



QUALITY AND SAFETY TESTING

Large scale of solutions for the identification and rapid detection of micro-organisms. Easier investment in molecular techniques

Frédéric BAR, Key Account Manager

Une histoire: l'origine de la vie

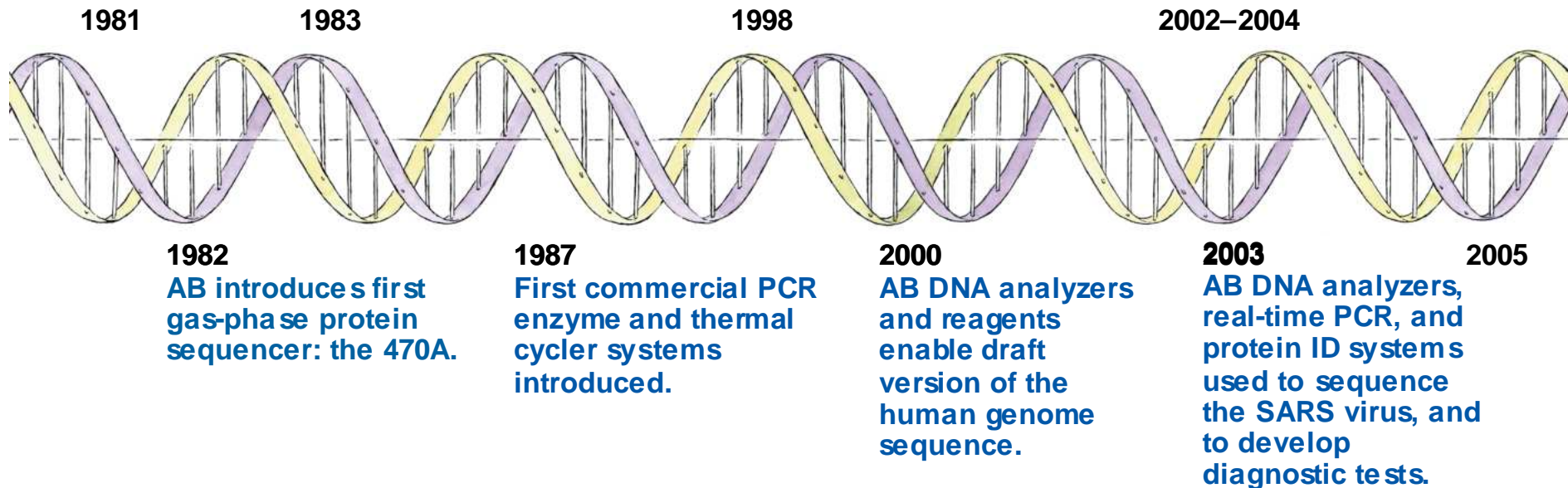
Un saut: des technologies accessibles pour le contrôle de routine

1981
Applied Biosystems is founded.

1983
AB introduces 380A DNA synthesizer.

1998
AB introduces ABI PRISM® 3700 DNA Analyzer: accelerating completion of human genome draft.

2002–2004
AB DNA analyzers and reagents used to identify 30,000 human genes and discover 10 million+ unique SNPs.



Diapositive 2

- b2** Linda - I shortened the words....I really like this slide! Cathy
burzikcm; 09/01/2005
- b3** burzikcm; 09/01/2005
- b4** burzikcm; 09/01/2005
- b5** Linda- I really like this slide...I just shortened it. Cathy
burzikcm; 09/01/2005

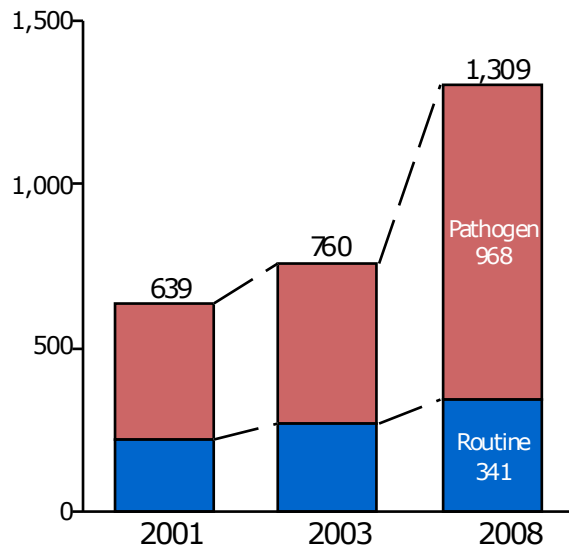
Applied Markets – Market Segments

Forensic	Quality & Safety Testing (QST)	Biosecurity
Human Identification	Pharma & Food & Environmental	On-line pathogen detection
Toxicology	Microbial Identification	Metabolite analysis

Marché de la détection et de l'identification

Market Value of Food Testing

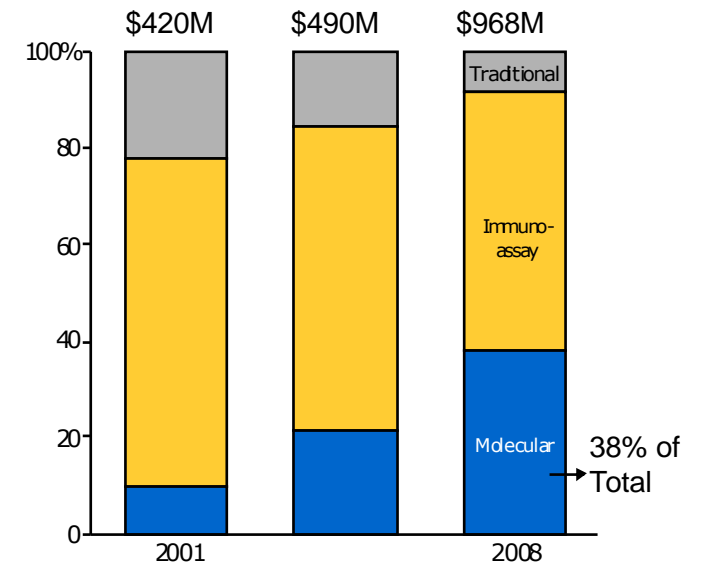
USD Millions



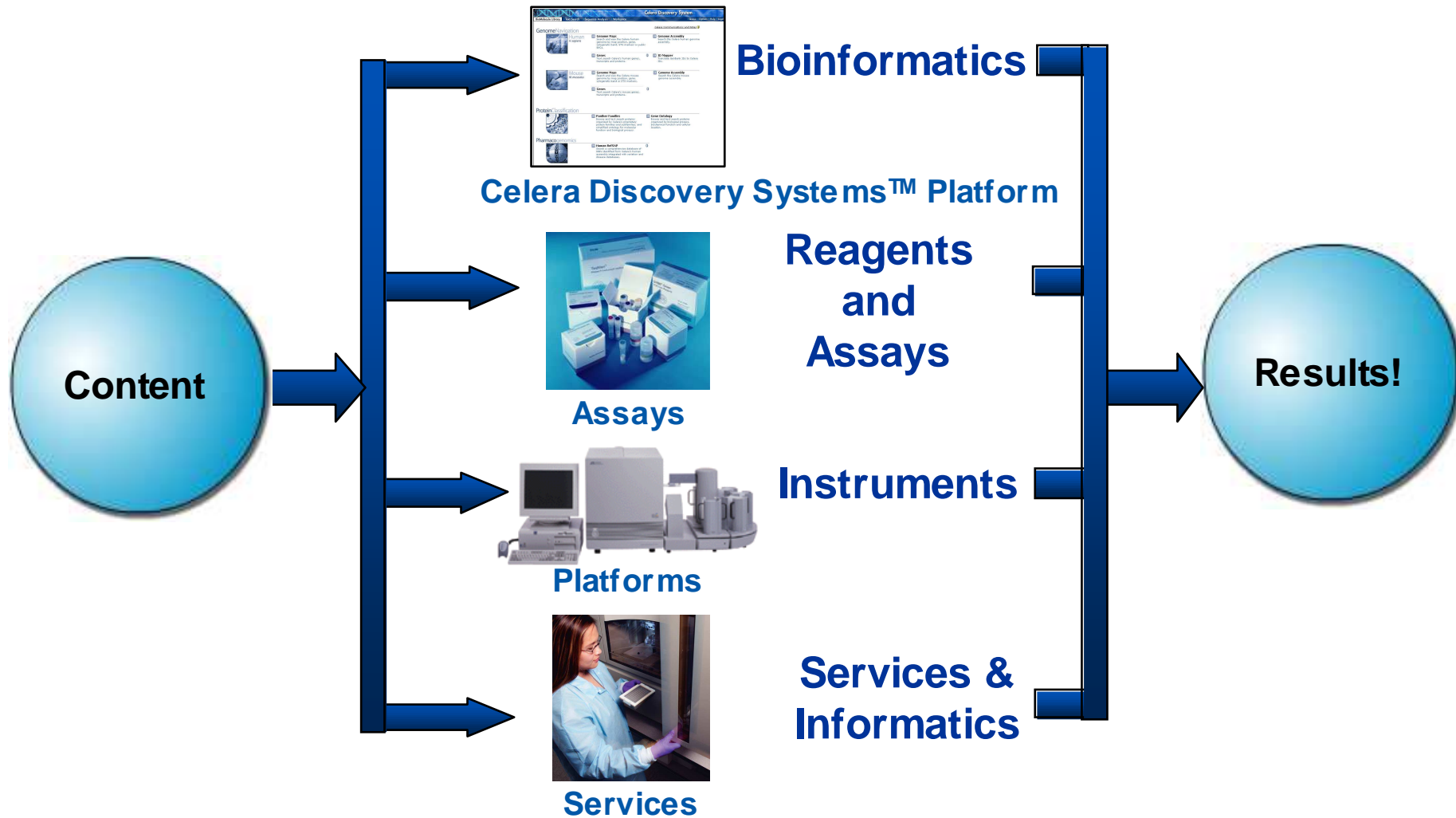
Market size and growth

- In 2003 the market size for food pathogen testing is \$490M
- \$100M (20%) is comprised of molecular methods.
- Molecular methods are the fastest growing of all methods used for pathogen testing and are expected to grow to over \$360M in 2008 (2003-2008 CAGR = 29%).

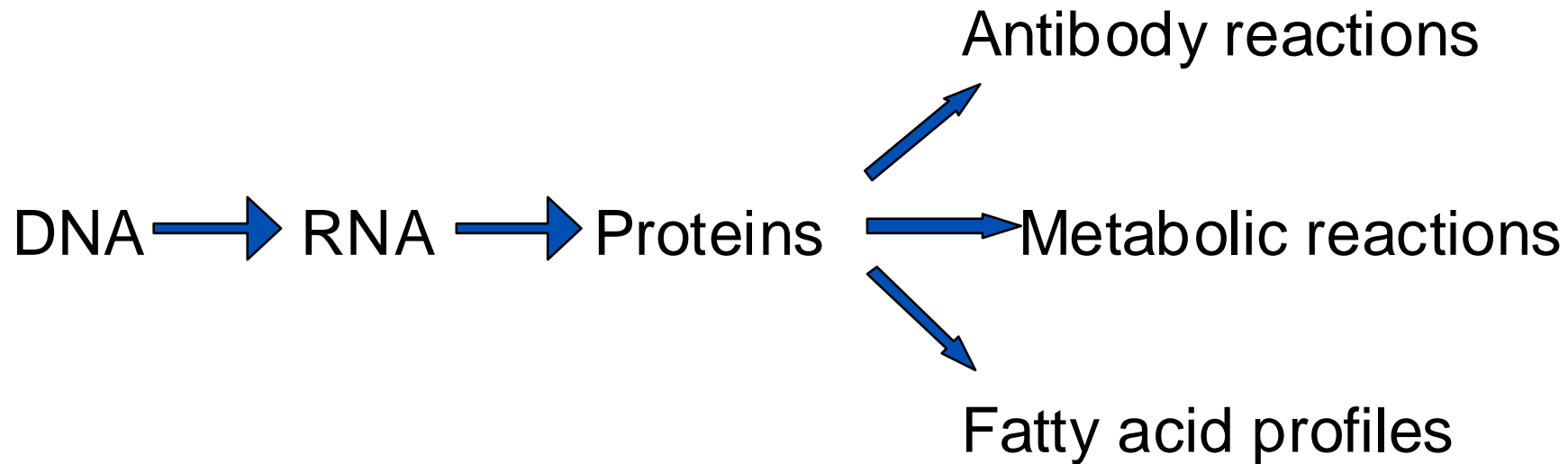
Pathogen Tests by Method



Notre Stratégie



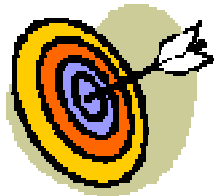
Why DNA testing?



Genotypic

vs.

Phenotypic



De Pasteur à la PCR en temps réel

Microbiologie Alimentaire

- 4 différents TaqMan® Pathogen Detection Kits:
 - *Listeria monocytogenes* (*hlyA* gene)
 - *Salmonella enterica* (*hilA* gene)
 - *Escherichia coli* 0157:H7 (*eaeA* gene)
 - *Campylobacter jejuni* (*ccoN* gene)

Environnement

- *Legionella spp et pneumophila*

Pharma et Cosmétique QC

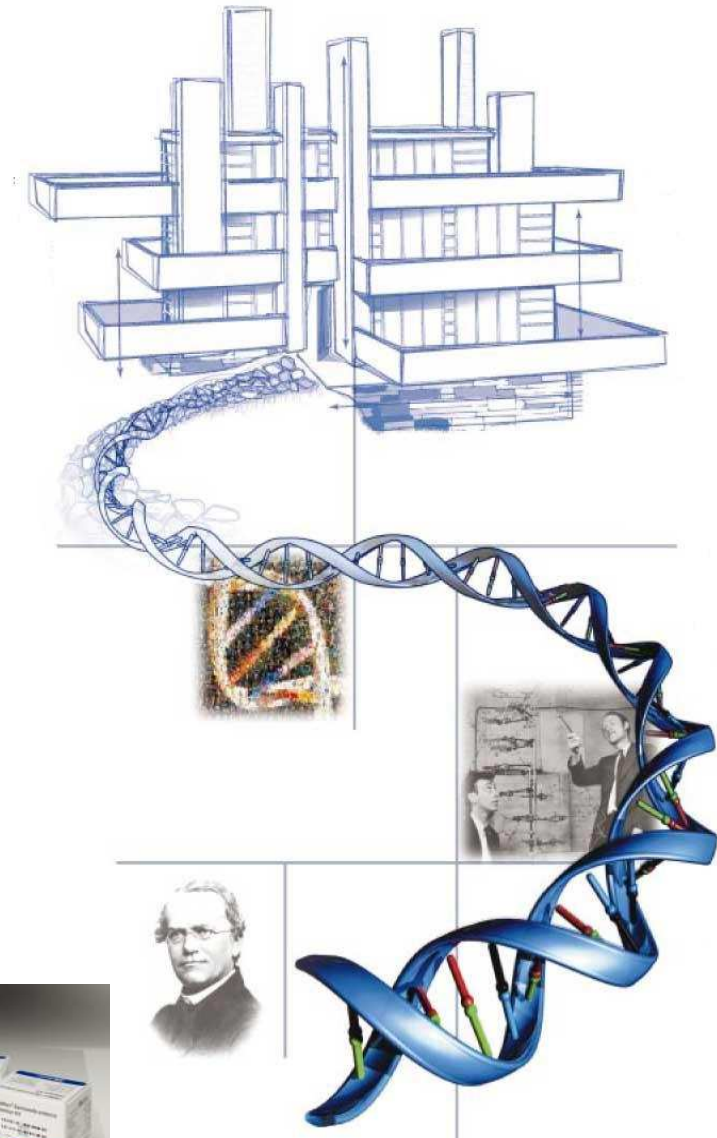
- *Staphylococcus aureus*
- *Pseudomonas aeruginosa*
- ADN résiduel
- Mycoplasme

Vins et Bières

- *Brettanomyces (Prédel)*

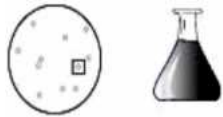
Virus

- Grippe Aviaire H5N1
- Rotavirus, Norovirus, ...

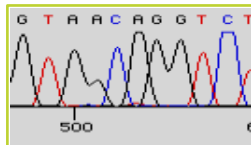


De Pasteur au séquençage

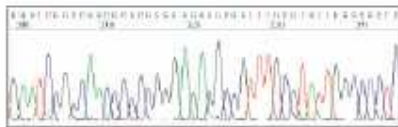
MicroSEQ: Solution pour l'identification



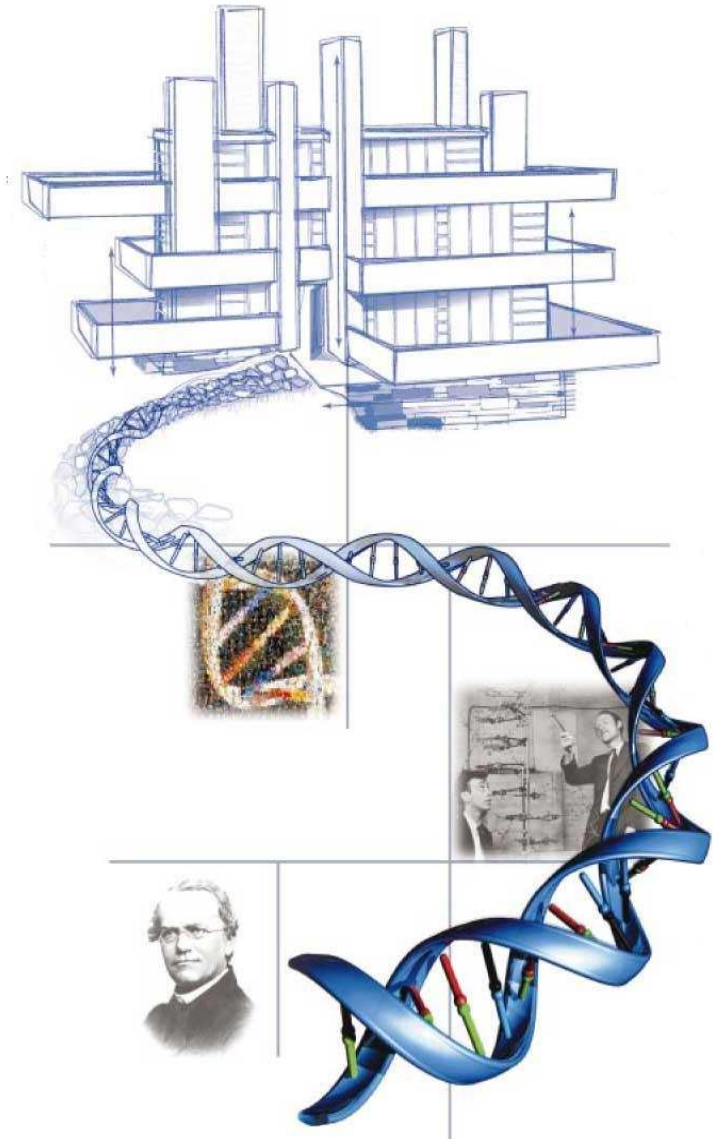
Bactérie/moisissure



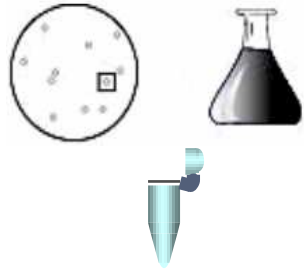
Hit List					
Specimen	Library	Sequence Name	% Match	# of Bases Searched	Total Mismatches
02	AB_Bacteria500Lib	Bacillus flexus	100.0	500	0
02	AB_Bacteria500Lib	Bacillus megaterium	97.7	500	12
02	AB_Bacteria500Lib	Bacillus circulans	93.8	500	31



Identification à 100%



MicroSeq® System Workflow



Starting material: sample from **colony** or pure culture

DNA isolation with PrepMan™ Ultra kit

30 min

PCR with fast MicroSeq® PCR kit

20 min



Purification of PCR product

Sequencing reaction with MicroSeq® sequencing kit
(2 reactions / sample: forward and reverse)

50 min

Purification of sequencing product

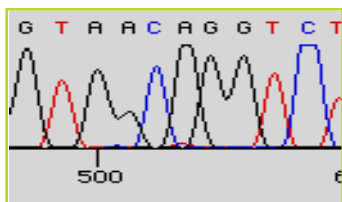
Capillary electrophoresis on Genetic Analyzer

2 hours



Data analysis in MicroSeq® ID software

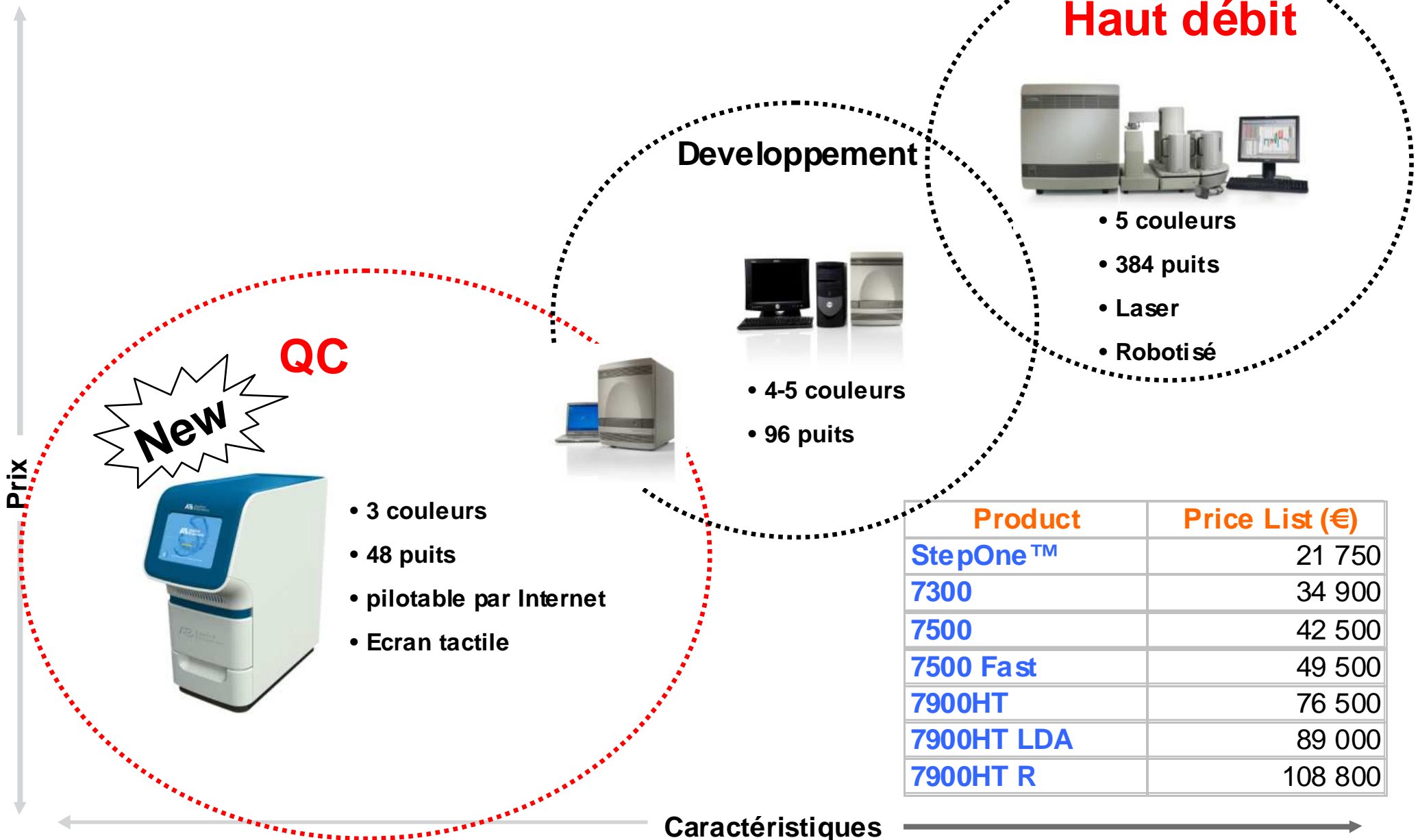
10 min



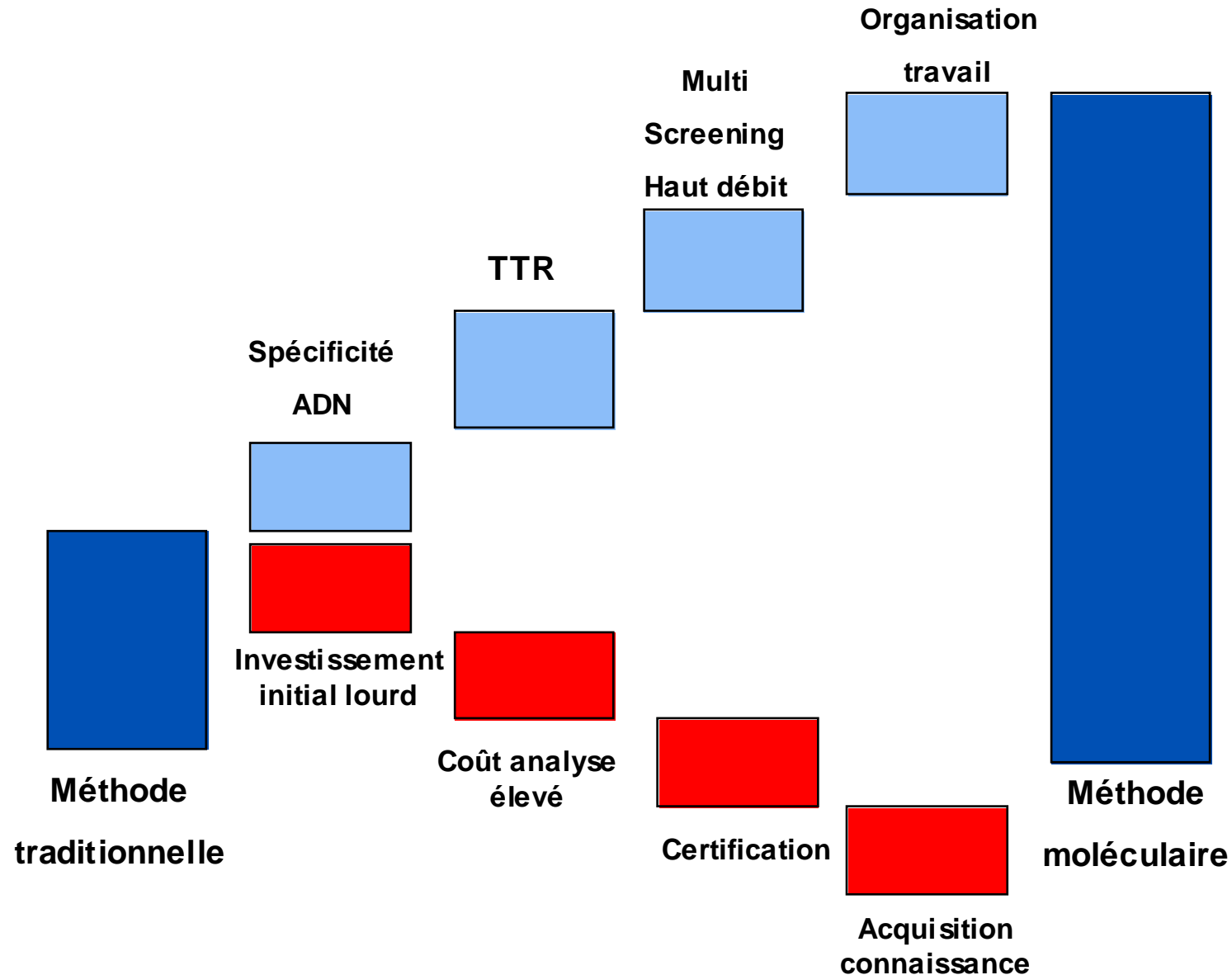
Library Search Report (Hit List)

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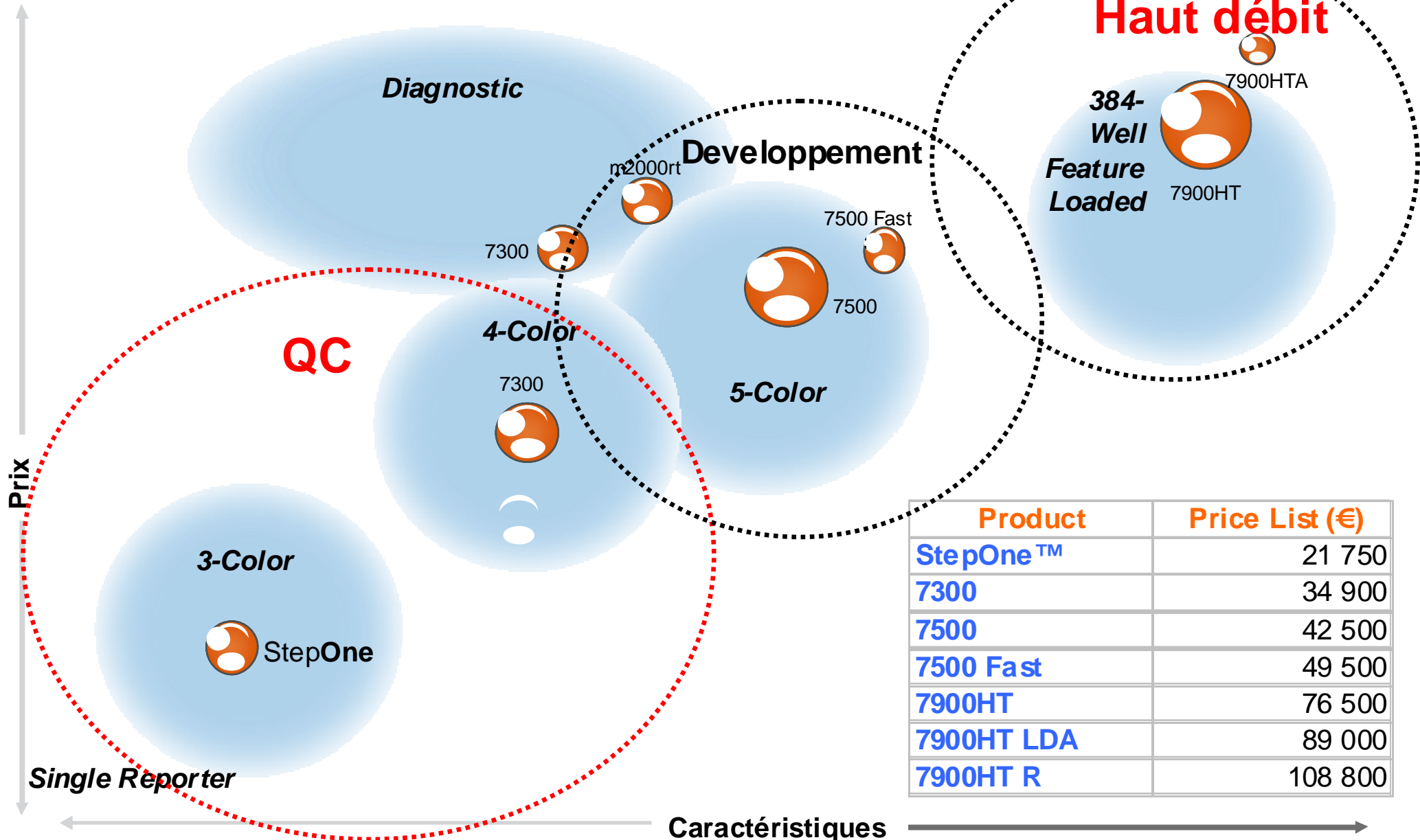
Gamme d'instrument la plus large



Nouvelle stratégie d'investissement pour les laboratoires d'analyses

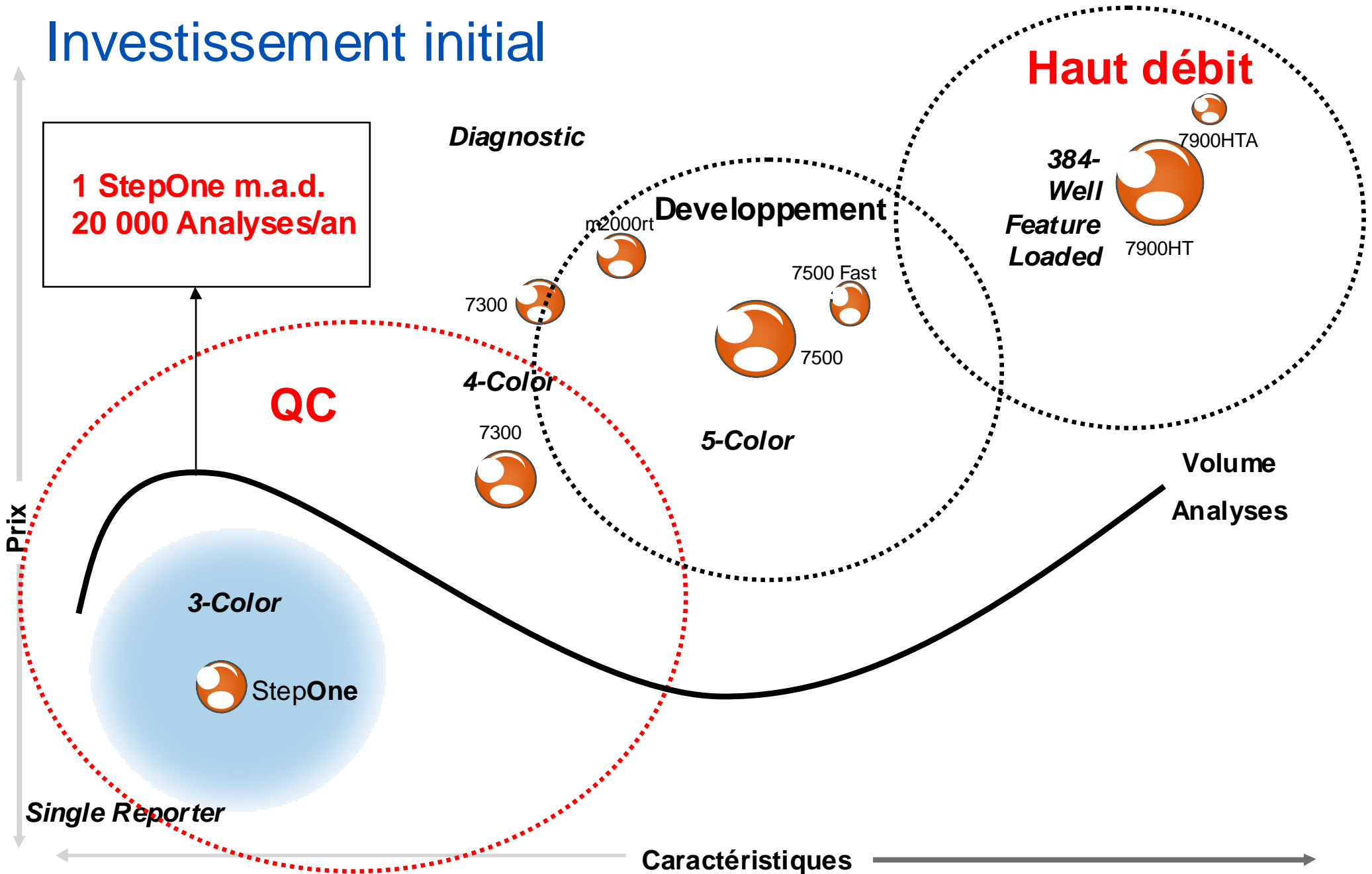


Investissement initial



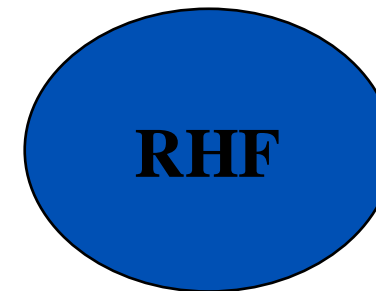
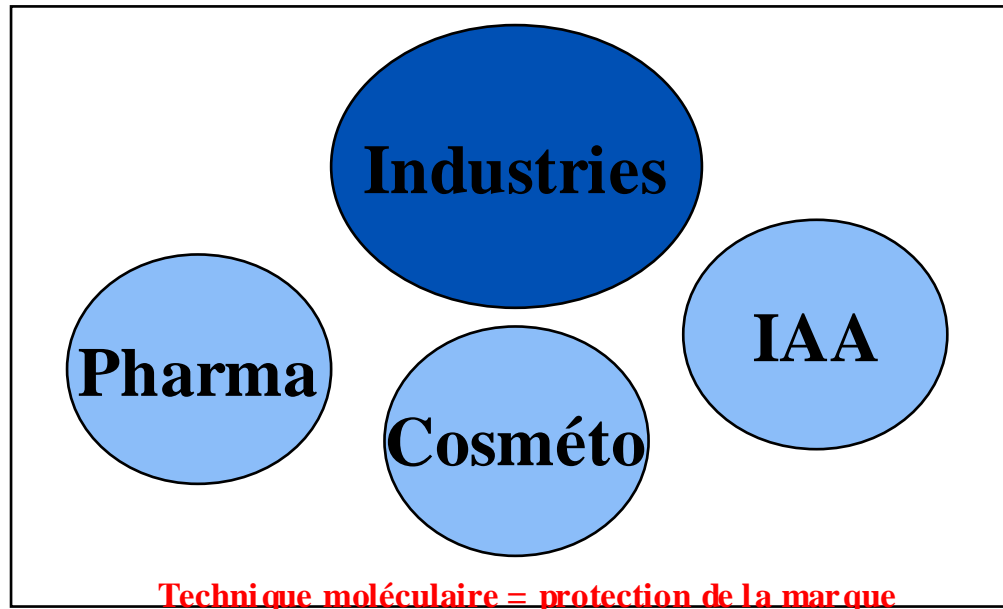
Product	Price List (€)
StepOne™	21 750
7300	34 900
7500	42 500
7500 Fast	49 500
7900HT	76 500
7900HT LDA	89 000
7900HT R	108 800

Investissement initial



Coût d'analyse

Segmentation des clients



- Concentration des pathogènes sur 1 plaque
- Moins de lecture = réduction du temps de travail
- Automatisation

Un support complet-Formations-Séminaires

