



SPI Development

M. Merens

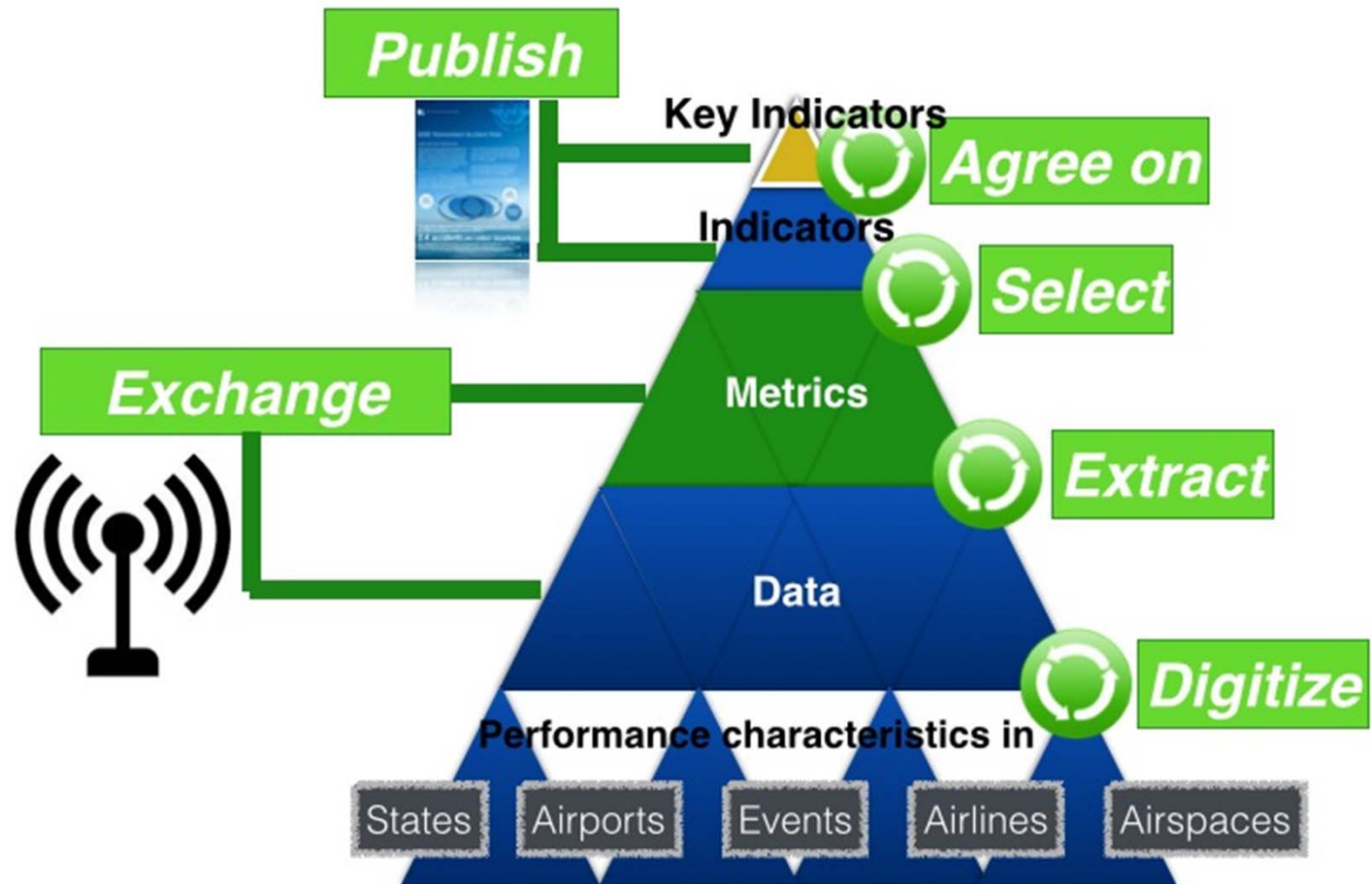


SSP SPI

- **The State should**
 - Establish lower consequence safety and/or quality indicators with appropriate target and alert monitoring (mature ALoSP).
 - Safety indicators development and selection should be congruent to the State's safety objectives and safety policy.
 - They should be appropriate and relevant to the scope and complexity of the State's aviation activities.
 - Periodic monitoring of the safety indicators for any undesirable trends, alert level breaches and target achievement should be performed.

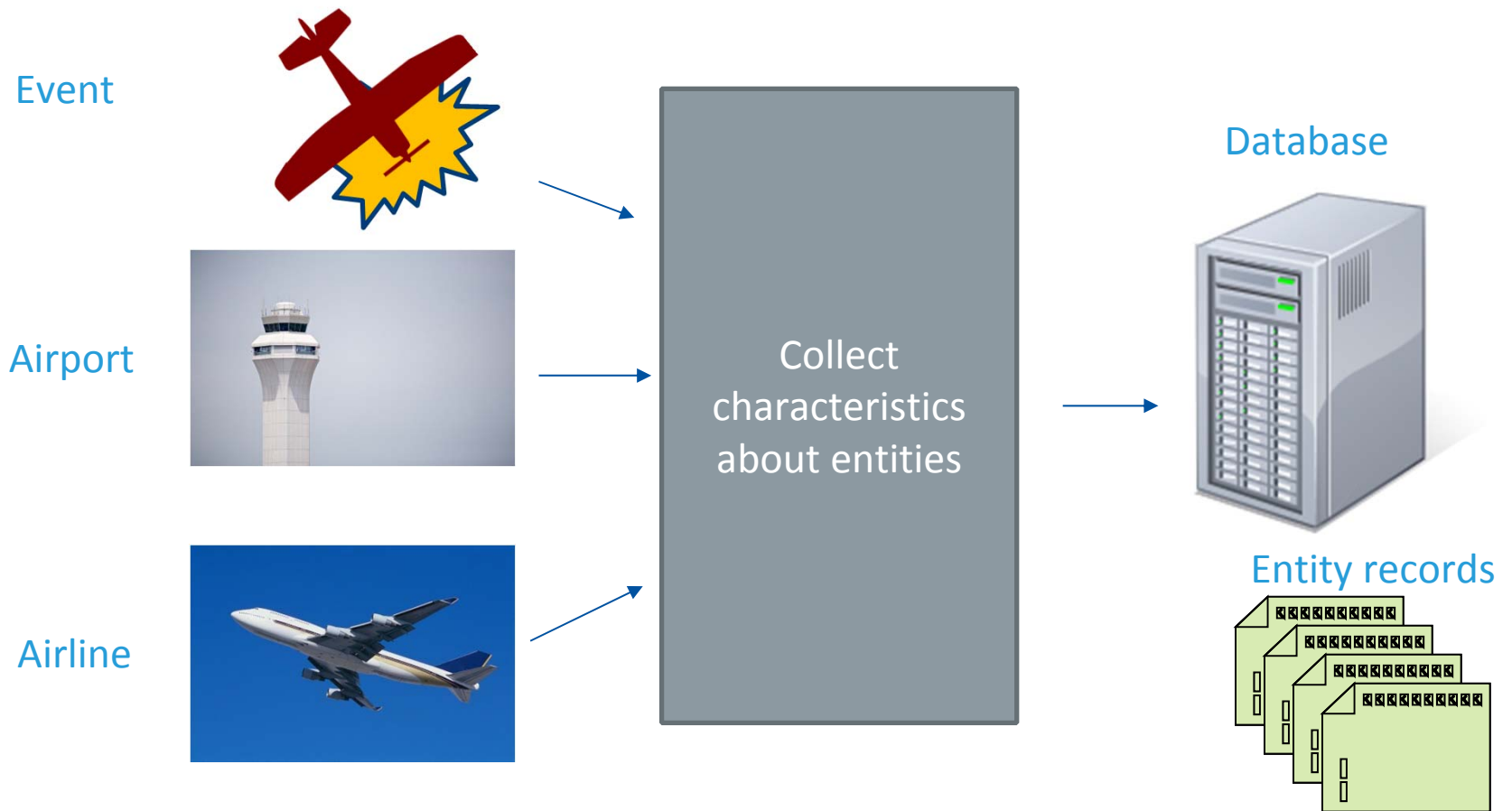


SPI Pyramid



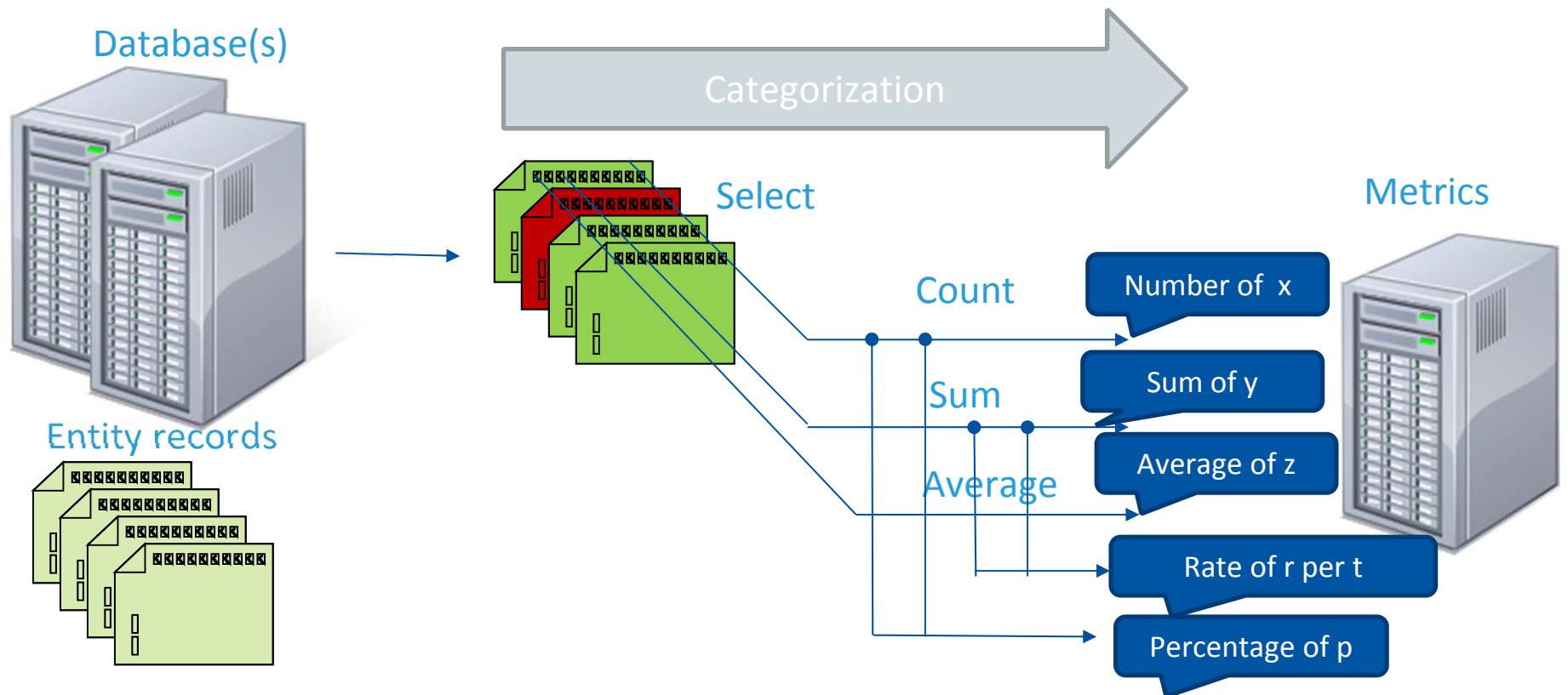


Digitization





Building Metrics





Metrics catalogue

- Keep you metrics in one place
- Publish the metrics for transparency and reusability

ICAO > Safety > METRICS CATALOGUE

METRICS CATALOGUE

ICAO provides access to its metrics via [REST APIs](#). The list of resources and metrics is provided here under. For information on how to access and use those metrics, please consult the [REST API page](#). You can also view the metrics on a map using our [Map Builder application](#).

Resources

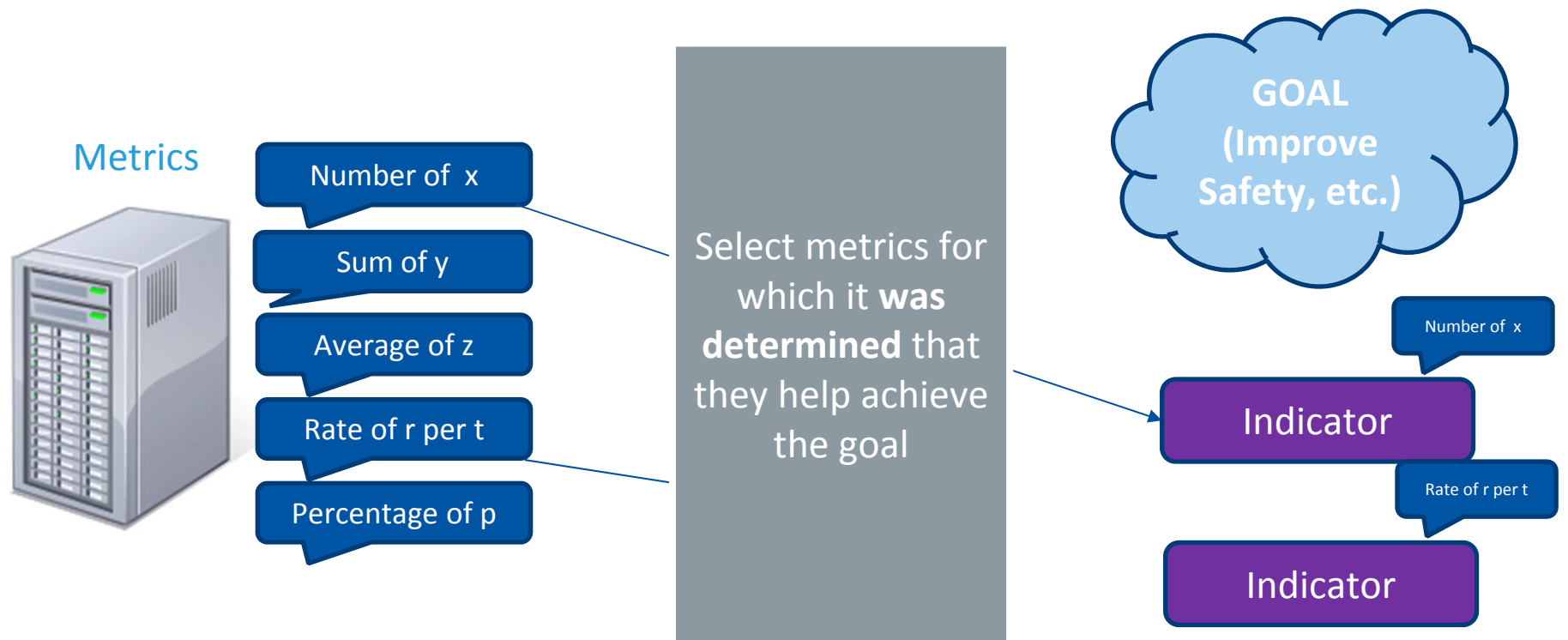
Metrics are bundled into resources. Resources resolve in unique URLs which when called, return all the metrics contained in the bundle. See the [REST API page](#) for more details. All available resources listed here under. Select a resource to see the included metrics. Click on the name of a resource to get more information about it like the source or the update frequency.

The [download link](#) can be used to quickly get the current (no history) full data for the World in CSV format. A valid API Key will be needed. Check out the Try-it section at the end of this page for more options.

Select	Name	Description	Resource
<input checked="" type="checkbox"/>	Significant Safety concerns	Bundle of 7 USOAP Significant Safety Concern State-related metrics containing current SSC status (Yes/No) and total number of SSCs and number of SSCs per technical area See: USOAP Safety Audit Information	Download CSV
<input type="checkbox"/>	USOAP Effective	Bundle of 17 USOAP State-related metrics containing current and historic Overall Effective Implementation (EI). EI by technical area	Download



Indicators



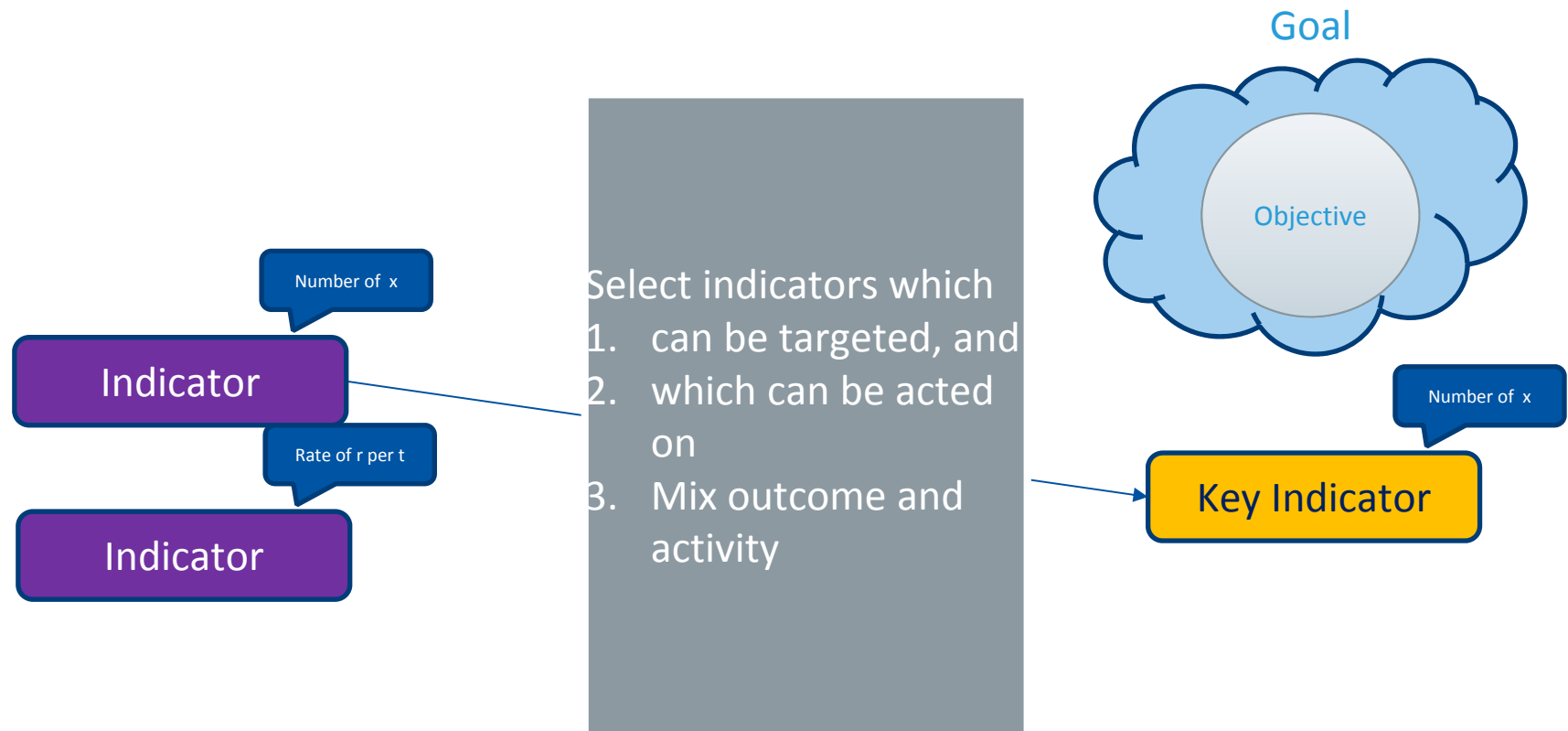


Indicator Types

- **Activities indicators** are designed to help identify whether enterprises/organisations are taking actions believed to lower risks
 - Audit score
 - Inspection results
- **Outcome indicators** are designed to help measure whether such actions are, in fact, leading to less likelihood or severity of an accident occurring
 - Number of fatalities
 - Accident rate



Key Indicators





Goal 1

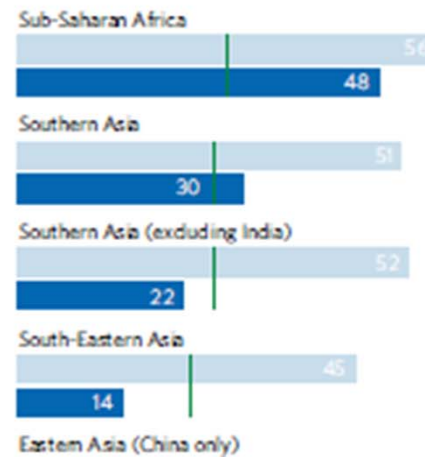
Eradicate extreme poverty and hunger

TARGET 1.A

Halve, between 1990 and 2015, the proportion of people whose income is less than \$1 a day

The extreme poverty rate has been halved, but major challenges remain

Proportion of people living on less than \$1.25 a day, 1990 and 2010 (Percentage)





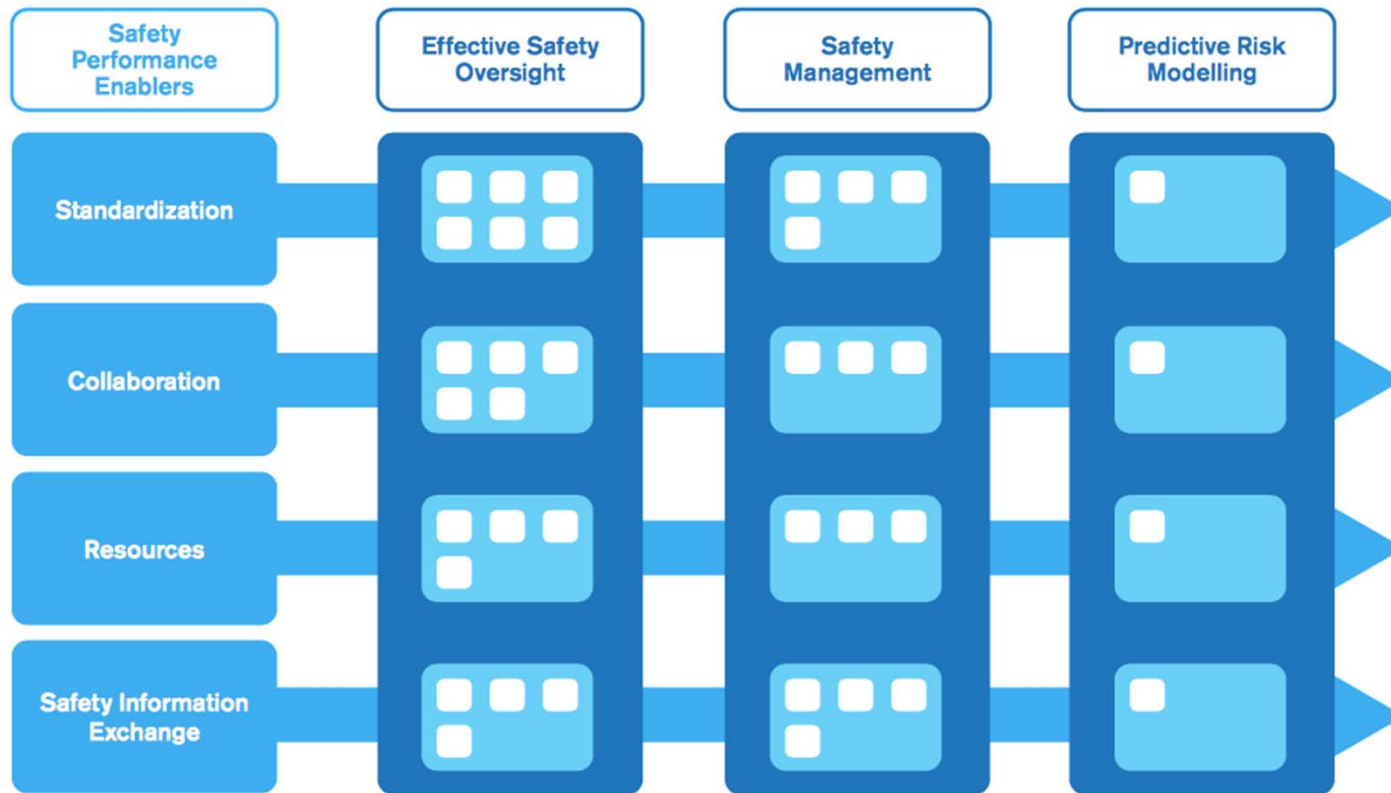
Example: Millennium Indicators

Millennium Development Goals (MDGs)	
Goals and Targets (from the Millennium Declaration)	Indicators for monitoring progress
Goal 1: Eradicate extreme poverty and hunger	
Target 1.A: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day	1.1 Proportion of population below \$1 (PPP) per day ^a 1.2 Poverty gap ratio 1.3 Share of poorest quintile in national consumption
Target 1.B: Achieve full and productive employment and decent work for all, including women and young people	1.4 Growth rate of GDP per person employed 1.5 Employment-to-population ratio 1.6 Proportion of employed people living below \$1 (PPP) per day 1.7 Proportion of own-account and contributing family workers in total employment
Target 1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	1.8 Prevalence of underweight children under-five years of age 1.9 Proportion of population below minimum level of dietary energy consumption
Goal 2: Achieve universal primary education	
Target 2.A: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	2.1 Net enrolment ratio in primary education 2.2 Proportion of pupils starting grade 1 who reach last grade of primary 2.3 Literacy rate of 15-24 year-olds, women and men
Goal 3: Promote gender equality and empower women	
Target 3.A: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	3.1 Ratios of girls to boys in primary, secondary and tertiary education 3.2 Share of women in wage employment in the non-agricultural sector 3.3 Proportion of seats held by women in national parliament
Goal 4: Reduce child mortality	
Target 4.A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	4.1 Under-five mortality rate 4.2 Infant mortality rate 4.3 Proportion of 1 year-old children immunised against measles
Goal 5: Improve maternal health	
Target 5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio	5.1 Maternal mortality ratio 5.2 Proportion of births attended by skilled health personnel
Target 5.B: Achieve, by 2015, universal access to reproductive health	5.3 Contraceptive prevalence rate



ICAO Global Aviation Safety Plan

Figure 1: GASP Framework





ICAO GASP Objectives

Figure 2: Overview of strategy to achieve GASP objectives





European Safety Plan

SAFETY PLAN FRAMEWORK		
SYSTEMIC ISSUES	OPERATIONAL ISSUES	EMERGING ISSUES
Working with States to implement and develop SSPs	COMMERCIAL AIR TRANSPORT BY AEROPLANES	New products, systems, technologies and operations
Working with States to foster the implementation of SMS in the industry	Runway Excursions	Environmental factors
Safety Management enablers	Mid-air Collisions	Regulatory considerations
Complexity of the system	Controlled Flight Into Terrain	
Competence of personnel	Loss of Control In Flight	
	Runway Incursions	
	Fire, Smoke and Fumes	
	OTHER TYPES OF OPERATION	
	Helicopters	
	General Aviation	
HUMAN FACTORS AND PERFORMANCE		



Belgian Safety Plan

Belgian Safety Plan 2010-2014 | 2011 Update

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CAA UK Objectives (CAP784)

1.10 In order to achieve a high level of safety, CAA has developed the following strategic objectives for aviation safety²:

- The CAA regulates the safety of UK aviation, in partnership with EASA, by approving and overseeing the organisations and individuals involved in UK aviation that fall within its remit;
- The CAA will continue to use and develop a risk-based approach to ensure that UK aviation complies with European and UK legislation and requirements;
- The CAA will work collaboratively with industry to continuously improve aviation safety and address safety issues;
- Where required, the CAA will take any necessary actions to ensure safety is not compromised and will ensure that the high safety standards within UK airspace, and its supporting infrastructure, are maintained, with potential risks identified and appropriate mitigating actions taken;
- The CAA will draw upon worldwide and UK data to identify safety trends applicable to UK aviation, prioritizing this information to focus on the most significant safety issues;
- The resulting safety improvement initiatives will be captured in the CAA Safety Plan, which will be used as a means of monitoring progress and effectiveness.



Dutch Objectives

1. A high level of safety and continual improvement

Towards what level of safety do we strive? The perception of safety changes through time, as does the confidence of Dutch citizens in the safety of Dutch aviation. For this reason, the target for aviation safety is not only expressed in figures, but also in the objective that the Netherlands, in keeping with the European objective, wishes to be among the best in the world. It is also in line with Cabinet policy that the Netherlands wants to be an ambitious and authoritative country in Europe and the world.

2. The sector takes responsibility itself. Red tape and administrative burden will be reduced.

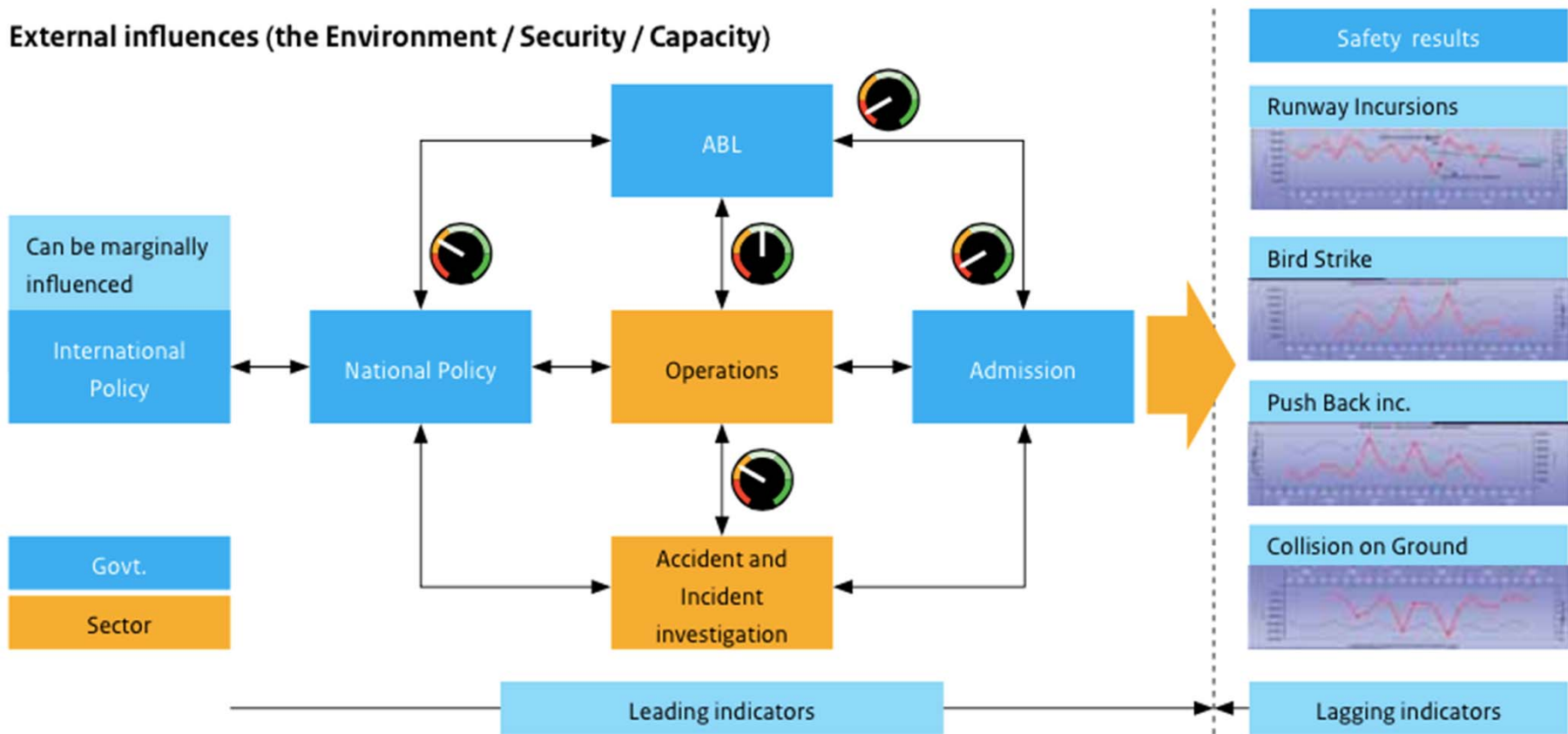
Aviation is a sector in which it has been proven that safety is of paramount importance. This means that it is possible to grant more freedom for the sector to take responsibility itself on the basis of thorough safety management systems. For airlines which abide well by the rules, the burden of supervision declines as a result. Safety is actually expected to improve more if organisations focus on possible risks and start to tackle them, rather than just being inspected all the time. The sector has the responsibility of improving safety itself, without detailed rules imposed by the government.

The starting point is that the red tape and administrative burden for companies will be limited as much as possible. In addition, safety costs money. An attempt must also be made to restrict the costs of safety measures as much as possible. This demands a different role for the government organisation, tailored to this in qualitative terms. Appropriate regulations and meta-supervision must guarantee that there is room for own responsibility whilst countering abuse.



Dutch Vision

External influences (the Environment / Security / Capacity)





What are your objectives?



SPI Development Plan

- 1. Define your Goals (Small sentence and rational)**
- 2. Define your aggregation levels**
- 3. List your data sources and link to aggregation levels**
- 4. Define key indicators, helper metrics and development needs for each goal**