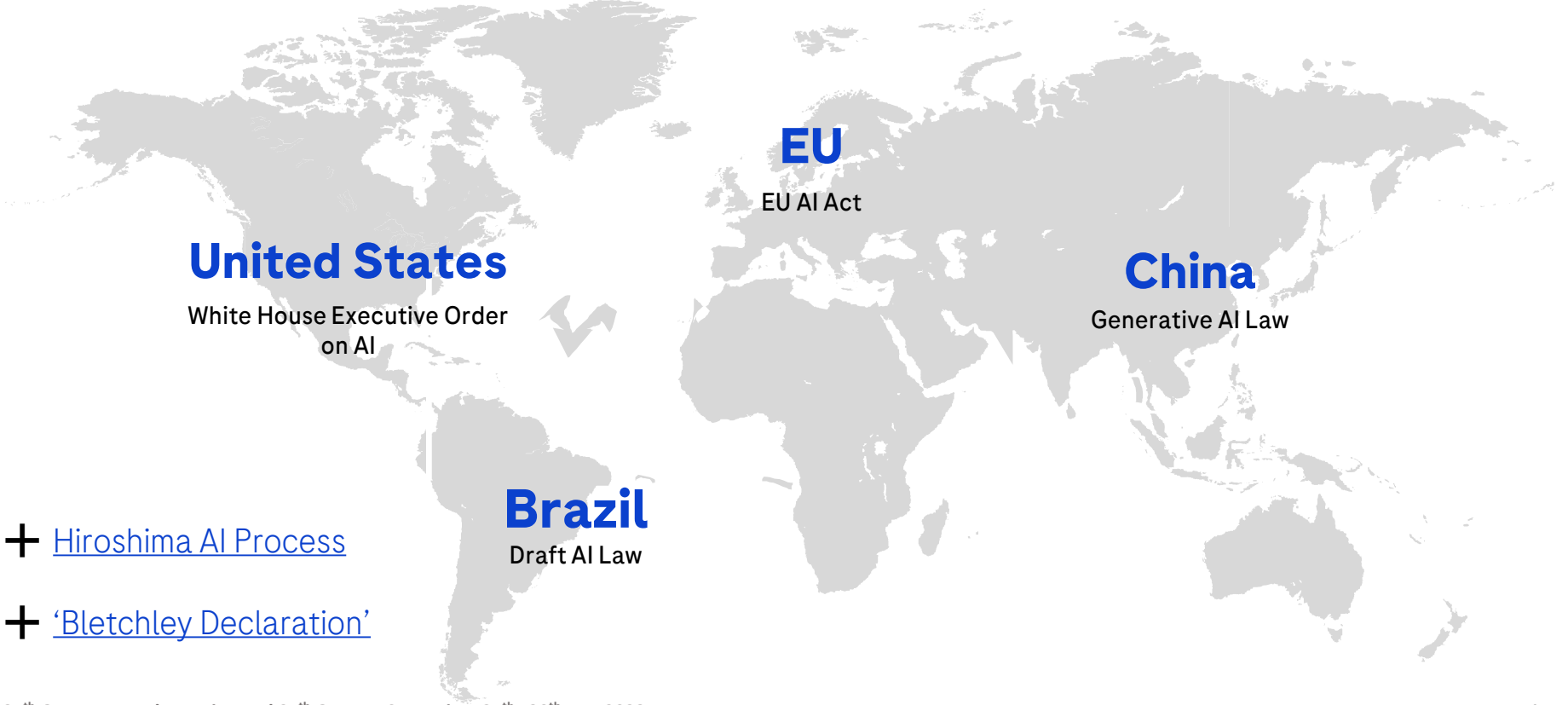
Global Harmonization Working Party
GHWP Towards Medical Device Harmonization

Roche

Predetermined Change Control Plans in the Global Context

Bradford Spring
Global Head of Regulatory Policy and Intelligence
Roche Diagnostics

All of this occurs in the context of growing horizontal regulation of AI



EU
EU AI Act

United States
White House Executive Order on AI

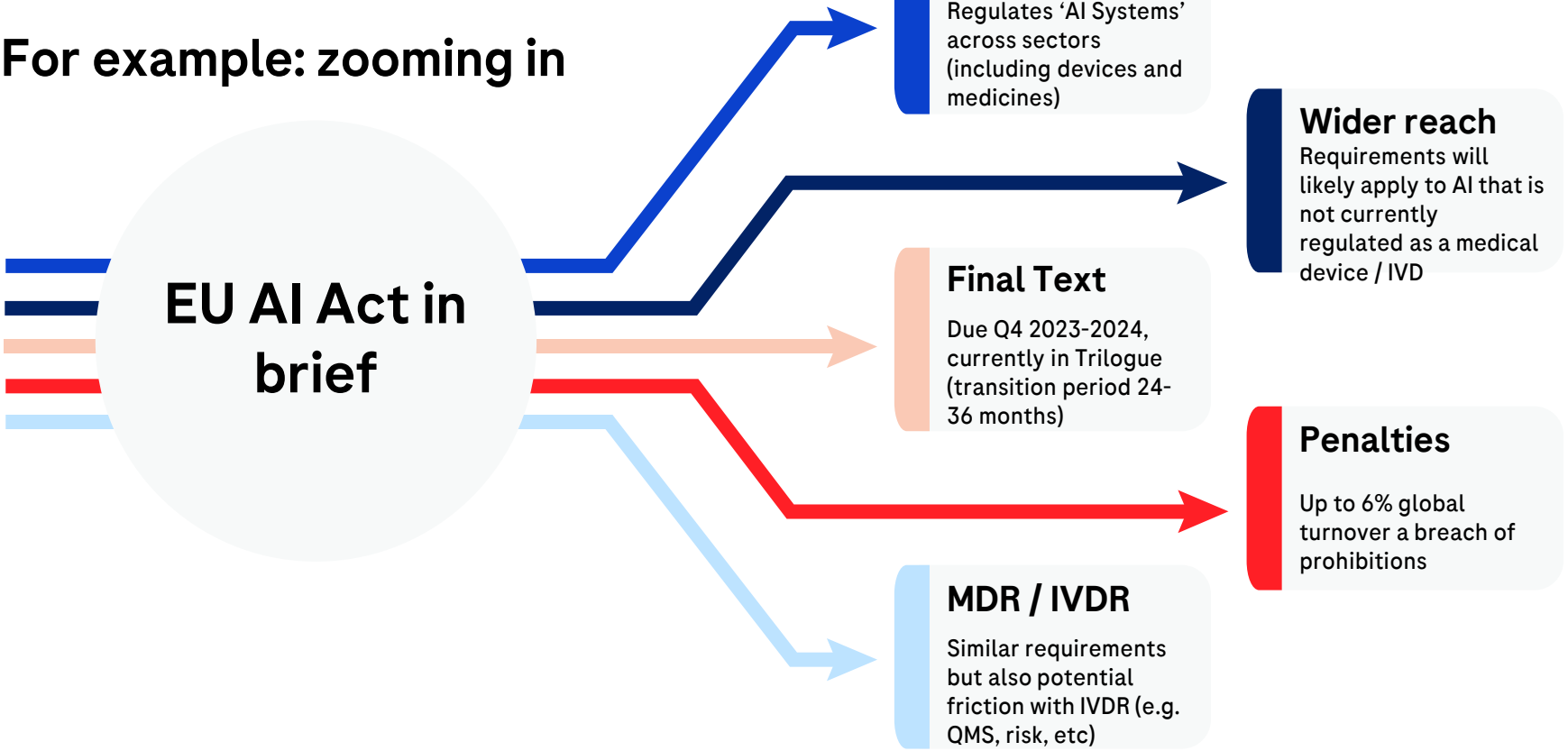
China
Generative AI Law

Brazil
Draft AI Law

+ Hiroshima AI Process

+ 'Bletchley Declaration'

For example: zooming in



The current model of assuring modifications in SaMD

In most jurisdictions, the current method of notifying, assuring, and getting modifications is as follows:

The safety case for agility

There is a risk to patients of static devices degrading across time, especially AI/ML-enabled devices

The traditional system of notifying modifications for SaMD (and devices more broadly) often favours atrophy of models

There is a need to find new ways to manage change in SaMD

That's why Roche support PCCPs

What are predetermined change control plans (PCCPs)?

PCCPs are a methodology for managing change in medical devices and IVDs

They will likely be deployed for ML/AI-enabled medical devices* first, where the need for agility is most pressing

As proposed by the 2023 Draft FDA Guidance, PCCPs have three components:

- Description of Modifications *what* you want to modify
- Modification Protocol *how* you execute that modification
- Impact Assessment what impact the modifications will have

Where do PCCPs fit?

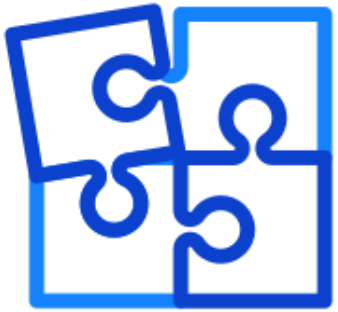
Minor modifications	Significant or substantial modifications that are not changes to the intended use / purpose	Modifications that significantly change the intended use / purpose
OUT OF scope of PCCPs.	**IN** scope of PCCPs.	Usually **OUT OF** scope of PCCPs.
In most jurisdictions, these modifications already do not need to be authorised by the regulatory authority	In most jurisdictions, without a PCCP, these modifications usually must be authorised by the regulatory authority	It is unlikely that significant changes to the intended use / purpose of the device will be within the allowed scope of PCCPs

Where a modification has been included within an Authorised PCCP and the Protocol has been adhered to, the modification does not need to be further authorised by the regulatory authority, instead the modification is documented via QMS and risk management procedures

Anticipated value of PCCPs

The value of PCCPs is to allow manufacturers to make significant or substantial changes included with an authorised PCCP (that are not changes to the intended use) without further authorisation from the regulatory authority

Especially in the context of AI, this method for managing change is likely much more sustainable, so long as PCCPs are sufficiently flexible and not overly burdensome in terms of documentation



For instance, without PCCPs, retraining of AI models would typically need authorisation from the regulatory authority, slowing:

a) timely improvements to model performance

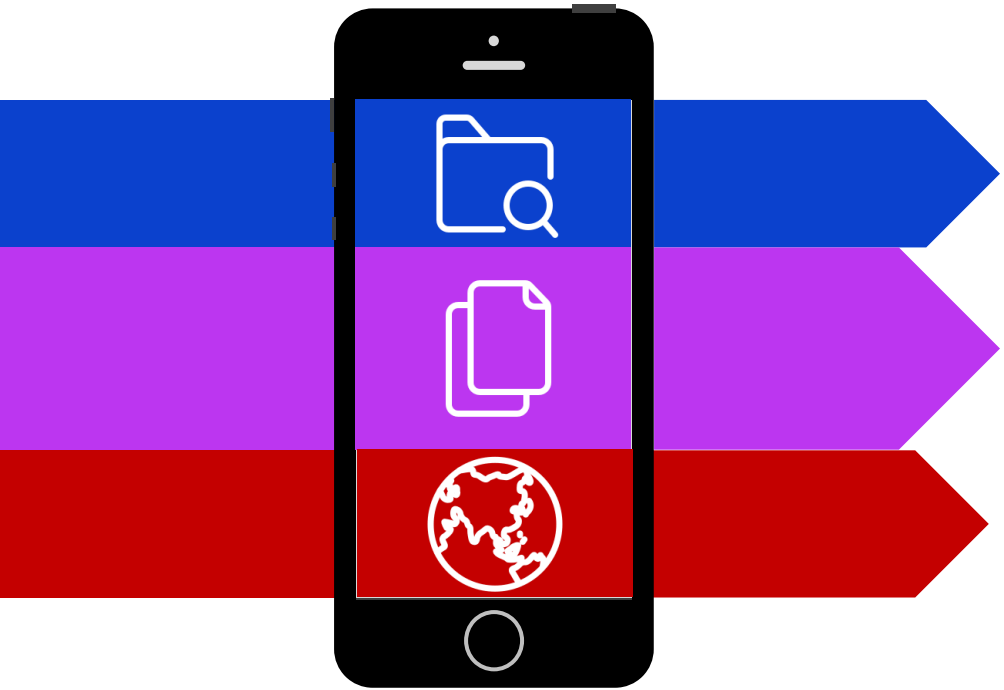
b) responsiveness to performance drift

c) tailoring models to better fit locales

PCCPs have the potential to strike the right balance between assuring change and allowing agile modifications

It is also a great opportunity to reduce burden on regulators, as authorising the scope and methodology to implement modifications rationalizes regulators' time

Three anticipated challenges for PCCPs



Specificity of detail in premarket phase

It can be difficult to provide specificity of detail for all modification in the premarket phase - some modifications are necessarily responsive (e.g. retraining for data drift)

Integration with existing documentation

PCCPs may be more oriented to agile ways of working but existing documentation in the QMS, risk management, etc are still static and so this integration likely poses challenges

International harmonisation

PCCPs will be an agile set of documentation, there needs to be a high-degree of convergence, even to the detail of common templates if we are to get the most out of PCCPs

The international picture (select examples)

	**US FDA**	Release of draft guidance on premarket submissions for PCCPs for AI/ML-enabled devices, legislative authority is broader than just SaMD, joint publication of PCCP Guiding Principles with HC and MHRA
	**Health Canada**	Draft guidance on premarket submissions for AI/ML-enabled devices, including PCCPs, joint publication of PCCP Guiding Principles with US FDA and MHRA
	**UK MHRA**	Announced intention to change legislation to allow for PCCPs for SaMD, joint publication of PCCP Guiding Principles with HC and US FDA
	**EU**	EU MDR / IVDR does not really allow for PCCPs, potential for flexibility to allow for PCCPs under the forthcoming AI Act but for AI/ML-enabled devices only or for devices more broadly if the MDR / IVDR get updated
	**Japan PMDA**	In 2020, PMDA introduced the IDATEN System to allow for timely of modifications and includes change plans
	**Korea MFDS**	MFDS potentially picking up the baton of a concept that's similar to the US FDA Precertification Pilot

PCCPs have incredible potential

Roche are excited to support the development of this innovative regulatory concept

We emphasise the special need for convergence and harmonisation on PCCPs to maximise their benefit for patients

Thank You