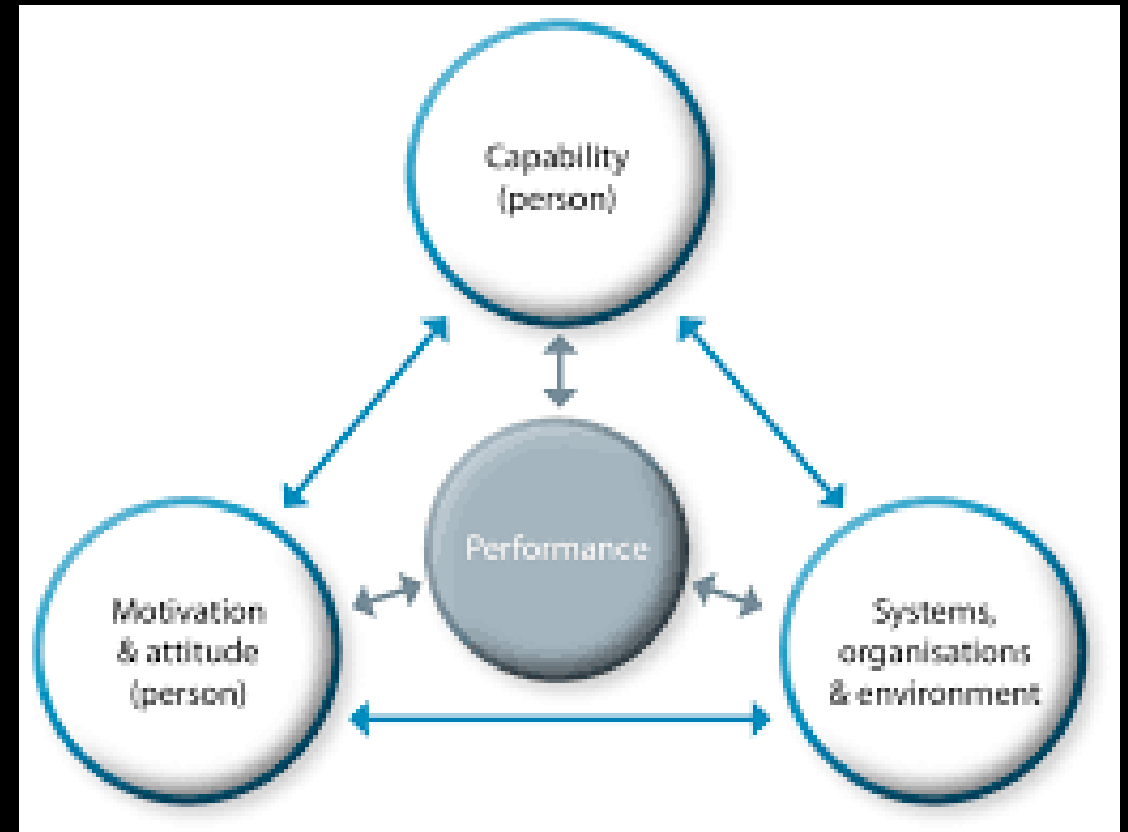
2040

4.2% (ICAO)

How will ANS manage this increase? How will human factors play into meeting this objective? What factors will affect human performance and what is human performance in ANS?
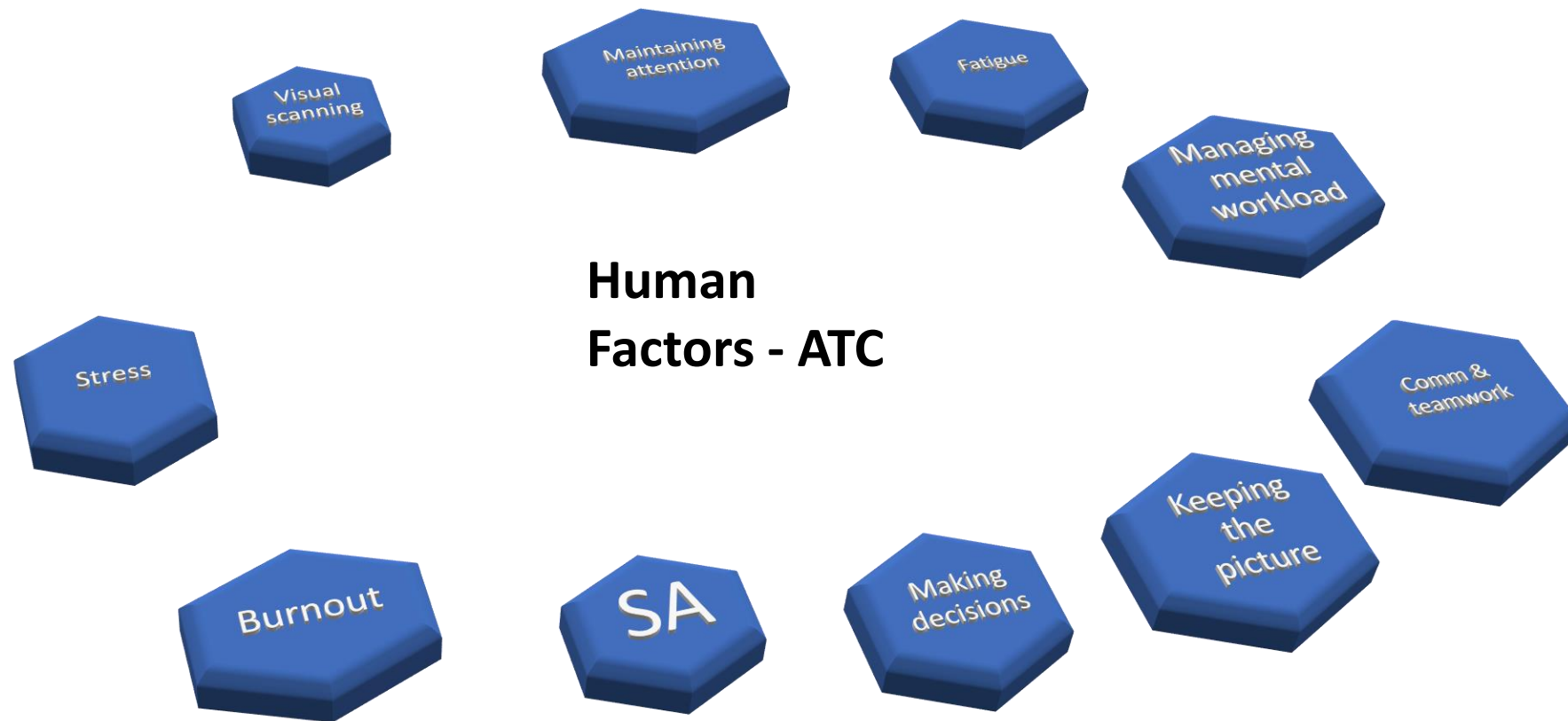

Much of the stress placed upon air traffic controllers is dependent on the organisation or culture they work in. Stefano Bonelli

What is human performance in ANS

- Performance of jobs, tasks and activities by operational personnel, individually and as a team.
  - CAPABILITY
  - MOTIVATION
  - SYSTEM SUPPORT
  - ORGANISATION
  - ENVIRONMENT

Human
Factors - ATC

Visual scanning

Maintaining attention

Fatigue

Managing mental workload

Stress

Comm & teamwork

Burnout

SA

Making decisions

Keeping the picture

Human Performance – ANS
6 challenges

Designing	Designing the right technology
Selecting	Selecting the right people
Organising	Organising the right people in the right roles and responsibilities
Ensuring	Ensuring the people have the right procedures and training
Managing	Managing human factors at the project and ANSP level
Managing	Managing the change and transition level

Some thoughts to address challenges

Selection & Recruitment

Aptitude testing

Pyschometric testing

Target audience description

Line operations

Team resource management

Procedures and job aids design

CISM

Performance observation

In Ops room

Environmental Assessment

Checklists

Standards

Simulation

Mock ups and prototyping

In training

Training needs analysis

Training design and assessment

Competency

Manpower planning

Fatigue

Shift design

Staffing assessment

Technology

Usability assessment

Mental workload assessment

Task and system modelling

ALL OF GUYANA BELONGS to GUYANA!

RALLY AROUND YOUR COUNTRY

Thank you!