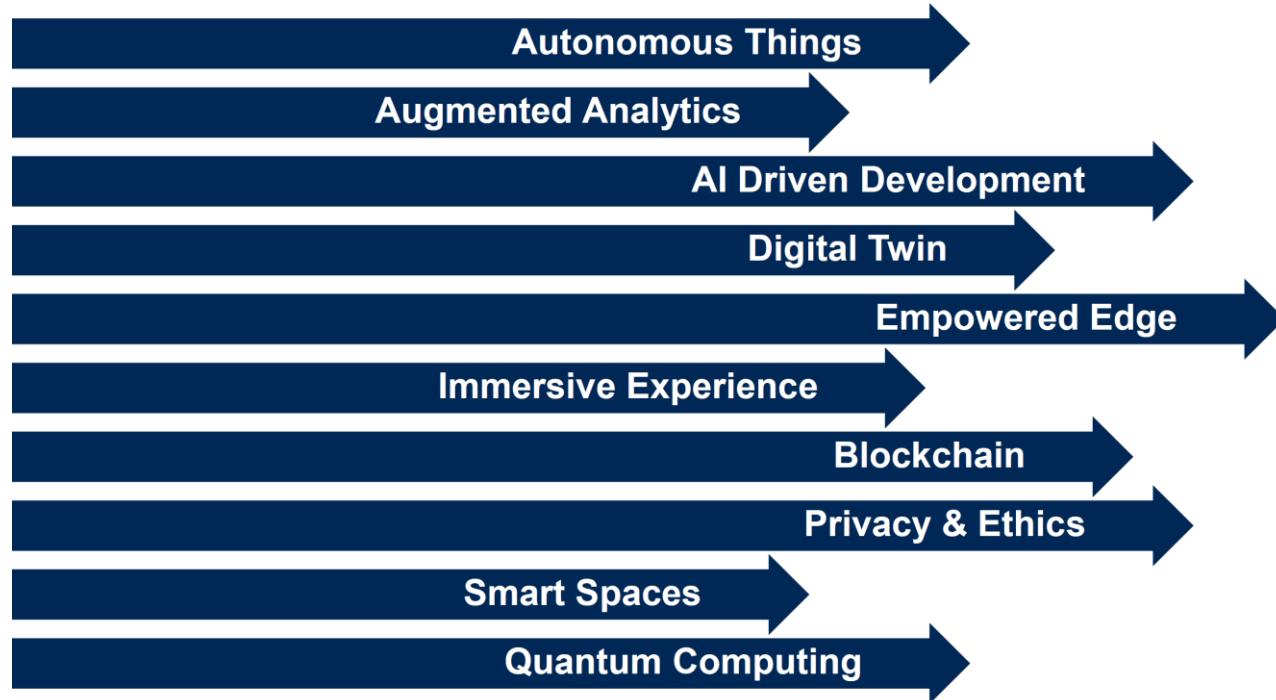


Data trends en ontwikkelingen

Seminar “Smart Data Practices”, 31 januari 2019

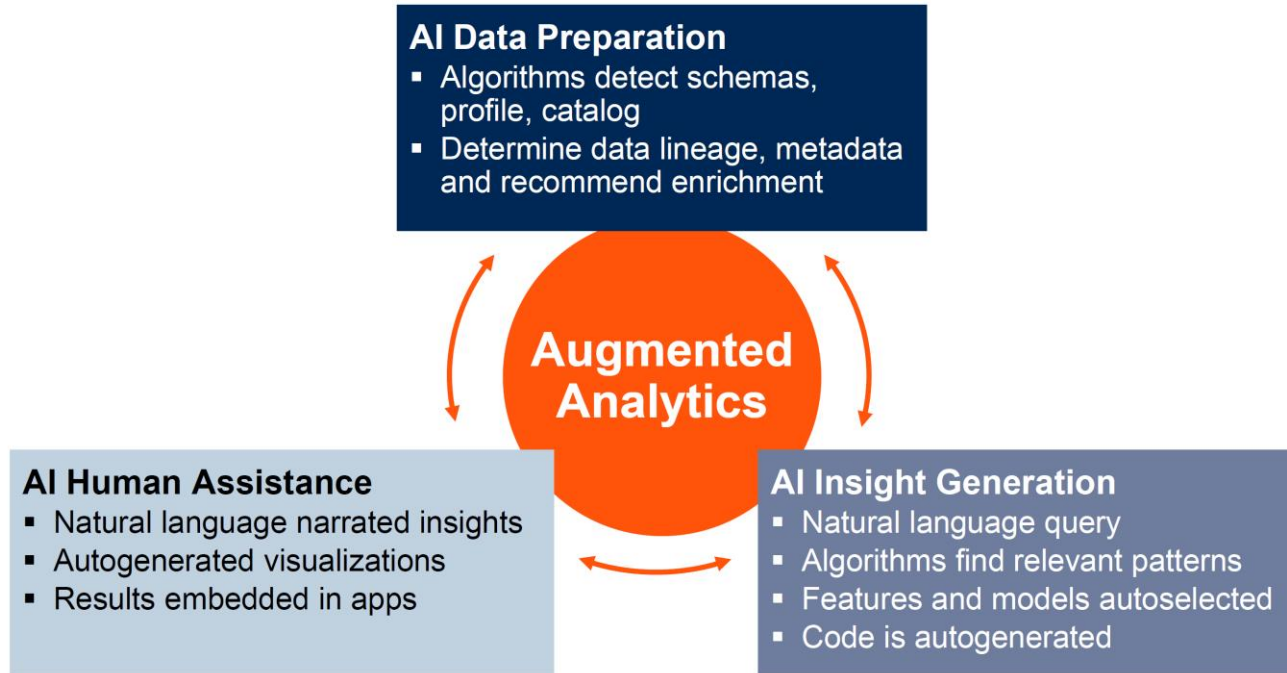
Danny Greefhorst
dgreefhorst@archixl.nl

Top 10 strategische technologietrends voor 2019



bron: Gartner, "The Top 10 Strategic Technology Trends for 2019" (2018)

Augmented Analytics



bron: Gartner, "The Top 10 Strategic Technology Trends for 2019" (2018)

AI Driven Development

| Vision | Speech | Language | Conversation |
|--------------------|---------------------|--------------------|------------------------|
| Image Analysis | Speech to Text | Text Analytics | Bots |
| Video Analysis | Text to Speech | Translation | Natural Language Proc. |
| Facial Recognition | Speaker Recognition | Content Moderation | QnA Generation |



| FEATURE NAME: | VALUE |
|---------------|---|
| Description | { "tags": ["grass", "outdoor", "dog", "mountain", "sitting", "brown", "standing", "front", "large", "white", "black", "frisbee", "wearing", "field", "riding", "water", "laying", "blue"], "captions": [{ "text": "a dog sitting on top of a mountain", "confidence": 0.9661996 }] } |
| Tags | [{ "name": "sky", "confidence": 0.9999597 }, { "name": "grass", "confidence": 0.999574244 }, { "name": "outdoor", "confidence": 0.9994123 }, { "name": "dog", "confidence": 0.999204 }, { "name": "mountain", "confidence": 0.9729537 }, { "name": "brown", "confidence": 0.8211674 }, { "name": "mammal", "confidence": 0.719327569 }] |
| Image format | "Jpeg" |

bron: Gartner, "The Top 10 Strategic Technology Trends for 2019" (2018)

Nieuwe functies die nodig zijn in 2029

- Data Detective
- Bring Your Own IT Facilitator
- Ethical Sourcing Manager
- AI Business Development Manager
- Master of Edge Computing
- Walker/Talker
- Fitness Commitment Counselor
- AI-Assisted Healthcare Technician
- Cyber City Analyst
- Genomic Portfolio Director
- Man-Machine Teaming Manager
- Financial Wellness Coach
- Digital Tailor
- Chief Trust Officer
- Quantum Machine Learning Analyst
- Virtual Store Sherpa
- Personal Data Broker
- Personal Memory Curator
- Augmented Reality Journey Builder
- Highway Controller
- Genetic Diversity Officer
- Algorithm Bias Auditor
- Chief Purpose Planner
- Cyber attack agent
- Cyber Calamity Forecaster
- Data Trash Engineer
- Esports Arena Builder
- Flying Car Developer
- Haptic Interface Programmer
- Head of Business Behavior
- Head of Machine Personality Design
- Joy Adjutant
- Juvenile Cybercrime Rehabilitation Counselor
- Machine Risk Officer
- Smart Home Design Manager
- Subscription Management Specialist
- Tidewater Architect
- Uni4Life Coordinator
- Vertical Farm Consultant
- Virtual Identity Defender
- Voice UX Designer
- VR Arcade Manager

bron: Cognizant, “21 jobs of the future” (2017) en “21 more jobs of the future” (2018)

Nieuwe functies die nodig zijn in 2029

- Data Detective
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 - AI Business Development
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 - Man-Machine Teaming Specialist
 - Financial Wellness Coach
 - Digital Tailor
 - Chief Trust Officer
 - Quantum Machine Learning Analyst
- Data Detective**
- Embed in departments and teams
 - Examine data
 - Find new sources of data
 - Ask questions of data
 - Work data sources
 - Triangulate different data sources
 - Write reports and present findings
 - Keep abreast of general developments in data science
 - Understand the competitive environment
- Flying Car Developer
 - Haptic Interface Programmer
 - Voice UX Designer
 - VR Arcade Manager
- Business Behavior
 - Machine Personality Design
 - Crime Rehabilitation
 - Officer
 - Design Manager
 - Management Specialist
 - Architect
 - Coordinator
 - Consultant
 - Policy Defender

bron: Cognizant, "21 jobs of the future" (2017) en "21 more jobs of the future" (2018)

Nieuwe functies die nodig zijn in 2029

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 - AI Business Development
 - Master of Edge Computing
 - Walker/Talker
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 - AI-Assisted Healthcare
 - Cyber City Analyst
 - Genomic Portfolio Director
 - Man-Machine Teaming
 - Financial Wellness Coach
 - Digital Tailor
 - Chief Trust Officer
 - Quantum Machine Learning
 - Virtual Store Sherpa
 - Personal Data Broker
 - Head of Business Behavior
 - Head of Machine Personality Design
 - Crime Rehabilitation Officer
 - Design Manager
 - Management Specialist
 - Architect
 - Coordinator
 - Consultant
 - Policy Defender
 - Designer
 - Manager
- Ethical Sourcing manager**

 - Be an active member of the ethical board
 - Augment ethical sourcing strategies
 - Define category redlines
 - Undertake category research
 - Create specific category plans
 - Oversee a team of analysts
 - Negotiate, agree and check delivery
 - Update key metrics for client review
 - Liaise with the provider community
 - Provide insight on ethical positions
 - Evaluate category information feeds

bron: Cognizant, "21 jobs of the future" (2017) en "21 more jobs of the future" (2018)

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- Genomic Portfolio Director
- Man-Machine Teaming
- Financial Wellness Coach
- Digital Tailor
- Chief Trust Officer
- Quantum Machine Learning
- Virtual Store Sherpa
- Personal Data Broker
- Personal Memory Curator
- Head of Business Behavior
- Head of Machine Personality Design
- Loyalty Adjutant
- Crime Rehabilitation Officer
- Design Manager
- Management Specialist
- Architect
- Coordinator
- Consultant
- Policy Defender
- Designer
- Manager

AI Business Development Manager

- Define, build and deploy
- Engage, support and drive sale
- Exhibit proactive ability and expertise
- Exhibit cloud-managed services or AI expertise
- Drive field and partner readiness
- Engage in senior-level customer meetings
- Serve as an evangelist
- Develop a standard market intelligence framework
- Establish ways to measure and track metrics
- Prepare and provide business reviews

more jobs of the future" (2018)

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- Management Specialist
- Architect
- Coordinator
- Consultant
- Policy Defender
- Designer
- Manager

Quantum Machine Learning Analyst

- Define a QML roadmap
- Collaborate with business and IT teams
- Research, design, prototype and test
- Work with industry partners and startups
- Apply machine learning techniques
- Apply principles from quantum techniques
- Collaborate with research institutions and startups
- Work with the legal team
- Collaborate with our internal research and engineering teams

more jobs of the future" (2018)

Nieuwe functies die nodig zijn in 2029

Data Trash Engineer

- Create a data trash nutrition labeling system to rate the quality of each dataset
- Become a champion of the “trash-to-treasure” innovation programme
- Design AI test experiments
- Participate in the planning and strategy of key projects
- Drive collaboration with other data teams
- Partner closely with our legal teams

- Genomic Portfolio Director
- Man-Machine Teaming Manager
- Financial Wellness Coach
- Digital Tailor
- Chief Trust Officer
- Quantum Machine Learning Analyst

- Calamity Forecaster
- Data Trash Engineer
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- VR Arcade Manager

Algorithm Bias Auditor

- Establish and lead a team of ABAs
- Create and maintain an inventory of all algorithms across the business
- Produce bias guidelines to lead development teams
- Develop matrix-style co-review models
- Initiate reporting methodologies

Geo-BIM integratie voor vergunningverlening



☰ menu

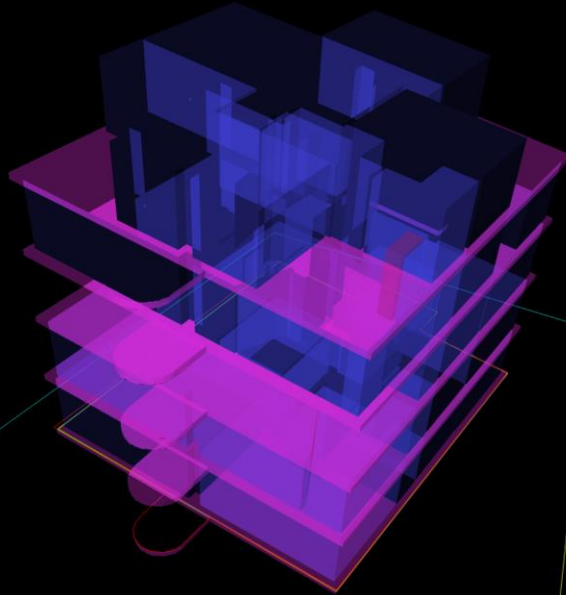
Uitleg

2D-gegevens

- Gebouwmotiek uit IFC
- Kadastraal perceel
- Pand uit de BAG
- RO Enkelbestemming
- RO Maatvoering

3D-gegevens

- Vloerplaten (IfcSlab)
- Ruimten (IfcSpace)



Informatie over object

IfcProject

Naam: Kantoor President Kennedylaan 1

Schema: IFC2X3

Eenheid lengte: METRE

Eenheid oppervlakte: SQUARE_METRE

Eenheid oppervlakte: CUBIC_METRE

Maximale hoogte: 16.5

Aantal personen per toiletruimte: 9

IfcSite

Lengtegraad: 4.9131097

Breedtegraad: [52.3423195](#)

IfcBuilding

Gerelateerd pand BAG:

<http://bag.basisregistraties.overheid.nl/bag/id/pand/0363100012>

Gerelateerd perceel BRK:

<http://brk.basisregistraties.overheid.nl/id/perceel/230143324>

BBL

Categorie:

<http://www.example.com/bbl#BestaandeBouw>

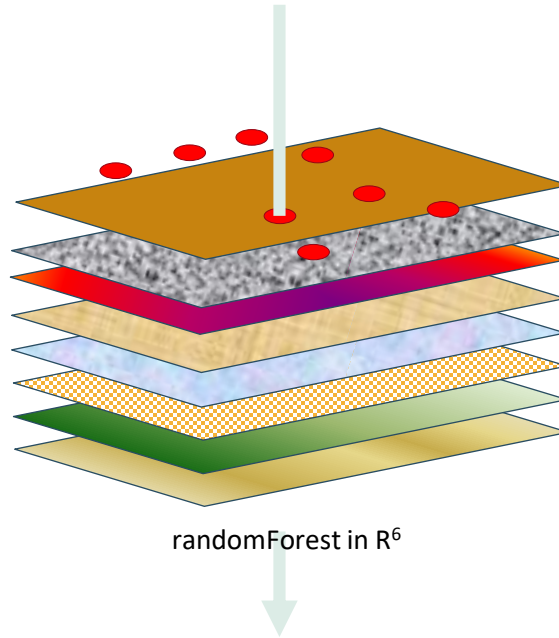
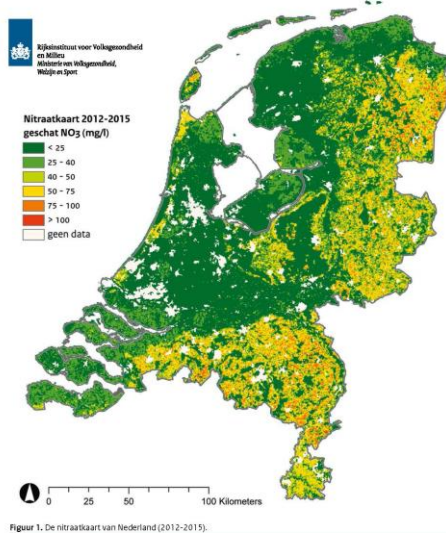
Functie:

<http://www.example.com/bbl#Kantoorfunctie>



Data science bij het RIVM: Nitraatkaart

Nitraatkaart 2012-2015



Landbouwgebieden:

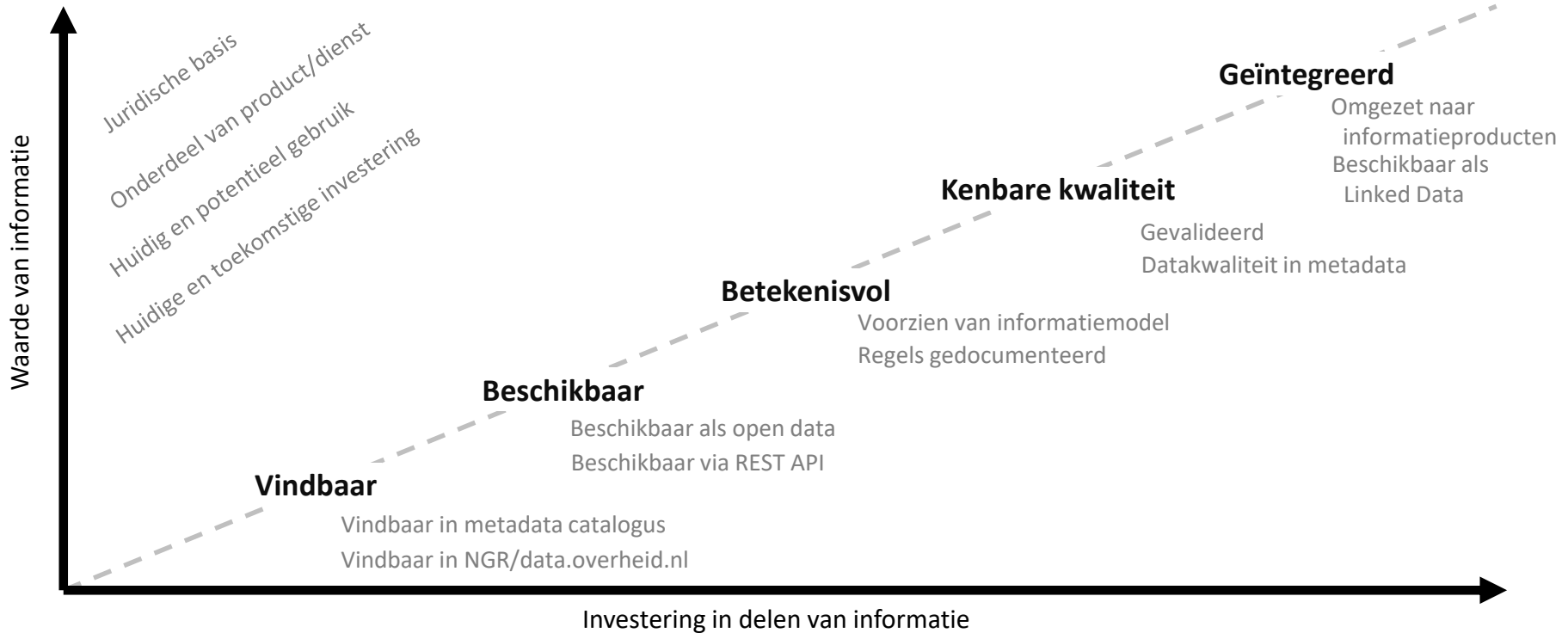
- Nitraatconcentraties LMM-locaties
- Bedrijfsoppervlakken LMM-locaties
- Grondsoortregiokaart LMM
- Landgebruikskaart Nederland
- Grondwatertrappenkaart (Gt)
- Bodemkaart
- Grondsoortenkaart meststoffenwet
- Mestgebruik per gemeente/
grondgebruik (MAMBO-data)

Natuurgebieden:

- Nitraatconcentraties TMV-locaties
- Landgebruikskaart
- Stikstofdepositiekaart
- Bodemkaart3

Bron: <https://www.rivm.nl/landelijk-meetnet-effecten-mestbeleid/resultaten/nitraatkaart-van-nederland>

Informatiewaardemodel

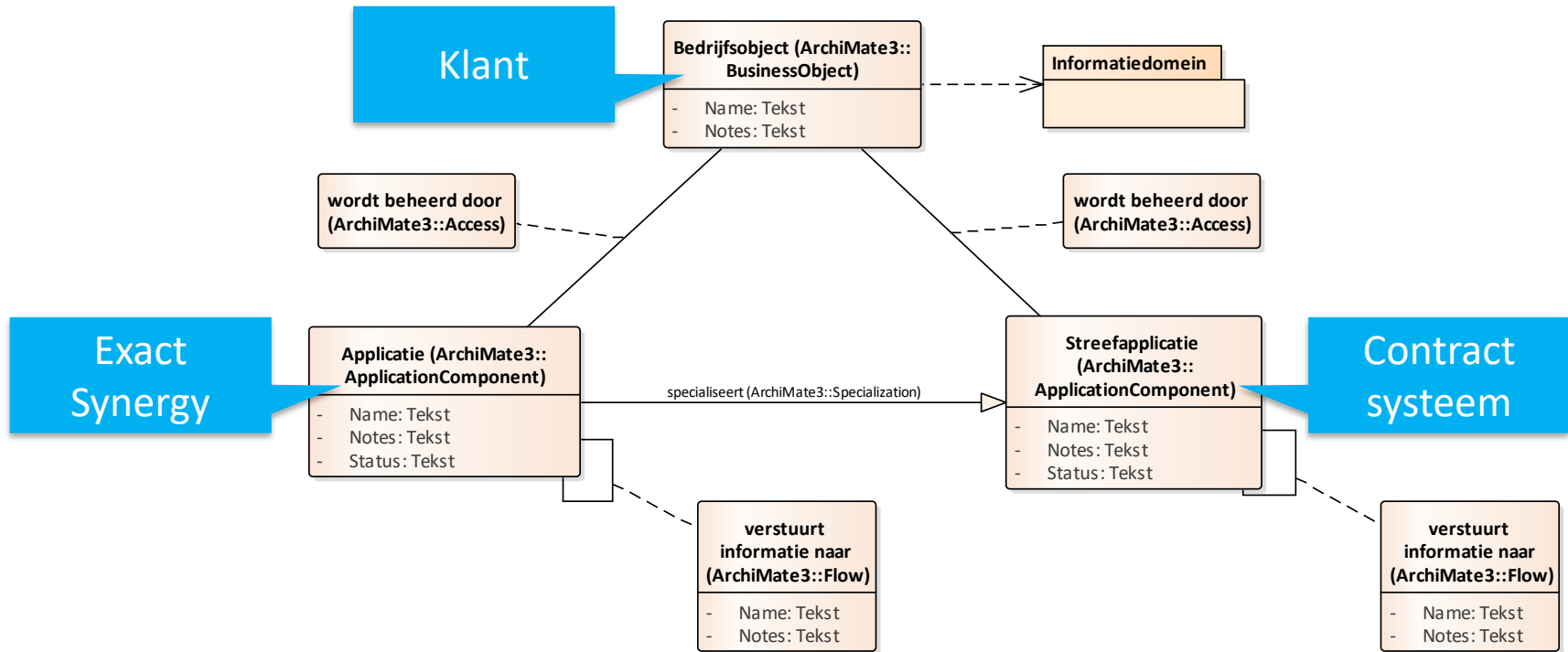


Datakwaliteit

| Nauwkeurigheid | | Compleetheid | | Consistentie | |
|----------------------------|------------------------------|-----------------------|------------------|--------------------------|---------------------------|
| Thematische nauwkeurigheid | Temporele nauwkeurigheid | Dataset compleetheid | Overcompleetheid | Formaat consistentie | Topologische consistentie |
| Classificatie juistheid | Kwantitatieve nauwkeurigheid | Object compleetheid | Historie | Domein consistentie | Referentiële integriteit |
| Positionele nauwkeurigheid | Systematische afwijking | Metadata compleetheid | Geo-gerefereerd | Conceptuele consistentie | Homogeniteit |
| | | | | Geometrische correctheid | |
| Actualiteit | Precisie | Plausibiliteit | Traceerbaarheid | Compliance | Begrijpelijkheid |
| Tijdigheid | Opslagprecisie | Authenticiteit | Herleidbaarheid | Standaarden compliance | Relevantie |
| Frequentie | Statistische precisie | Waarschijnlijkheid | | | Leesbaarheid |
| | Resolutie | Representativiteit | | | |

bron: Gegevenskwaliteit in de omgevingswet

Informatie-architectuur als basis voor data management



Vragen?

