

HLT policy in the Low Countries *yesterday, today, tomorrow*

Peter Spyns (Departement voor Economie,
Wetenschap en Innovatie, Flanders)

&

Liefke Reitsma (Ministerie van Onderwijs,
Cultuur en Wetenschap, The Netherlands)

Outline

- Funding institutions
- Pre-STEVIN activities
 - independent
 - coordinated
- STEVIN joint activities
- Post-STEVIN potential activities
- Existing/Potential instruments for collaboration with South Africa
- Suggestions for reading

Funding institutions

- UNESCO
- European Commission (DG Research - INFISO)
 - Dutch Language Union
- BelSpo (TAP, IUAP)
- Flanders / Brussels
 - EWI (& OV)
 - FWO
 - IWT / IWOIB
 - IBBT
 - Hercules
 - University (BOF, IOF)
- The Netherlands
 - OCW & EZ
 - NWO
 - SenterNovem
 - STW / ICT Regie

Pre-STEVIN HLT policy - Flanders

- EU (former DG XIII, currently INFSO)
 - Eurotra ([1978] 1986 - 1993 K.U.Leuven) machine translation
 - METIS I & II: 2002 - 2007 K.U.Leuven) machine translation
- Siemens-Nixdorf
 - METAL (1985 - 1992 K.U.Leuven) machine translation
- Flanders' policy: no specific thematic programs
 - IWT (Flemish Innovation Agency) [from 1991]
 - any industry project
 - any strategic basic research (e.g., ATRANOS, AMASS++)
 - FWO (Fundamental Research Agency) [from 1928]
 - any basic research grant or project
 - support for researcher mobility and networking
 - CLIF scientific research community (1995-2005, 2006-2010)
- Universities can determine own their research policy

Pre-STEVIN HLT policy - Flanders

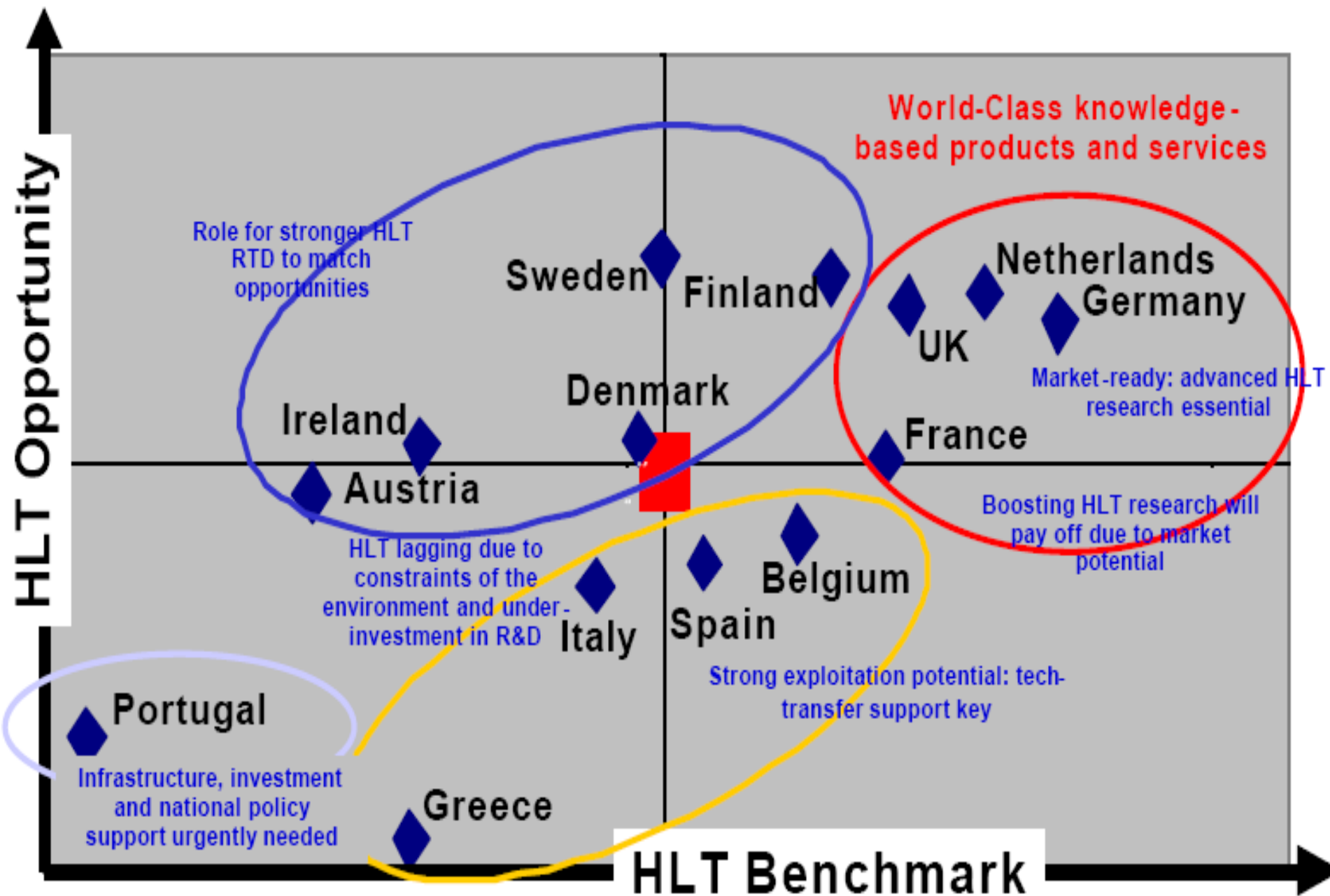
- Short term “speech technology for Dutch” programme (1994-1997) [IWT]: 6 projects
 - *Anno*: annotated DB for Dutch in Flanders
 - *CoGen*: corpus spoken Dutch for speech technology
 - Continuous large vocabulary speech recognition in Dutch
 - *FONILEX*: fonetic lexicon for Dutch in Flanders
 - language independent fonetic decoding and synthesis of word models for continuous speech recognition
 - speaker dependent speech characteristics
- HLT research programme (10 years)
 - Advice of the Flemish Science Council (1994) was positive but it was never realised in practice

Pre-STEVIN HLT policy - Netherlands

- NWO HLT Priority Programme (1995- 2000)
- NWO IMIX-programme (2002 - 2008)
- EZ IOP
- Rosetta, DLT
- SPIN (1984 - 1995)
- CELEX (1986 - 2000)

Pre-STEVIN joint FI-NI activities

- EU SpeechDAT project (1996-2001)
 - databases with speech recordings to train speech recognition models (20 languages)
 - major industrial initiative (without NTU)
- EU Euromap I & II projects (1996-2003):
 - involvement of NTU (phase II) next to FI & NI (phase I)
 - HLT industry fair(s) and awareness campaigns
 - HLT market studies (national SWOT analyses)
 - list of national HLT actors:
 - *Language Engineering in Flanders* (E. Dewallef - 1998)
 - *Charter the Future of Language Engineering²*



European HLT scorecard
 (source: *Benchmarking HLT progress in Europe*, 2003)

Pre-STEVIN joint FI-NI activities

- NTU report:
The position of Dutch in HLT (G. Bouma & I. Schuurman 1998)
- NL-Translex (1997-2002)
 - additional Systran translation dictionaries
 - co-funding EU, Flanders, the Netherlands and industry
- corpus of Spoken Dutch (1998-2004)
 - joint endeavour (one scientific steering committee)
 - separate funding lines: 1/3 (FI) & 2/3 (NI)
 - two project management committees (FI & NI)
 - single common end product (1 DVD and 36 CDs)
- PROSIT project (joint FWO - NWO VNC programme)

Pre-STEVIN joint FI-NI activities

- HLT platform (1999-2004)
 - hosted by NTU (secretariat)
 - comprising of FI & NI officials
 - prepare & develop HLT for Dutch policy
 - participation in ENABLER-project
 - commission studies funded by FI & NI
 1. "Brokering & Linking"
 2. Reinforcing the linguistic digital infrastructure
 - NTU report: *Dutch in HLT priorities for basic resources* (W. Daelemans & H. Strik, eds. - 2002)
 - EZ report: *HLT Technology Survey* (M&I Partners & D. Van Compernelle - 2004)
 3. Developing standards and evaluation criteria
 4. Managing, maintaining and distributing resources
 - NTU report: *Blueprint for maintenance, management and distribution of digital materials financed by the government* (P. Van Sterkenburg, T. Kruyt & P. van der Kamp - 2001)

Dutch government (EZ, OCW, NWO)

HLT board

Flemish government (EWI, IWT, FWO)

Action line 4
management, maintenance, distribution and availability of digital language resources funded by government means

Action line 1
extending and reinforcing the network on HLT in and between the Netherlands and Flanders

Dutch Language Union

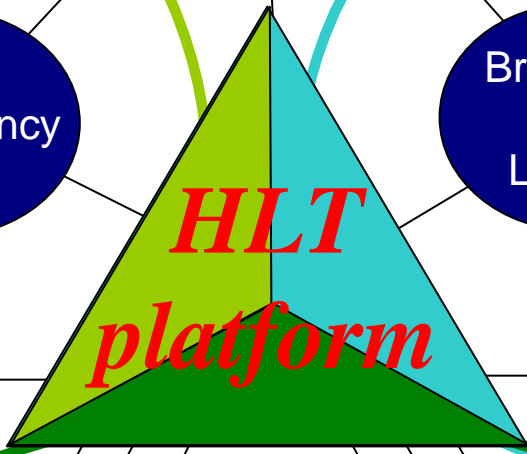
funded by the NTU

HLT Agency

Brokering & Linking

funded by the NTU

HLT(C) Pricing committee



HLT PR & Comm WG

funded by EWI, (IWT, FWO) & EZ, OCW, NWO

knowledge institutions

companies

Action line 2: Flemish/Dutch R&D programme for Dutch language and speech technology (*STEVIN*)



STEVIN: joint FI-NI HLT R&D

STEVIN goal:

to secure the position of the Dutch language in the modern information and communication society.

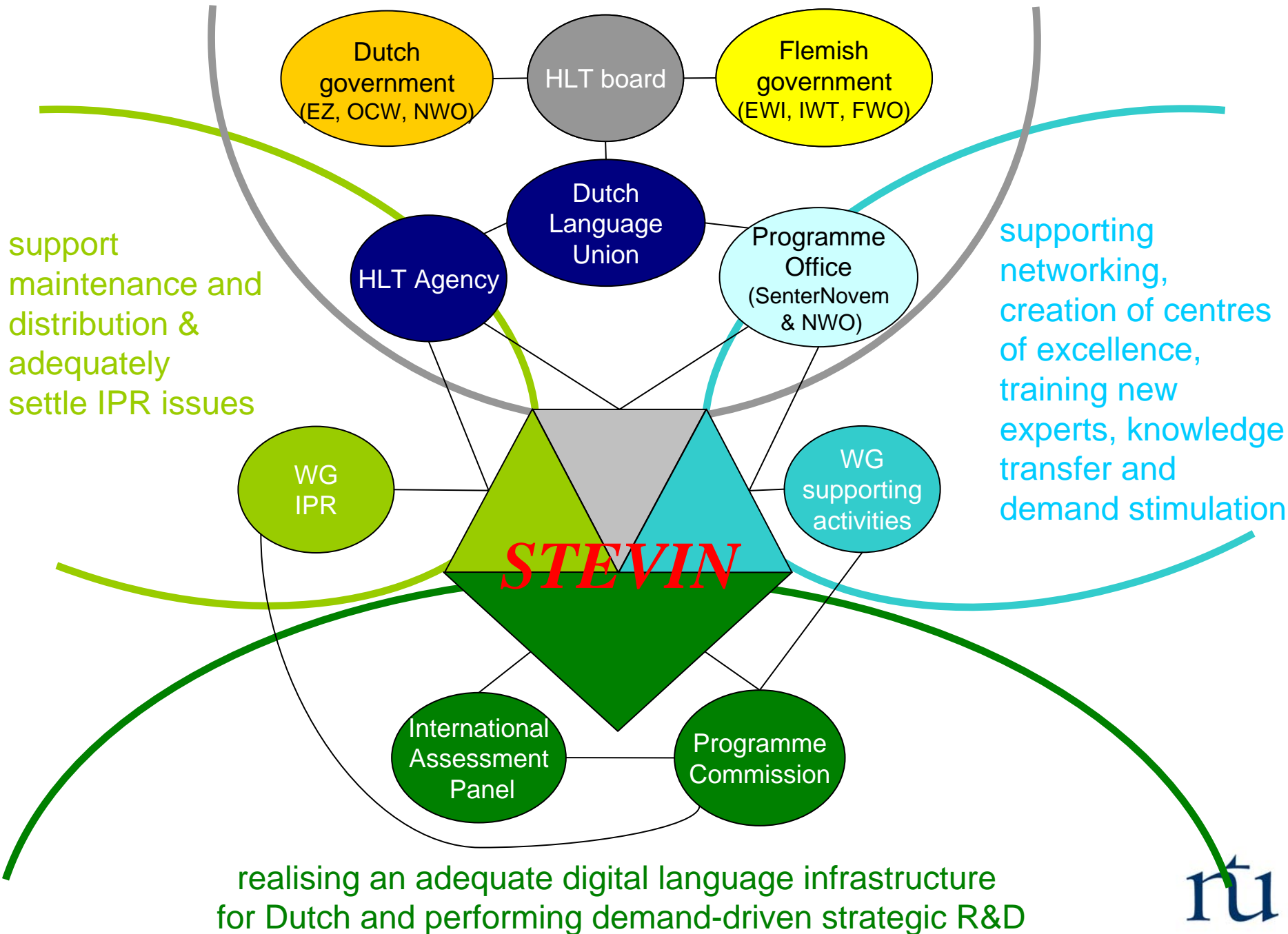


S	Spraak- en	= speech and
T	Taaltechnologische	= language technology
E	Essentiële	= essential
V	Voorzieningen	= resources
I	In het	= in
N	Nederlands	= Dutch

STEVIN: joint FI-NI HLT R&D

- jointly funded (11,4 M€: 2004 - 2011) by the Netherlands (7,6 M€) & Flanders (3,8 M€) [www.stevin-tst.org]
- coordinated and managed by the NTU
 - common pot funding scheme
 - joint submission, evaluation, monitoring and acceptance procedures
- R&D programme to
 - promote strategic research and develop essential resources for Dutch that are missing
 - raise awareness of HLT results and stimulate the demand of HLT for Dutch products
 - support the maintenance and distribution of HLT resources

financing, global supervision, coordination, monitoring and practical organisation



STEVIN: joint FI-NI HLT R&D

- STEVIN R&D projects
 - strategic research [\[www.stevin-tst.org/projecten\]](http://www.stevin-tst.org/projecten)
 - innovative
 - basic resources for Dutch
- STEVIN demonstration projects
 - industry (SME) stimulation [\[www.stevin-tst.org/bedrijven\]](http://www.stevin-tst.org/bedrijven)
 - off the shelve technology
 - visibility [\[www.stevin-tst.org/pers\]](http://www.stevin-tst.org/pers)
- STEVIN education activities
 - raising awareness amongst students
 - HLT for Dutch popularisation [\[www.kennislink.nl\]](http://www.kennislink.nl)
- STEVIN networking grants
 - spreading knowledge
 - bringing potentially interested/interesting parties together
- STEVIN master classes
 - educate industry decision makers and government high ranking officials

STEVIN: joint FI-NI HLT R&D

- Results of the STEVIN R&D projects
 - ownership goes in principle to the NTU
 - open source agreements are allowed
 - liveliness of the community of developers
 - always some formal link with the HLT Agency
 - free licence to allow original developers to continue research
- Pricing policy for HLT Agency products
 - in line with basic idea of open innovation:
 - joint development of new knowledge (co-competition)
 - diffusion of knowledge (also to industry)
 - pricing committee recommendations (approved by HLT board)
 - free for non for profit use (except handling costs)
 - easy entry but a fair price for profit use
 - lump sum (or royalties if appropriate)

STEVIN: joint FI-NI HLT R&D

- successful R&D programme STEVIN:
 - creation of a transnational research community
 - connecting companies with research groups
 - creating a BLARK (and more) for Dutch
 - stimulating industry
- established HLT Agency
 - taking in and distributing STEVIN results (and other resources)
 - offering help desk services
 - managing IPR
 - supported by pricing committee to advise with exploitation of results
- expanding HLT info desk
 - near monthly e-news letter (has become a reference)
 - web site with overview relevant Flemish and Dutch HLT actors
 - assisted by overall PR&Comm WG
 - co-organising events ("Language@Work" industrial HLT for Dutch fair)
- IAP assessment main outcome: IAP congratulates the Dutch and Flemish HLT community with the accomplishments STEVIN has reached so far

Post-STEVIN activities

- STEVIN last projects end in 2011
- What's next "STEVIN II" ?
 - more towards applications of HLT ?
 - industry-driven scientific roadmap ?
 - role of governments?
 - IPR ? Open source ?
 - Stimulate open innovation ?
 - (Fundamental) R&D: complete/update BLARK?
- Specific cooperation with South Africa ?
- CLARIN
 - currently no collaboration on governmental level
 - included in renewed FI-NI «letter of intent»

