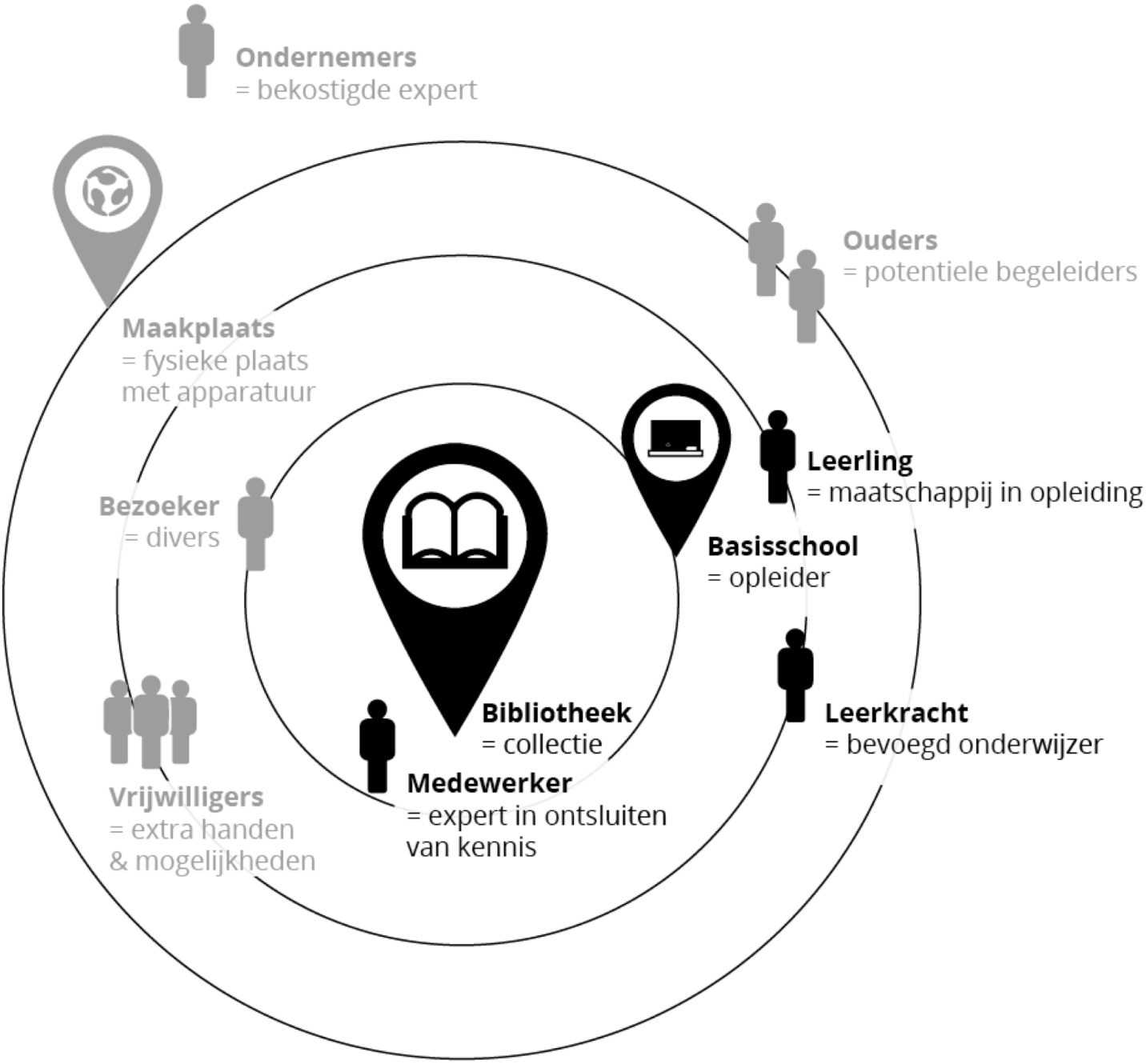

Ondernemers
= bekostigde expert
Ouders
= potentiele begeleiders
Maakplaats
= fysieke plaats
met apparatuur
Leerling
= maatschappij in opleiding
Bezoeker
= divers
Basisschool
= opleider
Bibliotheek
= collectie
Leerkracht
= bevoegd onderwijzer
Medewerker
= expert in ontsluiten
van kennis
Vrijwilligers
= extra handen
& mogelijkheden

Bibliotheek
= Collectie > connectie

Making is..
- onderdeel van 21e eeuwse vaardigheden
- een stappenplan
- sociaal maatschappelijke problemen oplossen

Bij bezoek van onderwijs:
- ondersteunen in plaats van overnemen
  (van het onderwijs)
- niet bevoegd om te onderwijzen

Basisschool
= Opleidingsinstituut

Making is..
- onderdeel van 21e eeuwse vaardigheden
-
-

Bij bezoek bibliotheek / fablab:
- heeft de leraar ‘even pauze’
- hoeft er niets voorbereid te worden
  of afgemaakt te worden

FryskLab

FryskLab is a mobile FabLab, developed by Bibliotheekservice Fryslân. It is the first officially library-powered FabLab in Europe. FryskLab creates an healthy interest in technology and maker skills, hereby stimulating digital literacy. Users of the lab will be able to use tools and skills to design and remix their personal environment and share these with others.

Teacher Maker Camp

Teacher Maker Camp: een inspirerende, technische, creatieve, leuke en uitdagende training, bestaande uit een set workshops voor leraren uit het PO, VO, MBO én HBO. Zelf maken staat centraal. Gedurende Teacher Maker Camp gaat voor even de ‘lerarenpet’ af en de ‘leerlingpet’ op en maak je kennis met nieuwe digitale technieken, zoals 2D- en 3D-ontwerpen, vinyl- en lasersnijden en 3D-printen. Twee dagen lang ga je in de historische Waag op de Nieuwmarkt leuke dingen maken en ontwikkel je je creatieve en technische vaardigheden.

Fablab Drachten

Bezoekers van de bibliotheek Drachten, jong en oud, maken kennis met grafisch ontwerpen, digitale fabricage en andere digitale toepassingen in het Fablab Drachten.

Maakplaats 021

Maakplaats 021 is een speelkamer in de OBA waar jongens en meisjes uit de buurt hun creativiteit en digitale vaardigheden kunnen ontplooien.

Makerkar

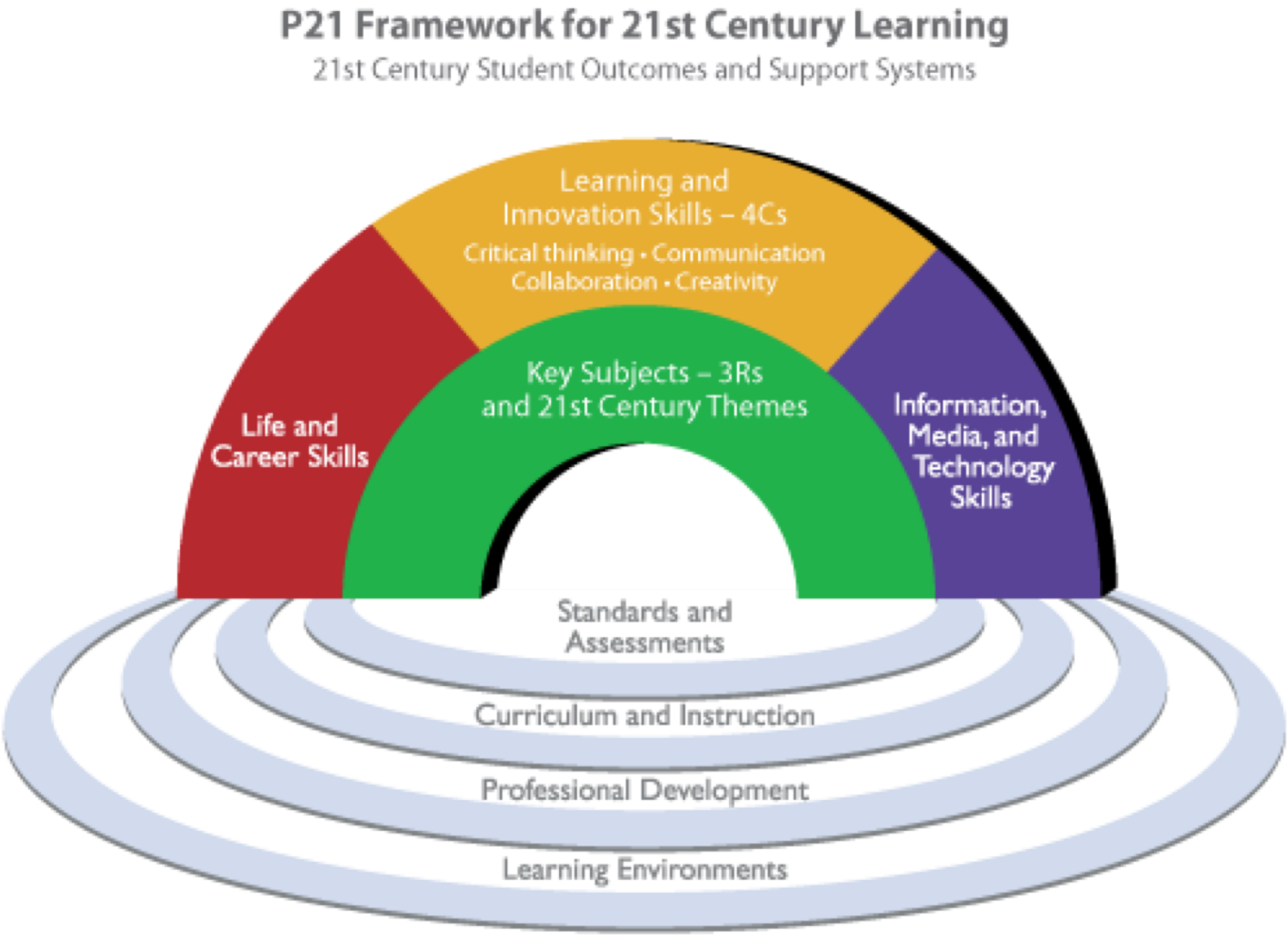
De Makerkar is een mobiele makerspace die met bestaand transport kan worden vervoerd en daardoor geschikt is voor tal van locaties: ziekenhuizen, zorg, kinderopvang etc. Er is een prototype en de kar wordt in het project via opensource-tekeningen door bibliotheken zelf gebouwd. Dit kan in het kader van een schoolproject, met zzp-ers, lokale bedrijven etc. Er wordt gestart met 3 bibliotheken met procesbegeleiding van Rijnbrink; de bibliotheek is trekker van het project.

VR/AR Makerspace

De Bibliotheek Kop van Overijssel en het Platform Cultuureducatie in Steenwijkerland willen een op Virtual Reality en Augmented Reality gespecialiseerde makerspace starten. De makerspace is mobiel en wordt opgebouwd in de Wowi-bus.

Van idee > product

In samenwerking met een docententeam en studenten van het Scalda ICT en Mediavormgeving (MBO) wordt een leerlijn opgezet waarmee jeugd en volwassenen via digitale fabricage een idee kunnen uitwerken tot een product. Deze leerlijn wordt modulair opgezet in de vorm van workshops.



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LEARNING AND INNOVATION SKILLS
Learning and innovation skills increasingly are being recognized as those that separate students who are prepared for a more and more complex life and work environments in the 21st century, and those who are not. A focus on creativity, critical thinking, communication and collaboration is essential to prepare students for the future.

CREATIVITY AND INNOVATION

Think Creatively

- Use a wide range of idea creation techniques (such as brainstorming)
- Create new and worthwhile ideas (both incremental and radical concepts) Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts

Work Creatively with Others

- Develop, implement and communicate new ideas to others effectively
- Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work
- Demonstrate originality and inventiveness in work and understand the real world limits to adopting new ideas
- View failure as an opportunity to learn; understand that creativity and innovation is a long-term, cyclical process of small successes and frequent mistakes

Implement Innovations

- Act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur

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CRITICAL THINKING AND PROBLEM SOLVING

Reason Effectively

- Use various types of reasoning (inductive, deductive, etc.) as appropriate to the situation

Use Systems Thinking

- Analyze how parts of a whole interact with each other to produce overall outcomes in complex systems

Make Judgments and Decisions

- Effectively analyze and evaluate evidence, arguments, claims and beliefs
- Analyze and evaluate major alternative points of view
- Synthesize and make connections between information and arguments
- Interpret information and draw conclusions based on the best analysis
- Reflect critically on learning experiences and processes

Solve Problems

- Solve different kinds of non-familiar problems in both conventional and innovative ways
- Identify and ask significant questions that clarify various points of view and lead to better solutions

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COMMUNICATION AND COLLABORATION

Communicate Clearly

- Articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts
- Listen effectively to decipher meaning, including knowledge, values, attitudes and intentions
- Use communication for a range of purposes (e.g. to inform, instruct, motivate and persuade)
- Utilize multiple media and technologies, and know how to judge their effectiveness a priori as well as assess their impact
- Communicate effectively in diverse environments (including multi-lingual)

Collaborate with Others

- Demonstrate ability to work effectively and respectfully with diverse teams
- Exercise flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal
- Assume shared responsibility for collaborative work, and value the individual contributions made by each team member

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INFORMATION, MEDIA AND TECHNOLOGY SKILLS

People in the 21st century live in a technology and media-driven environment, marked by various characteristics, including: 1) access to an abundance of information, 2) rapid changes in technology tools, and 3) the ability to collaborate and make individual contributions on an unprecedented scale. Effective citizens and workers of the 21st century must be able to exhibit a range of functional and critical thinking skills related to information, media and technology.

INFORMATION LITERACY

Access and Evaluate Information

- Access information efficiently (time) and effectively (sources)
- Evaluate information critically and competently

Use and Manage Information

- Use information accurately and creatively for the issue or problem at hand
- Manage the flow of information from a wide variety of sources
- Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information

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MEDIA LITERACY

Analyze Media

- Understand both how and why media messages are constructed, and for what purposes
- Examine how individuals interpret messages differently, how values and points of view are included or excluded, and how media can influence beliefs and behaviors
- Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of media

Create Media Products

- Understand and utilize the most appropriate media creation tools, characteristics and conventions
- Understand and effectively utilize the most appropriate expressions and interpretations in diverse, multi-cultural environments

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ICT (Information, Communications and Technology) LITERACY
Apply Technology Effectively

- Use technology as a tool to research, organize, evaluate and communicate information
- Use digital technologies (computers, PDAs, media players, GPS, etc.), communication/networking tools and social networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy
- Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information technologies

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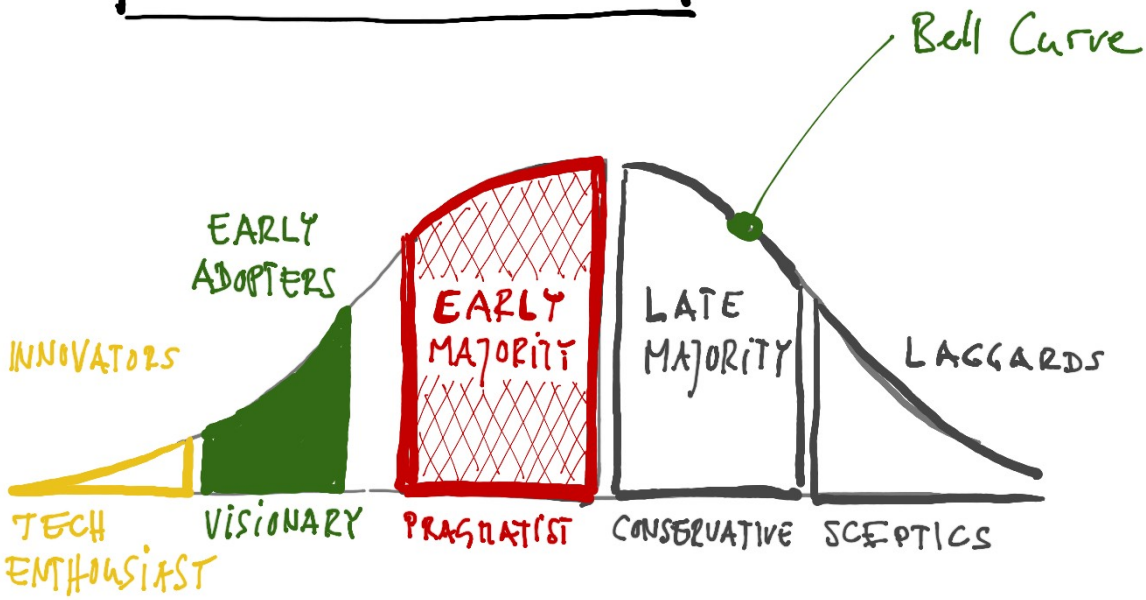
The Chasm

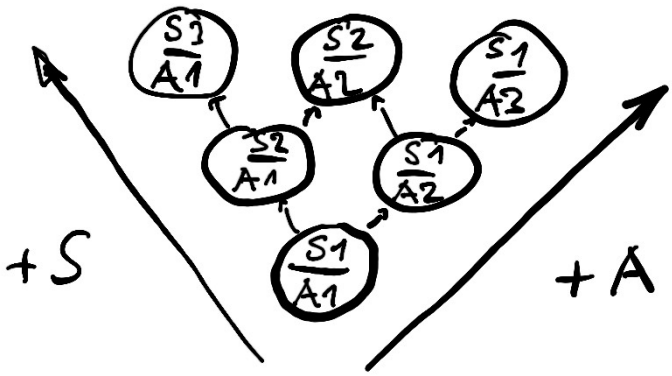


Geoffrey A. Moore
Crossing the Chasm.
Marketing and Selling
Technology Products to
Mainstream Customers.
New York: HarperCollins 1991

⚠ pragmatists do not trust visionaries as credible reference

BOWLING ALLEY

S: segment
A: application



20% vrije ruimte in het curriculum?!