Language Technology in Europe

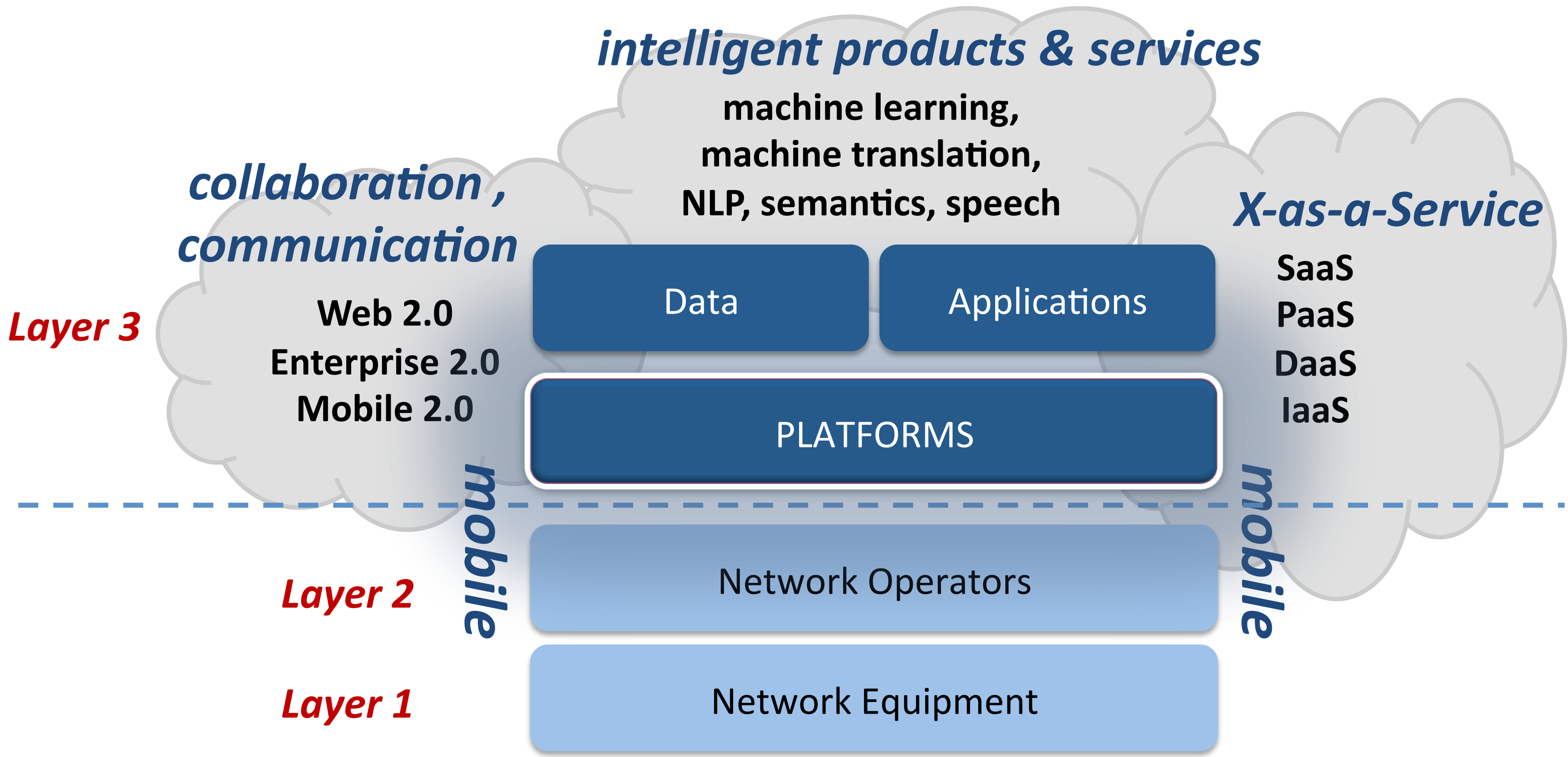
from niche to pervasive

LT-Innovate Workshop

Brussels, 9th October 2012

Rose Lockwood

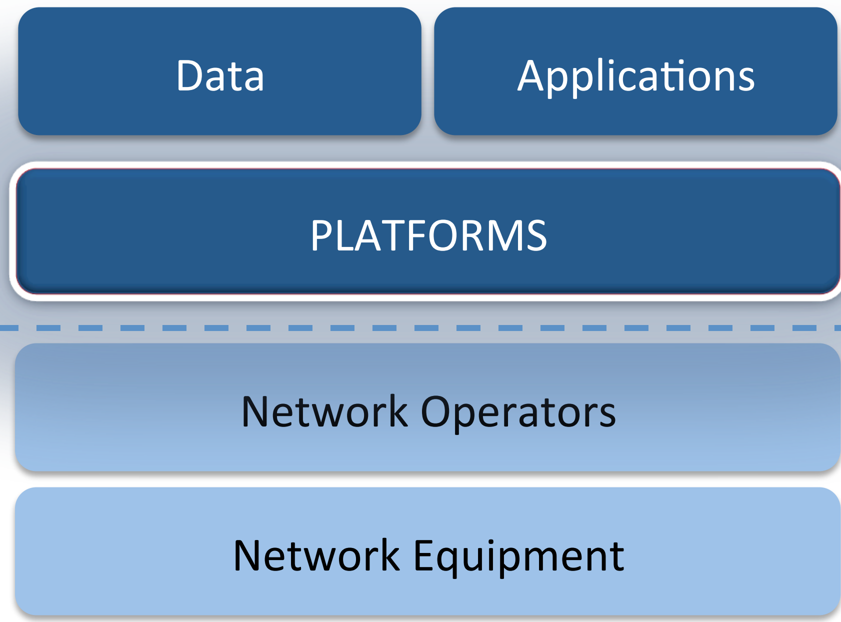
New ICT ecosystem is affecting Europe's ability to compete



adapted from *The New ICT Ecosystem: Implications for Policy and Regulation*, Fransman, 2010, Cambridge University Press

Players in the Layers

Thomson Reuters, BBC, PSI



Layer 3

Microsoft, IBM, SAP, Oracle

Google, Apple, YouTube, Facebook, LinkedIn

Layer 2

BT, Deutsche Telekom, Vodafone

Layer 1

Cisco, Samsung, Alcatel, Ericson, Nokia

"New ICT Sectors: Platforms for European Growth?"

(Breugel Policy Contribution, August 2012

- Europe – ICT firms are not less R&D invensive (typically more), but they are:
  - not specialising in new ICT sectors, innovating in the less dynamic parts of the ecosystem and missing out completely on new segments of the market
  - concentrating investment in Layer 2 (least R&D intensive in the ecosystem)
  - not generating new firms that become leading innovators (with 70% of "leading innovators" established before 1975)
- US – firms are investing in new segments and they are:
  - concentrating investment in Layer 3 (highest R&D intensity)
  - With 88% of "leading innovators" established after 1975
- Europe lacks in particular leading platform providers, who are capturing most of the value in the new ICT ecosystem.

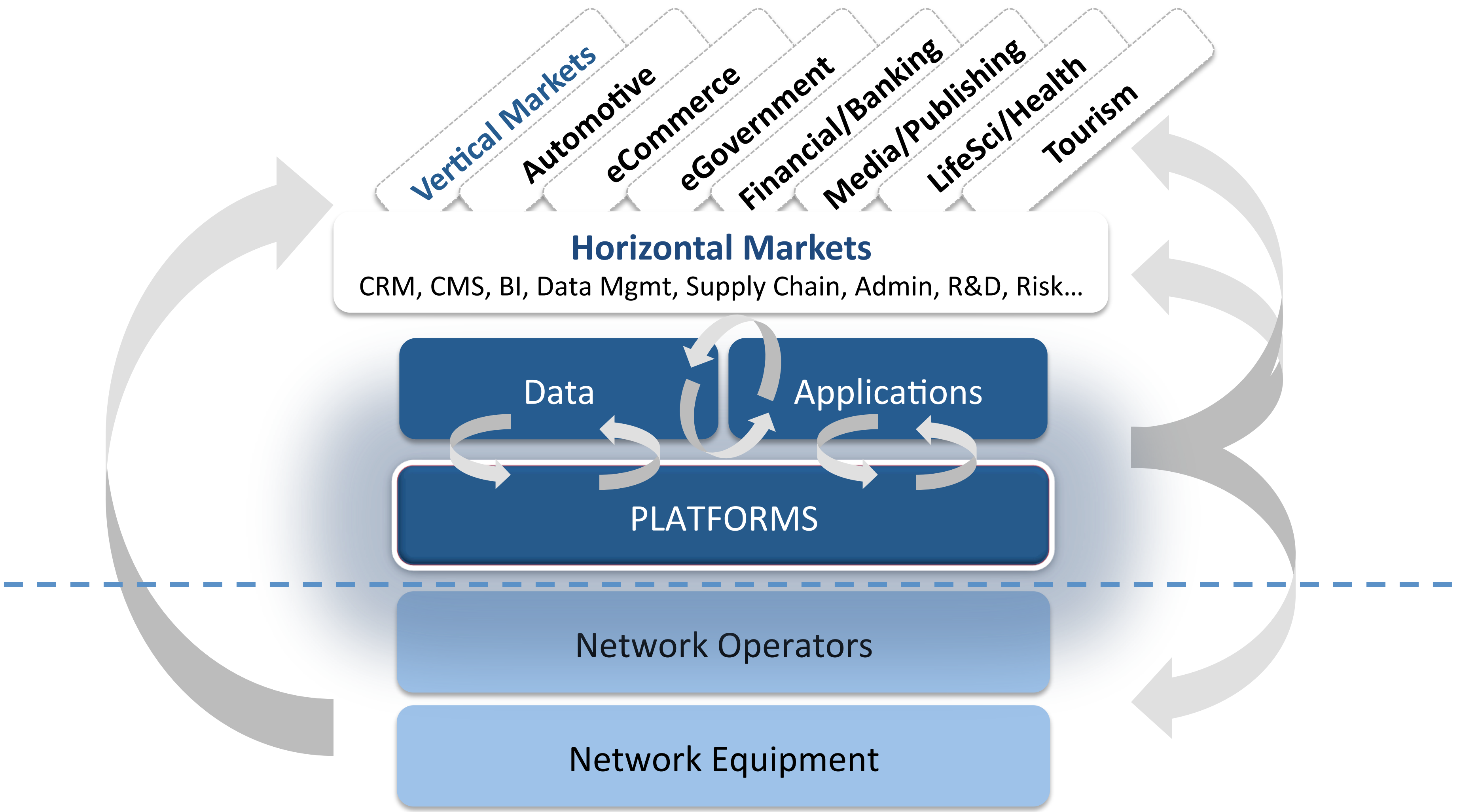
Source: FLY project: **Further Lessons from ICT Innovative Industries,** Veugelers et al, using scoreboard data from the Institute for Prospective Technological Studies on world's largest R&D spending companies, includes 1,000 European companies

Europe: Barriers to capturing value in Layer 3 markets (Breugel)

- The lack of a large **integrated digital market** in Europe is an impediment for commercialisation.
- **Language barriers** and fragmented intellectual property rights hinder the development of some sectors.
- **Absence of ICT clusters** reduces synergies.
- HOWEVER:
  – Europe's cultural differences could also be an opportunity to differentiate and create niches, conditional on being able to reach critical scale.

Innovation in the New ICT Ecosystem

across the value chain but concentrated in Layer 3

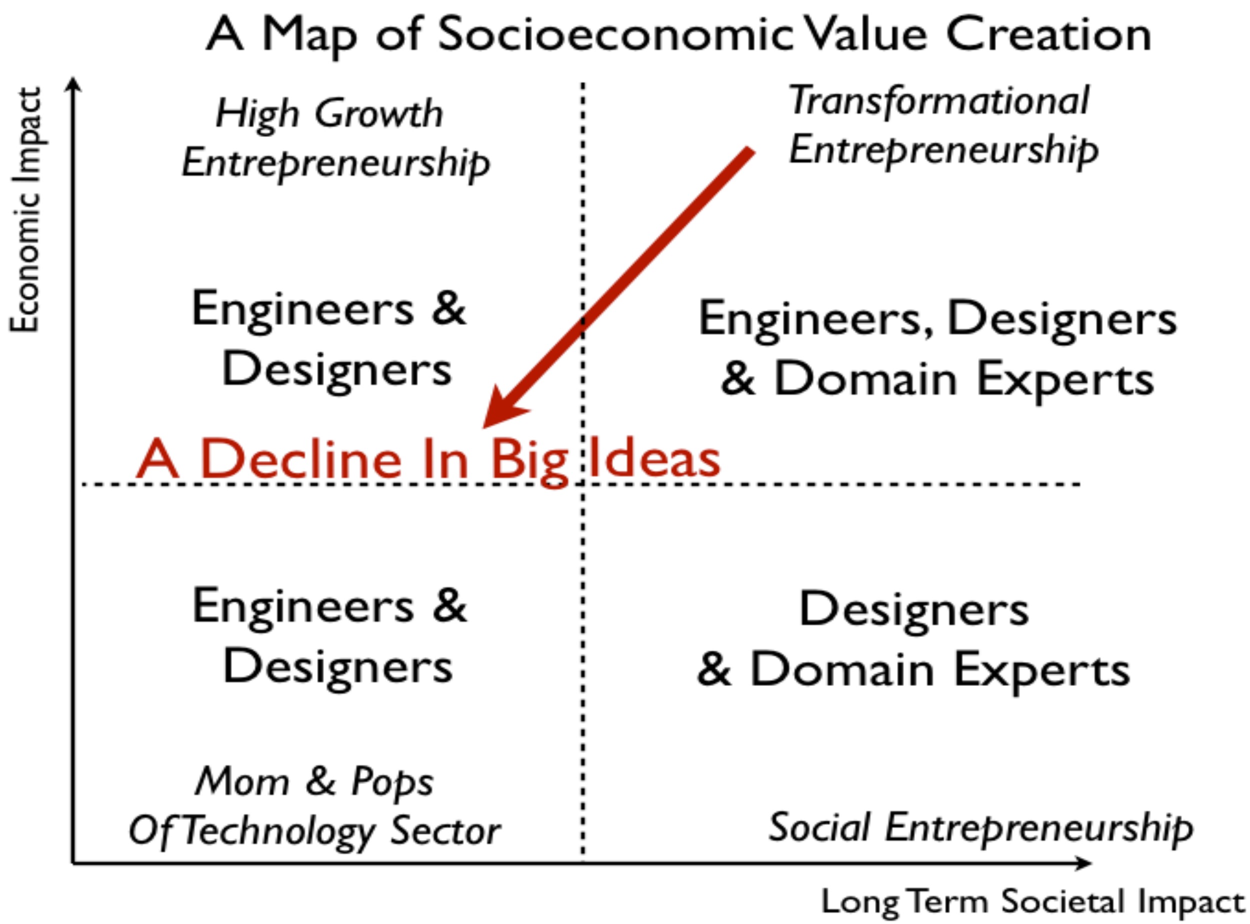


LT is a new ICT market that can unlock potential for Europe

- Founded on decades of European R&D, with world-class levels of technological expertise
- Addresses linguistic barriers directly, with multilingual and translation capabilities
- Enables advanced communication with intelligent natural interfaces
- The only technology capable of handling today's volumes of unstructured data

LT brings Domain Knowledge & Focus

the key to “top quadrant” innovation

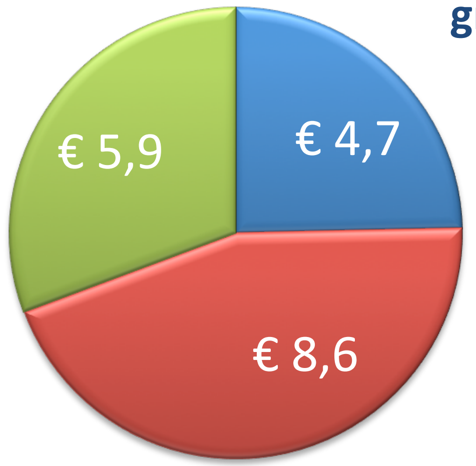


Source: Startup Compass, http://blog.startupcompass.co/
Check out Startup Genome project

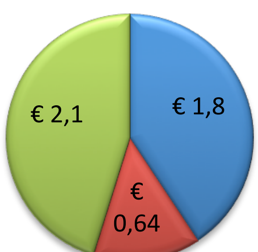
LT: an industry with potential for high growth and impact

Global Value-Add 2011: €19.3 B

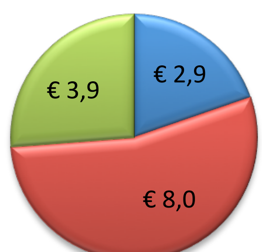
growing 11+%/year

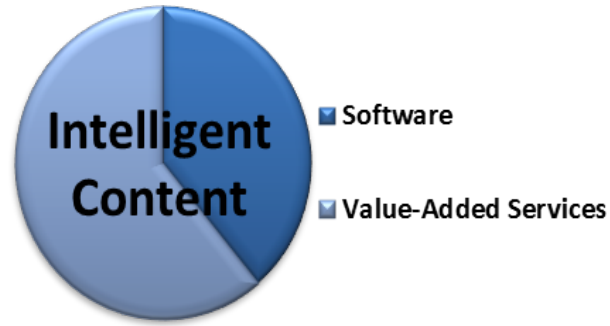


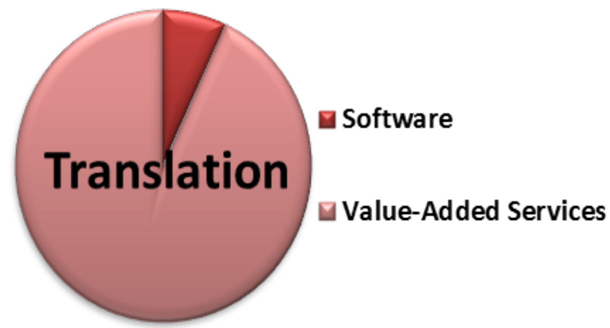
LT Software

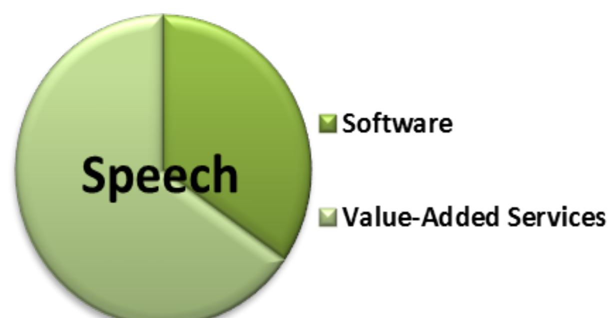


LT Services



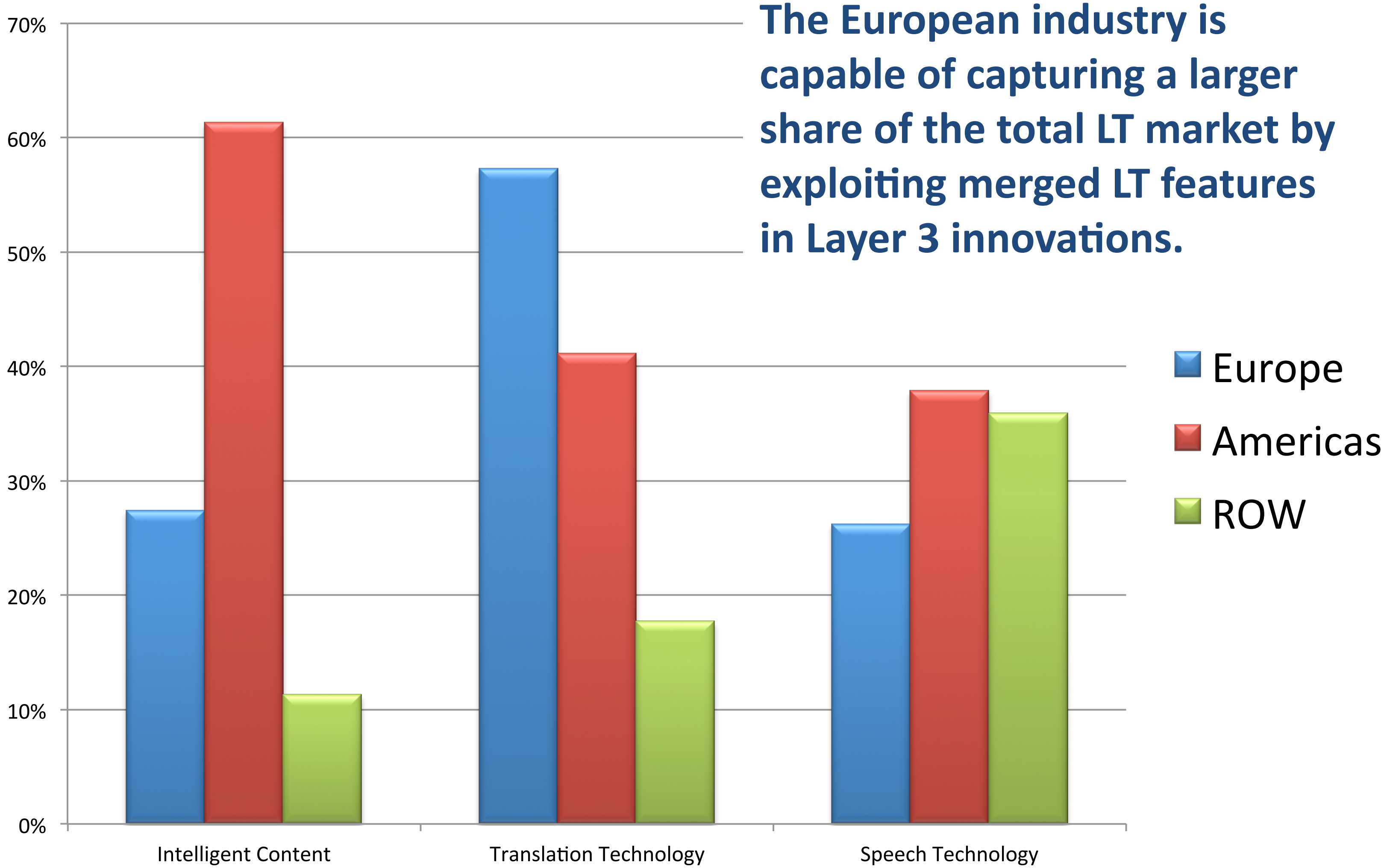




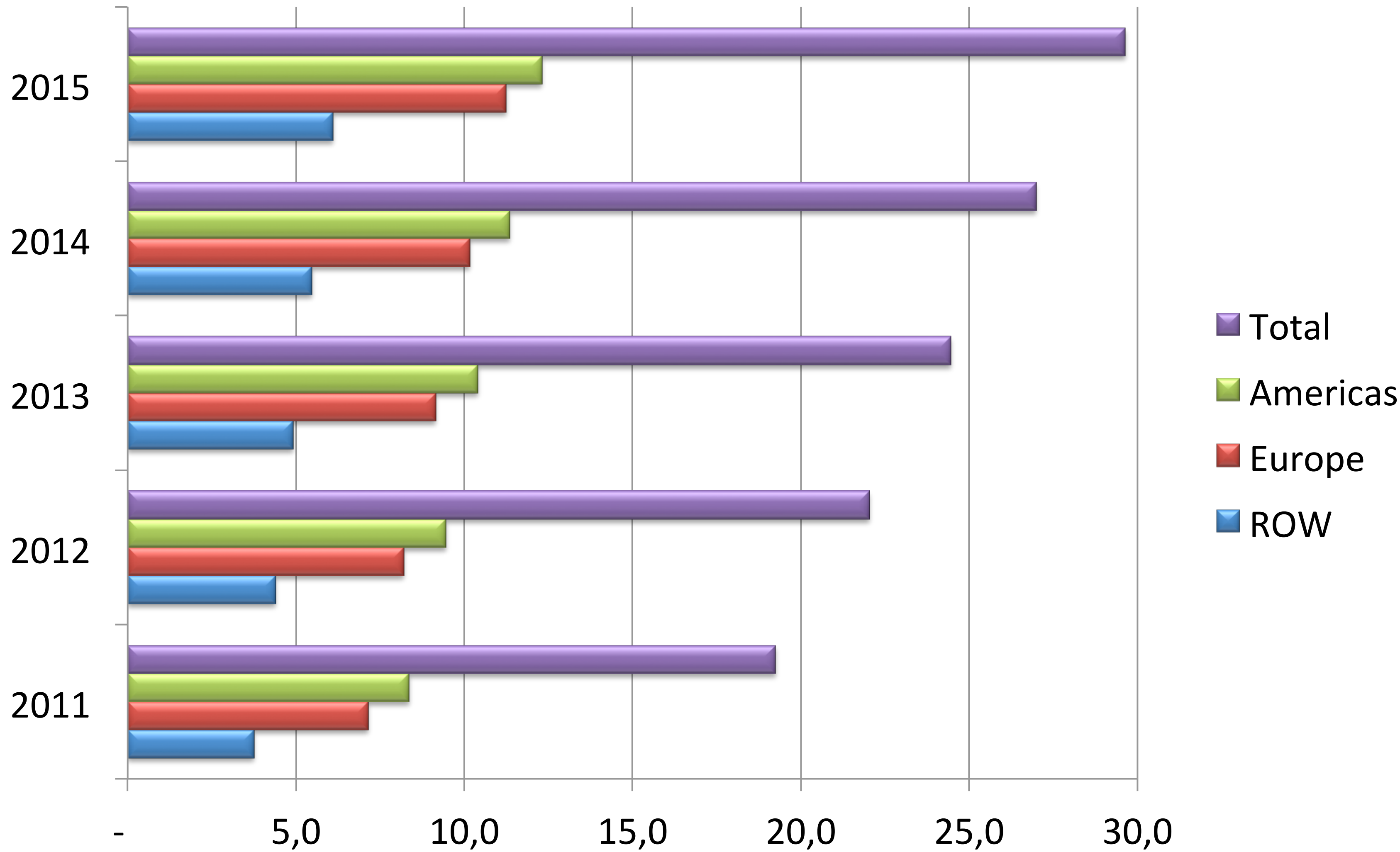


Regional Shares by Segment: 2015

The European industry is capable of capturing a larger share of the total LT market by exploiting merged LT features in Layer 3 innovations.



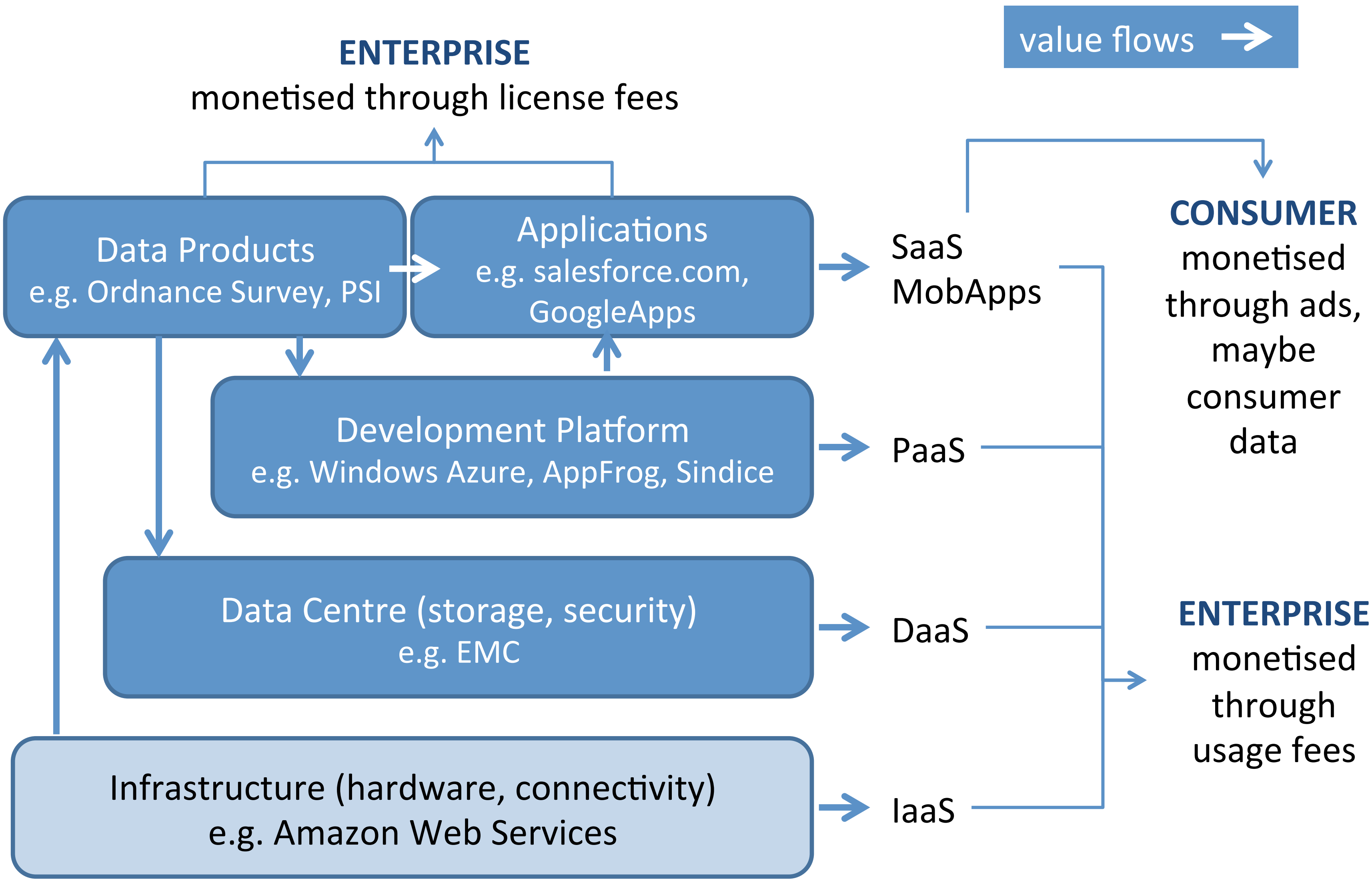
Global Language Technology Market 2011-2015 Regional Shares by Year (€B)



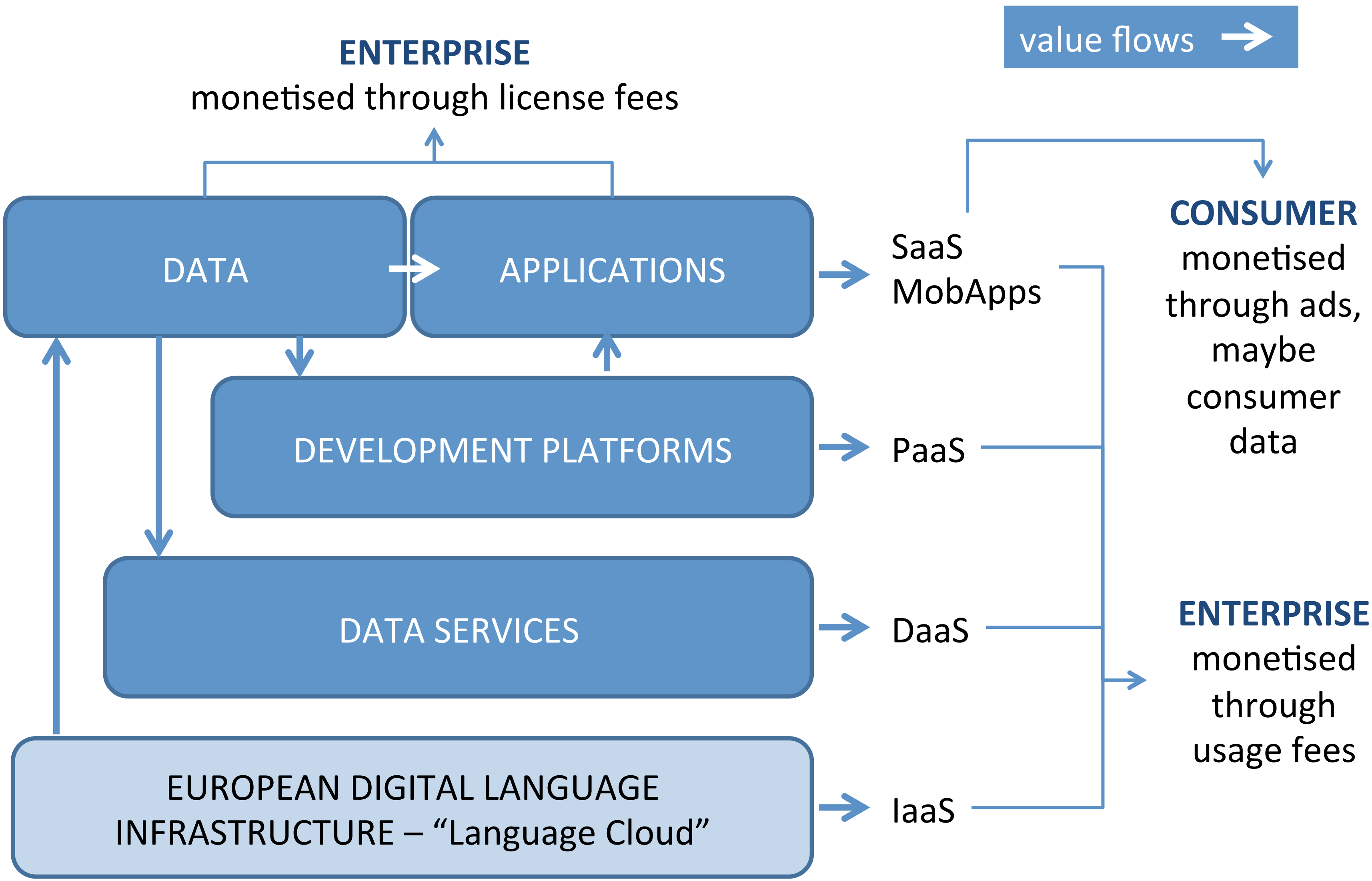
LT in the Enterprise Applications Market ("horizontal")

	Software & Services for the Management of							
	Business Intelligence	Content	Customer Experience	Sales	Legal/ Risk	Supply Chain	Data	Finance
Intelligent Content Technology	*	*	*	*	*	*	*	*
Translation Technology	*	*	*	*	*			
Speech Technology	*	*	*	*				

Transition to “Cloud”



The LT Value Chain



"Layer 3" in Vertical Markets
LT can kick-start innovation

	DATA	APPLICATION	PLATFORM
Automotive	Service Information	Technical Translation	Embedded Systems
→ Culture/Tourism	Maps, Schedules, Archives	"Machine Interpretation"	Augmented Reality
→ e-Commerce	Product Data	Competitive Monitoring	Avatars
→ e-Government	PS Data (almost unlimited…)	Curation	Semantic Annotation
Education	Academic Publications	Language Learning	Voice Clones
→ Financial Services/ Banking	Actuarial Data	Fraud Monitoring	Speaker Verification
Games/Entertainment	Video archives	Speech Translators	Voice Banks
→ LifeSciences/Healthcare	Clinical Data	Public Health Monitoring	Electronic Health Records
→ Media/Publishing	Content, Rich Media	Recommender	Multilingual Authoring
Software Publishing	Translation Data	Self-Service Support	Website Localisation
Telecommunications	Service Data	Service Optimisation	Speech Translation

Valuable Layer 3 Markets: LT potential to contest or disrupt

A. **Platforms and Applications based on integrated LT features**
   - combining multilingual, intelligent, interactive features in turnkey development environments, or applications
   - likely to be vertical industry or domain-specific

B. **Innovative applications with focused LT features**, e.g.
   - HQMT platform for a specific domain or industry
   - self-service voice cloning platform

C. **Add-ons or enhancements to existing platforms and applications**, e.g.
   - adding semantic features to an existing info mgmt system
   - a translation plugin for Overblog (or some other Europe-based publishing environment)

D. **Existing applications replicated for new markets**
   - speech components for new languages, analytics services in new locales/languages