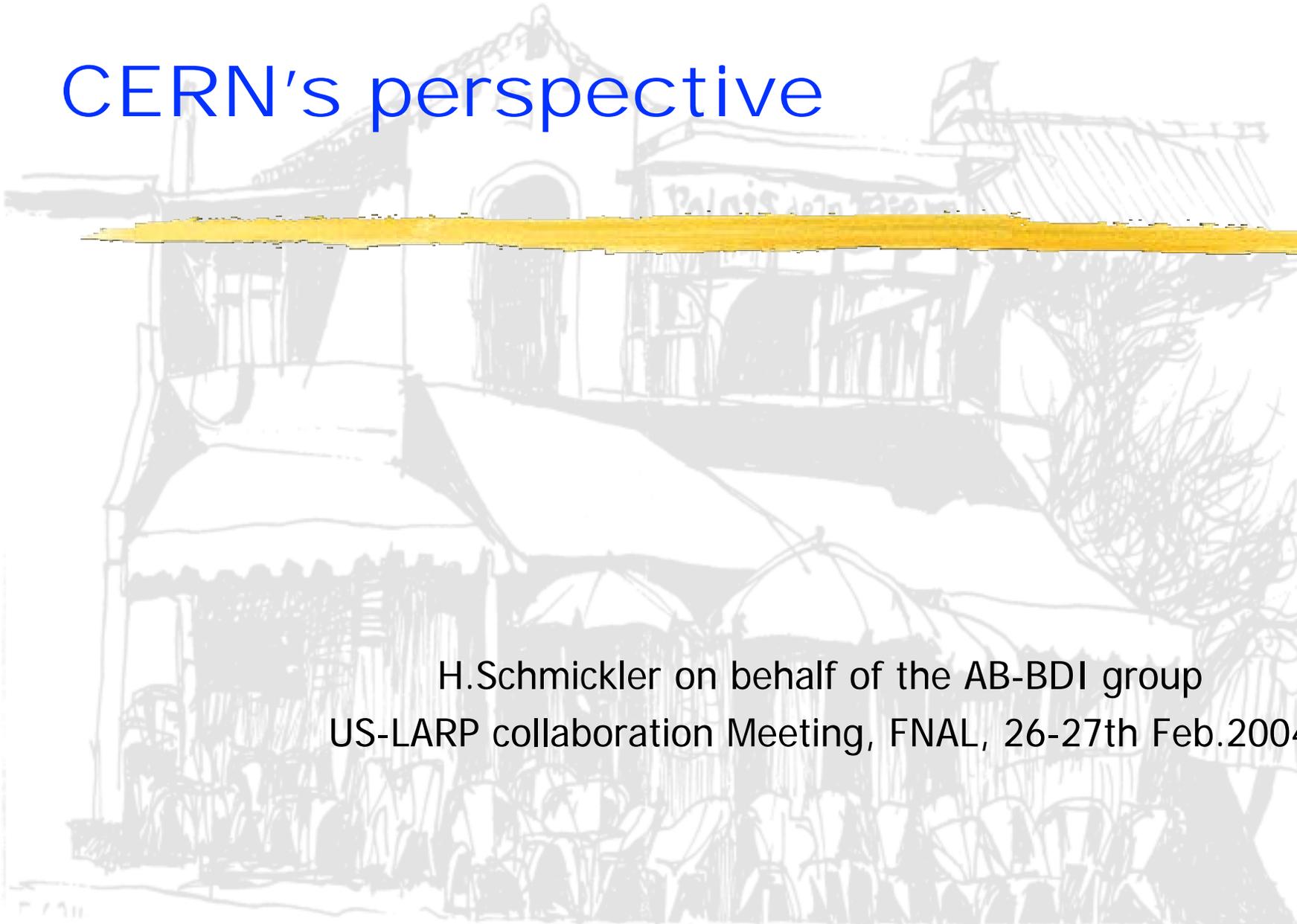
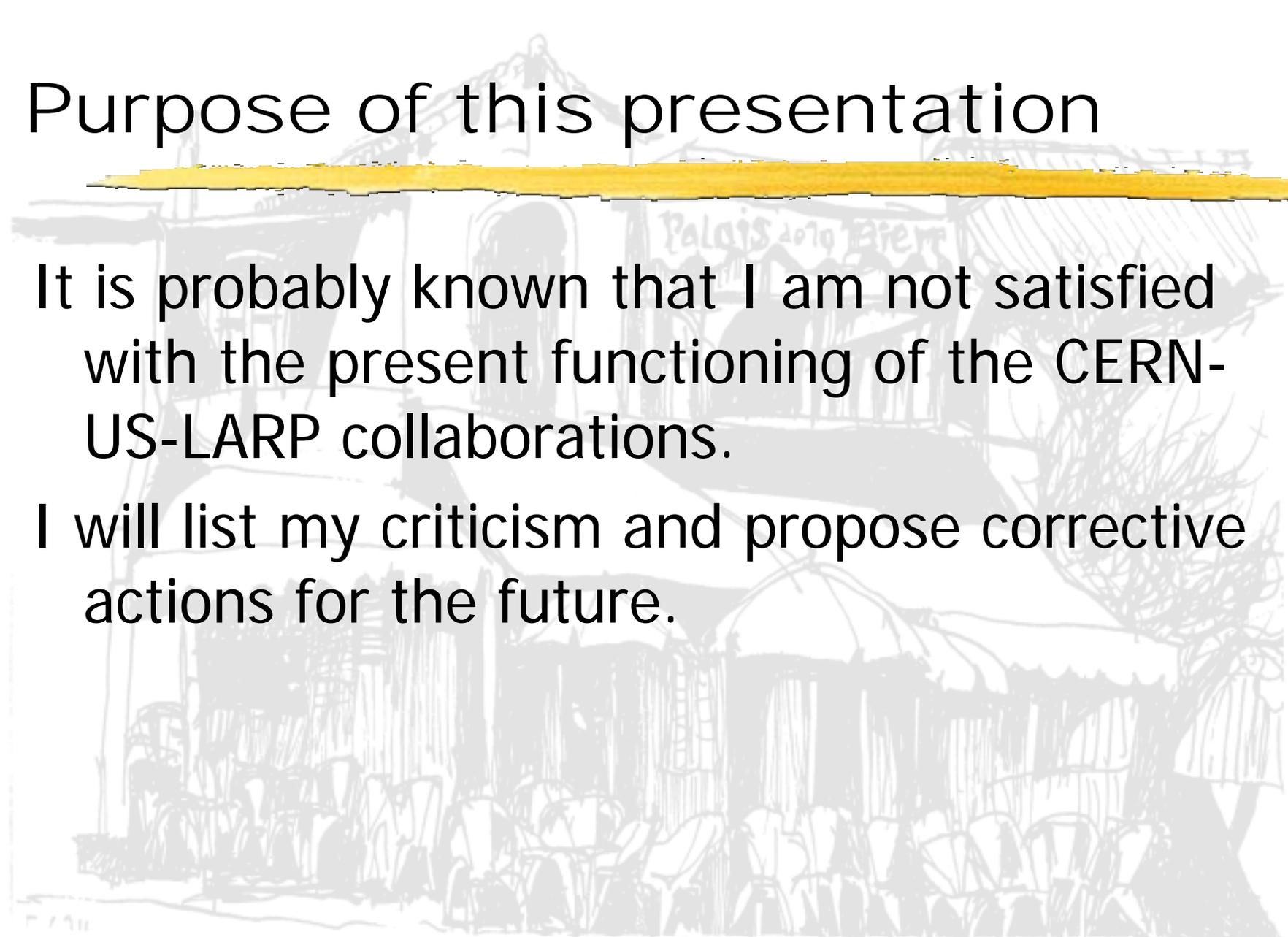


CERN's perspective

A faint pencil sketch of a building with a balcony and a tree, with a yellow brushstroke across the middle.

H.Schmickler on behalf of the AB-BDI group
US-LARP collaboration Meeting, FNAL, 26-27th Feb.2004

Purpose of this presentation



It is probably known that I am not satisfied with the present functioning of the CERN-US-LARP collaborations.

I will list my criticism and propose corrective actions for the future.

Present Scope of US-LARP

- Luminosity monitoring with 40 MHz bandwidth, “legacy” from previous US contribution to LHC construction.
Lab: LBL
- PLL tune tracking
labs: BNL (already bilateral collaboration agreement existing) + FNAL?
- Longitudinal density monitoring: =
Abort Gap monitor and bunch shape monitor as defined at Danfords meeting 2003
lab: LBL

Scope con't

All 3 instrumentation items ...

- ❑ are essential instruments for LHC running and commissioning.
- ❑ ...demand technology, which is presently not available; hence valuable LARP items.
- ❑ ...demand a long-term commitment of the financial and human US-LARP resources
- ❑ ...demand a contribution from US-LARP people to system commissioning and system maintenance through the first years.
- ❑ ...demonstrate the confidence, which CERN invests into LARP
- ❑ Demand the **corresponding** approach now:

Corresponding approach

- 1) Respect of **CERN functional specifications**
 - exist in approved form for :
luminosity, longitudinal density monitoring
 - in work:
tune and chromaticity diagnostics
(expected 4/2004)
 - problem area example:**
 - Longitudinal density monitoring: Since spring 2003 CERN demands to measure parameters, which will determine if the proposed laser system can meet specs. NOT DONE

Corresponding approach

- 2) Respect of CERN integration and approval procedures
- integration constraints
 - space, cable length, radiation levels, machine impedance, bake-outs
 - redaction of engineering specifications
 - definition of milestones and planning
 - introduction of this data into EDMS

Corresponding approach

3) Communication with CERN people

This is probably the most important problem area:
CERN has a link-person for each activity.

Frequent information exchange is a **must**:
email, VC, activity meetings, i.e. 4 per year,
2 in the US, 2 at CERN.

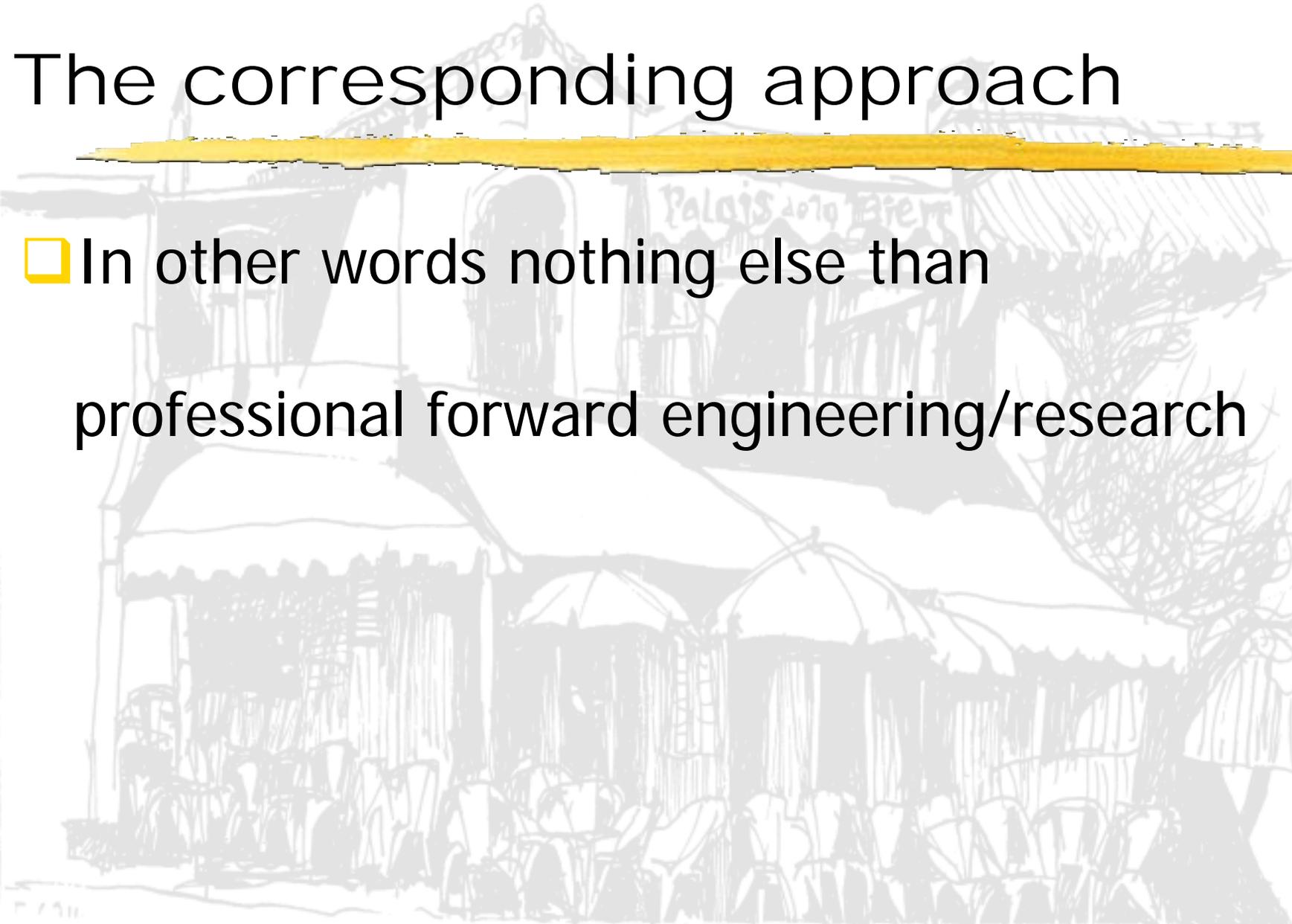
The time and budget for this must be planned from
the beginning (W. Turner visited CERN about every
2nd month)

negative examples:

FNAL: no single email between FNAL and CERN
concerning tune-tracking since September 2003,

BNL: submission of EPAC paper on superconducting
BPM without CERN consultation.

The corresponding approach



- In other words nothing else than professional forward engineering/research

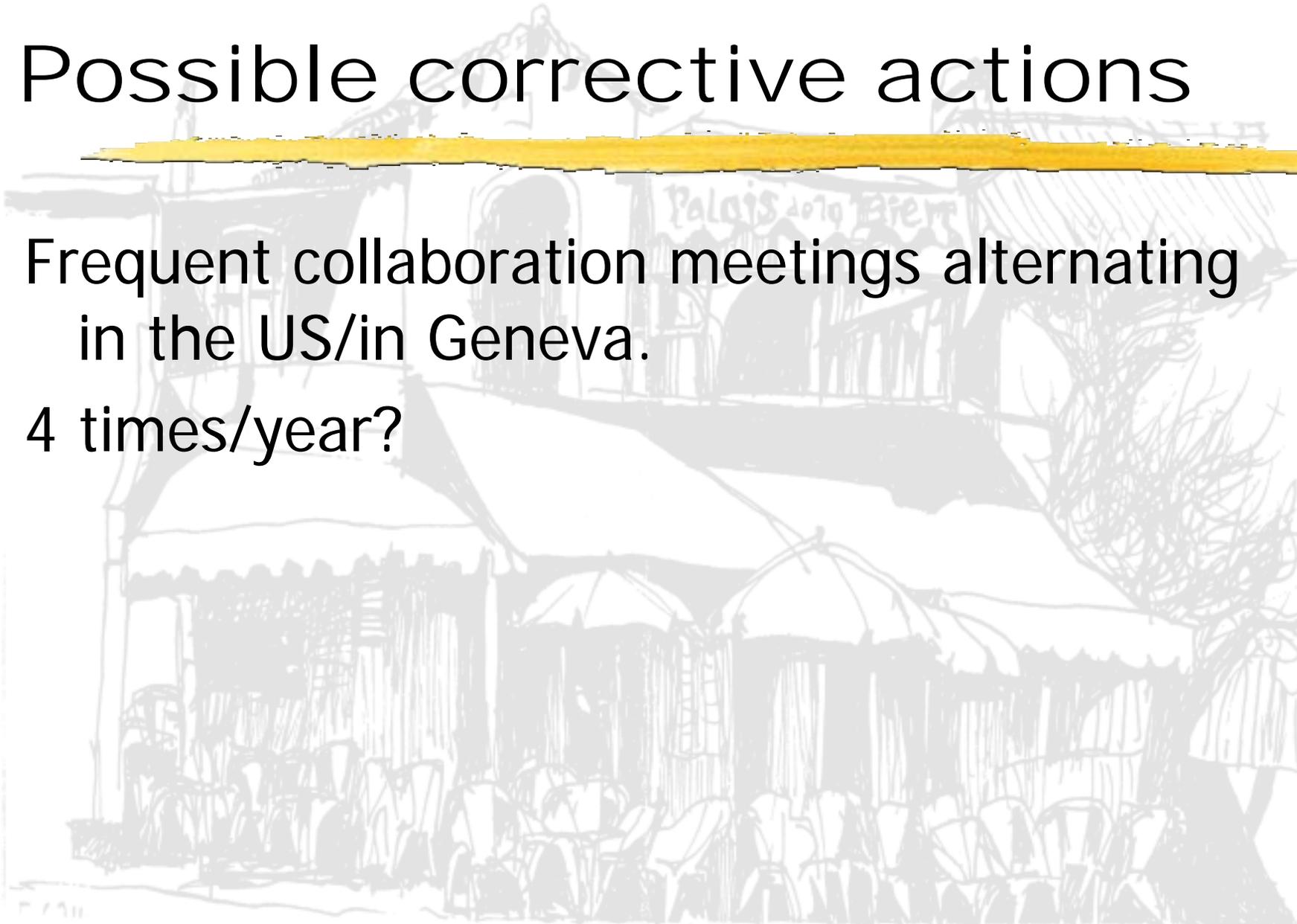
Possible corrective actions:

Nomination of a US-LARP coordinator for the beam instrumentation activities.

Mandate:

- defines/negotiates deliverables and milestones
- defends/obtains resources
- reports on progress
- assures coherence with CERN integration procedures
- is responsible for deliverables
- communicates with me

Possible corrective actions



Frequent collaboration meetings alternating
in the US/in Geneva.

4 times/year?

Possible corrective actions

Reassignment of tasks to collaboration partners:

- 40 MHz luminosity: LBL
- PLL Tune tracking: BNL
- ?: FNAL
- Abort gap monitoring: LBL
- ~~Longitudinal density Monitor: CERN~~