CDAO NETWORK

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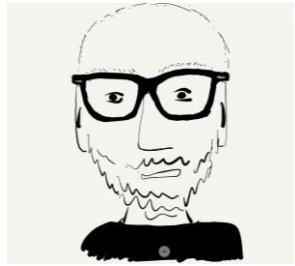
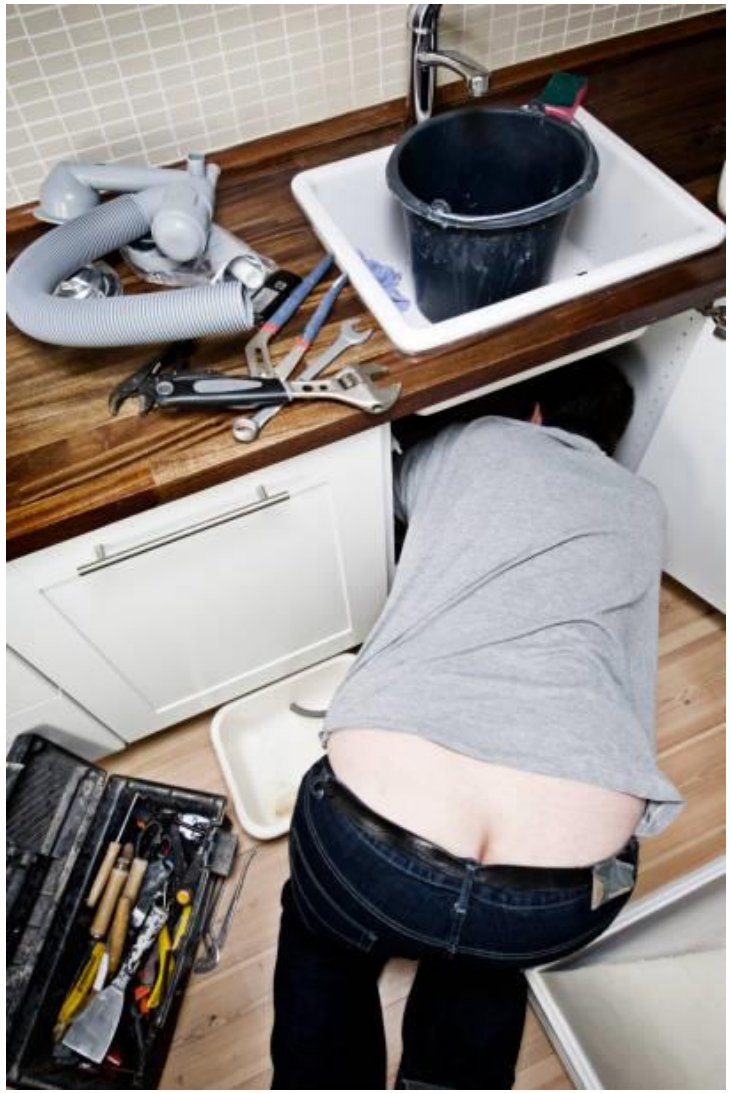
Dr Marc Farr

Chief Data and Analytical Officer

- East Kent Hospitals and NHS Kent and Medway



Digital (Basement)



Data (Boardroom)

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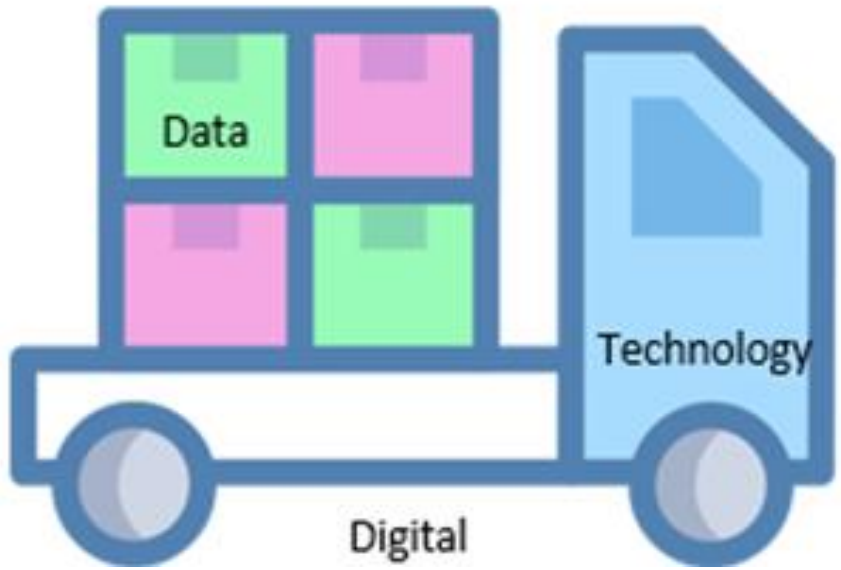

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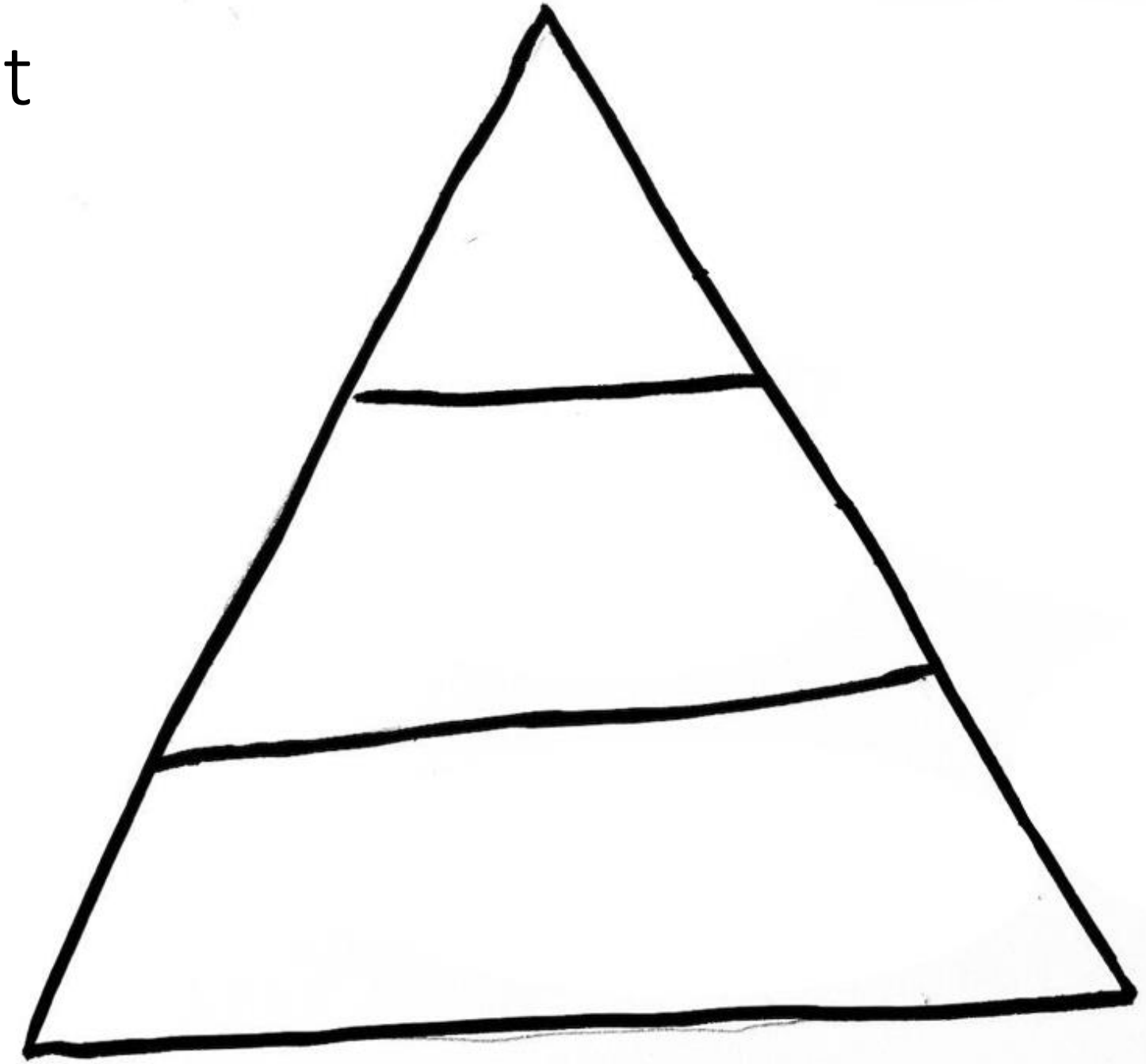
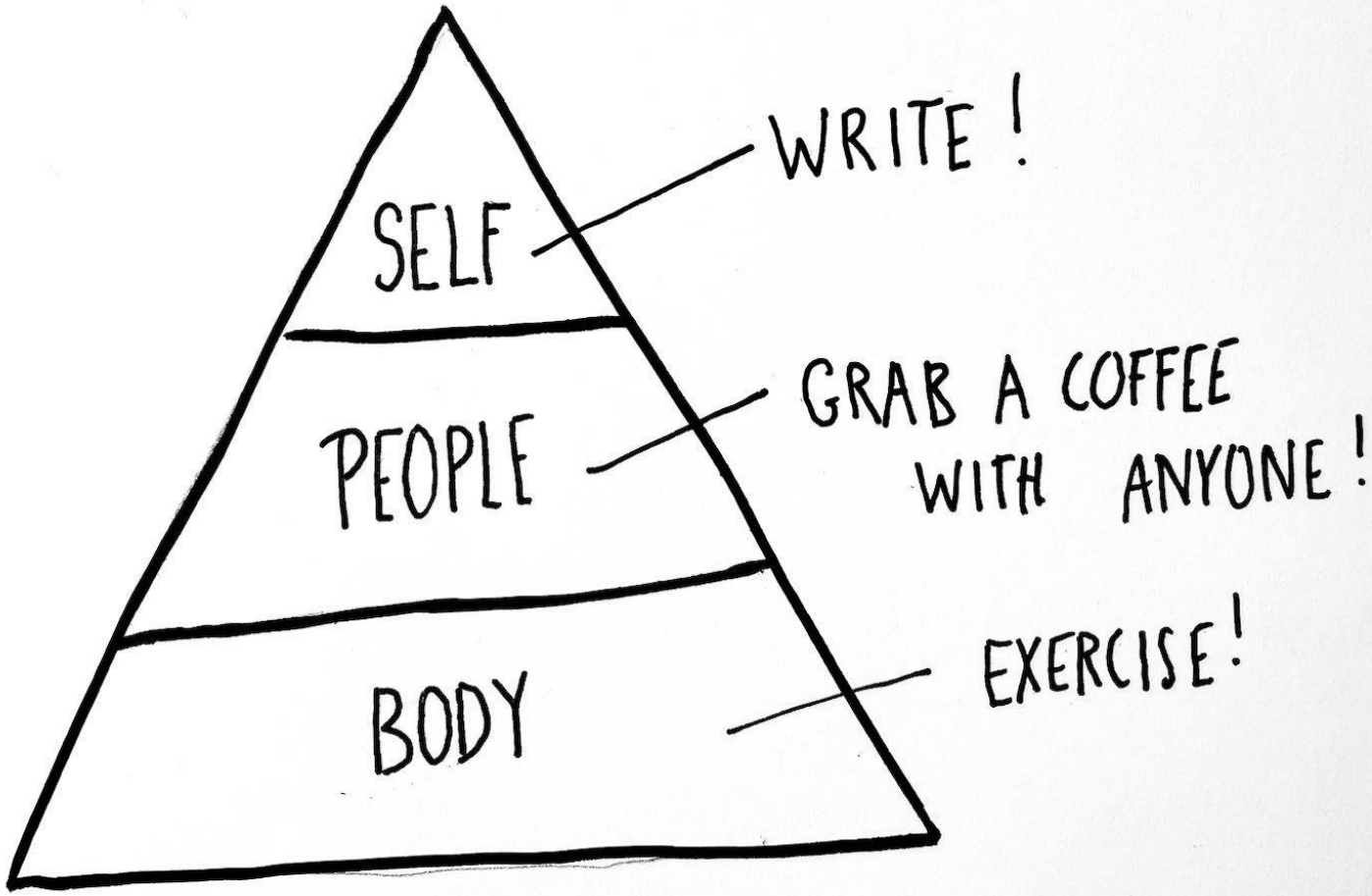
OLD COOTS GIVING ADVICE
It's probably bad advice, but it's free.
REGIONAL ITALIAN

I think Marc's great because:

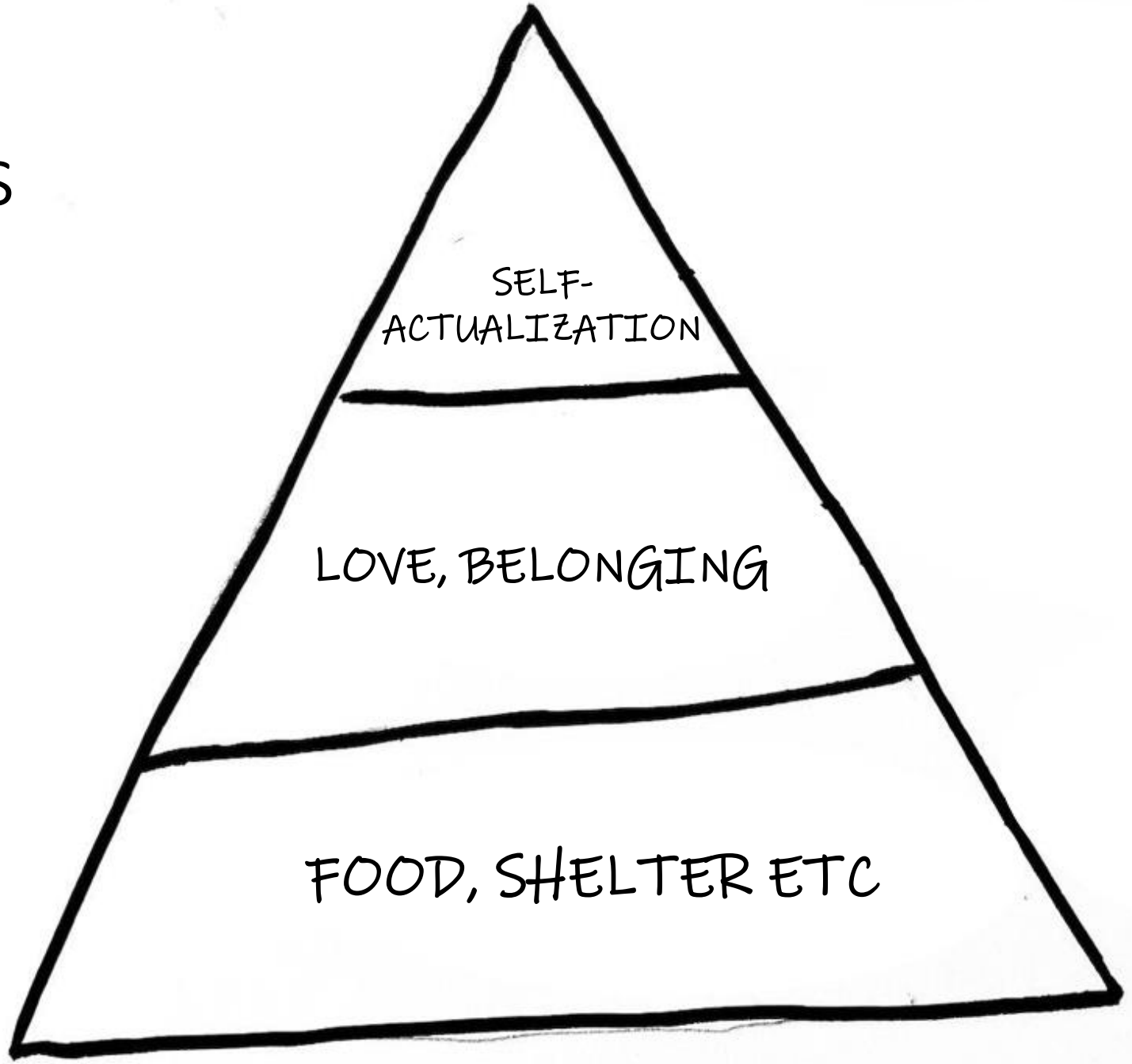


PYRAMID OF RELATIONSHIPS

— by Phill Stutz —



Maslow's Hierarchy of Needs



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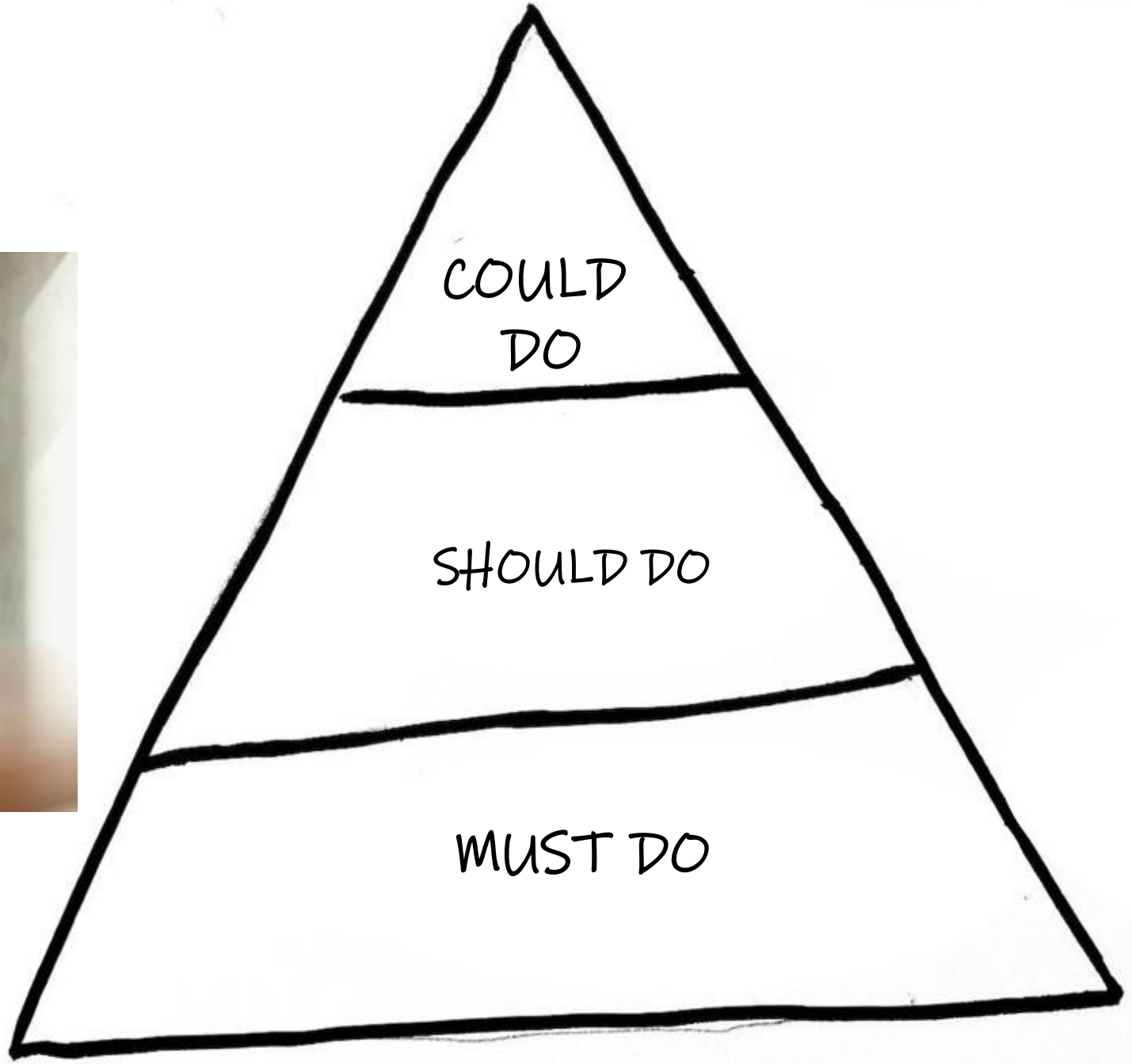
MOSCOW



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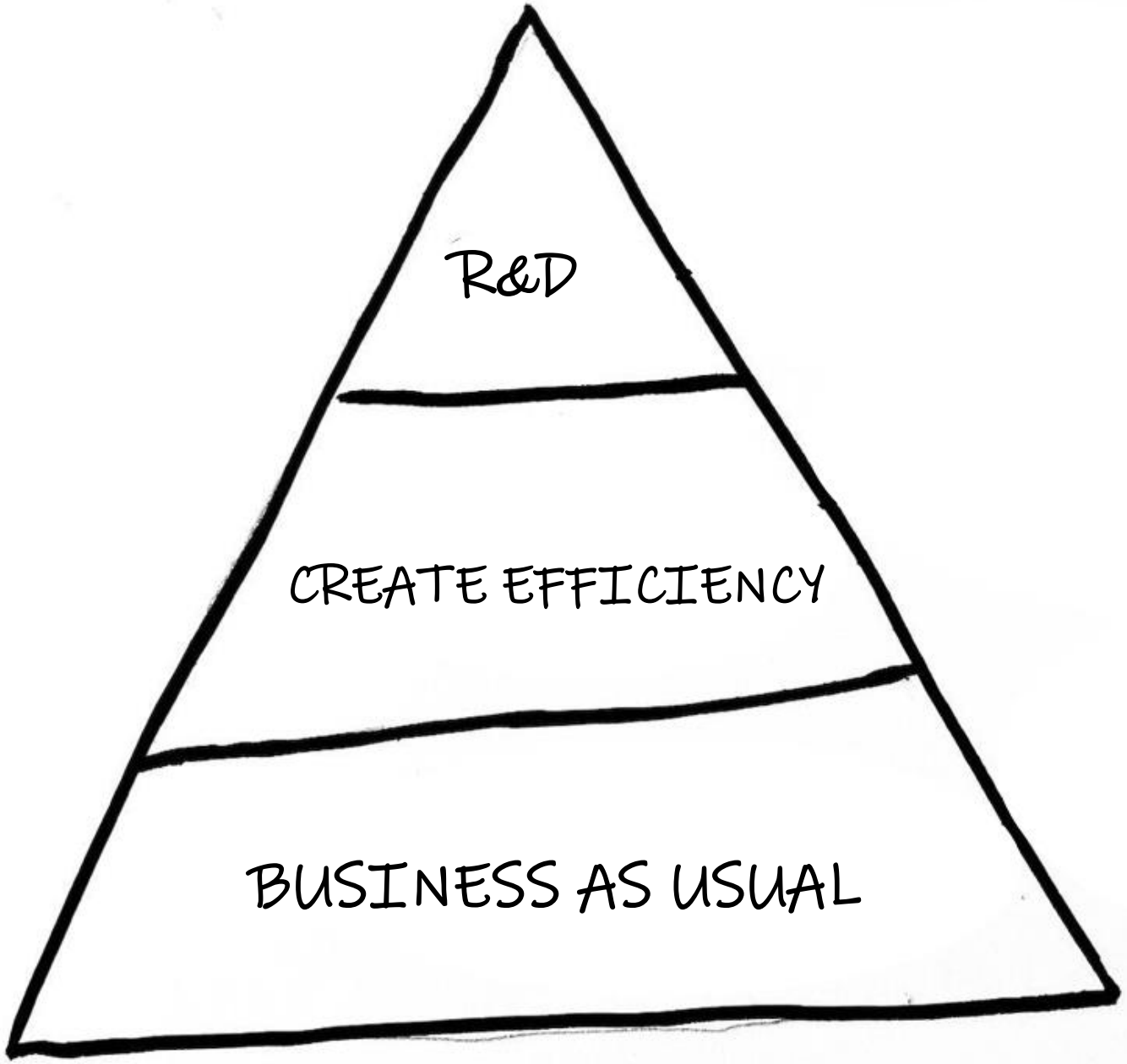
Google

- Dry-cleaning (or maybe Deep Mind…)
- Email/Maps
- Search



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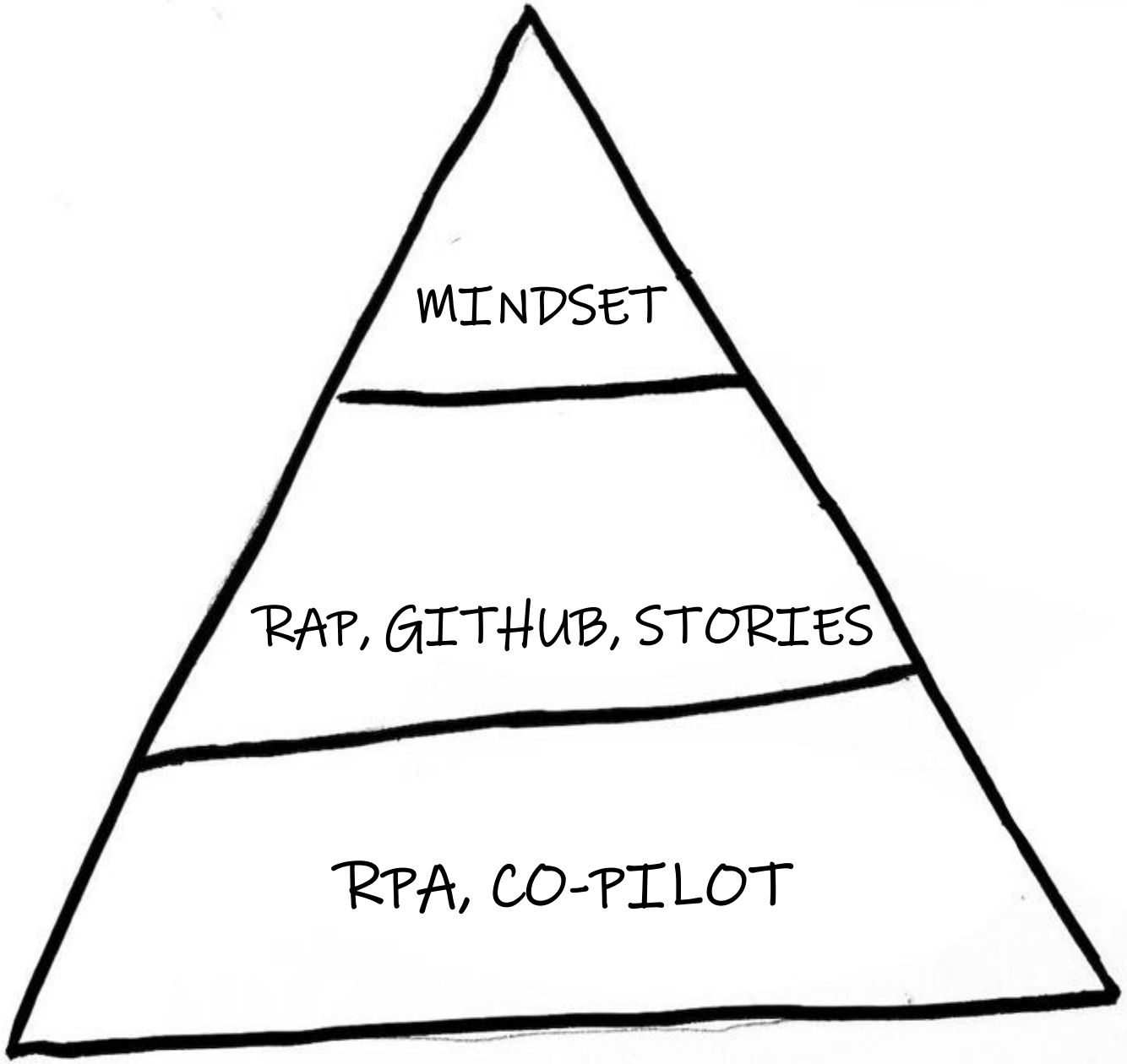
Pro-actively share

- Just do what Ben said.



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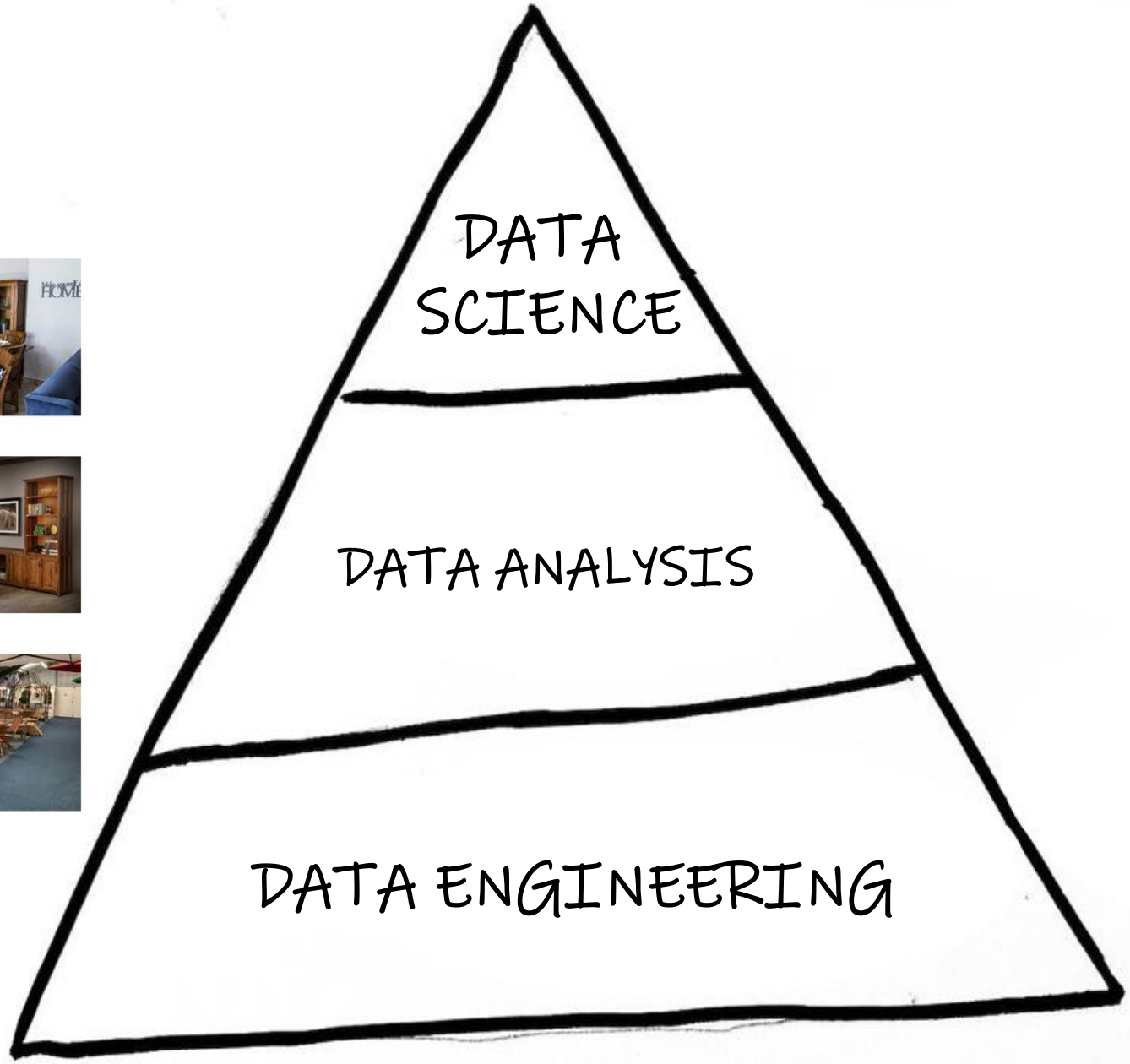
‘The woodyard’

Themes - organisation



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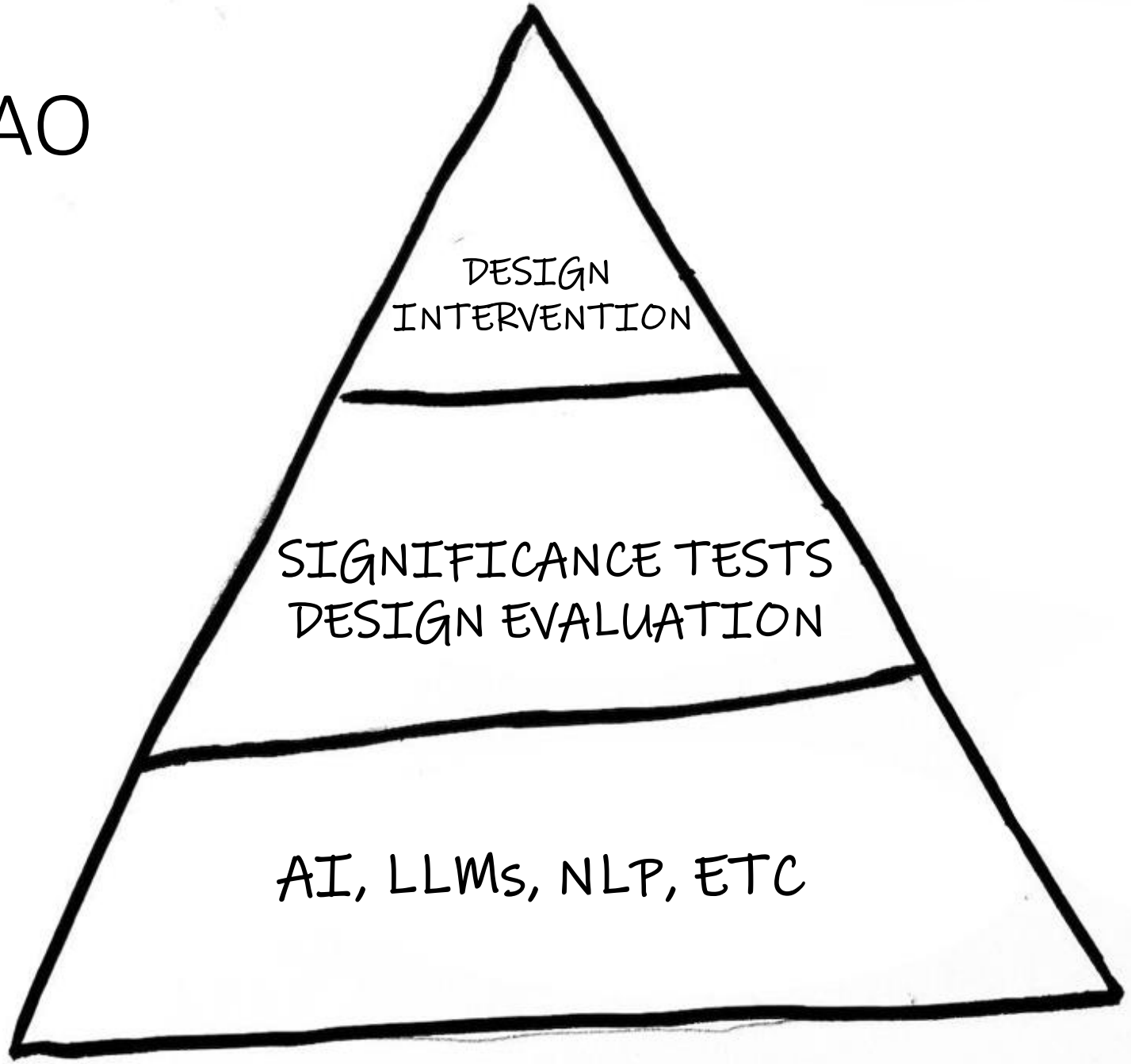
The role of the CDAO

- Be able to explain a data science project
- Be able to interpret a data science project
- Be able to commission a data science project



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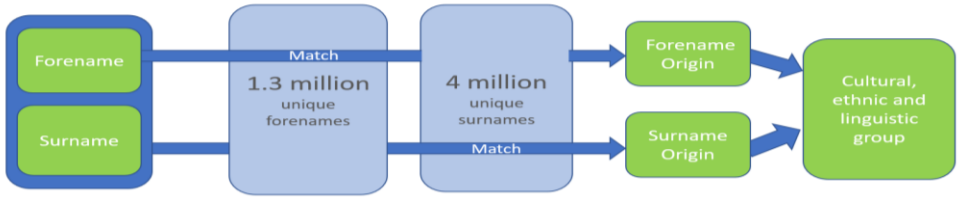
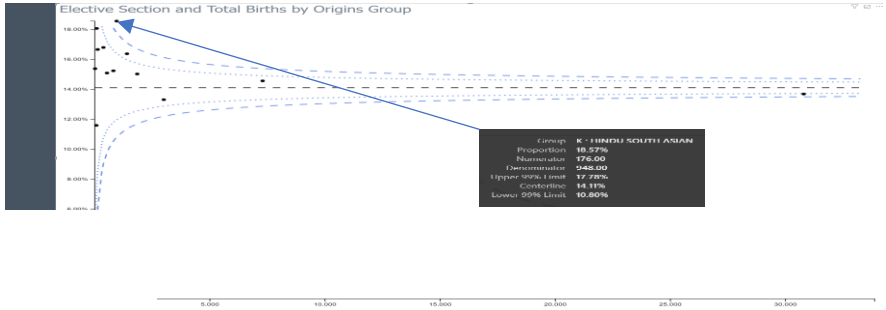
Inequalities Analysis





PATIENT STORIES

FIRST AND SECOND NAME ANALYSIS

IMD, CENSUS ETHNCITY CODING

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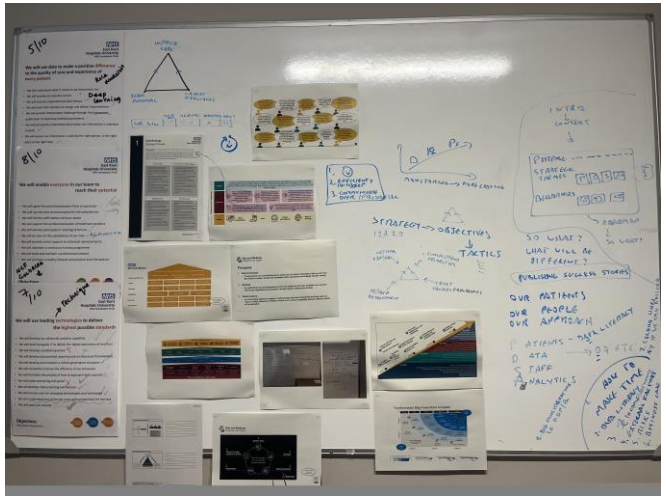
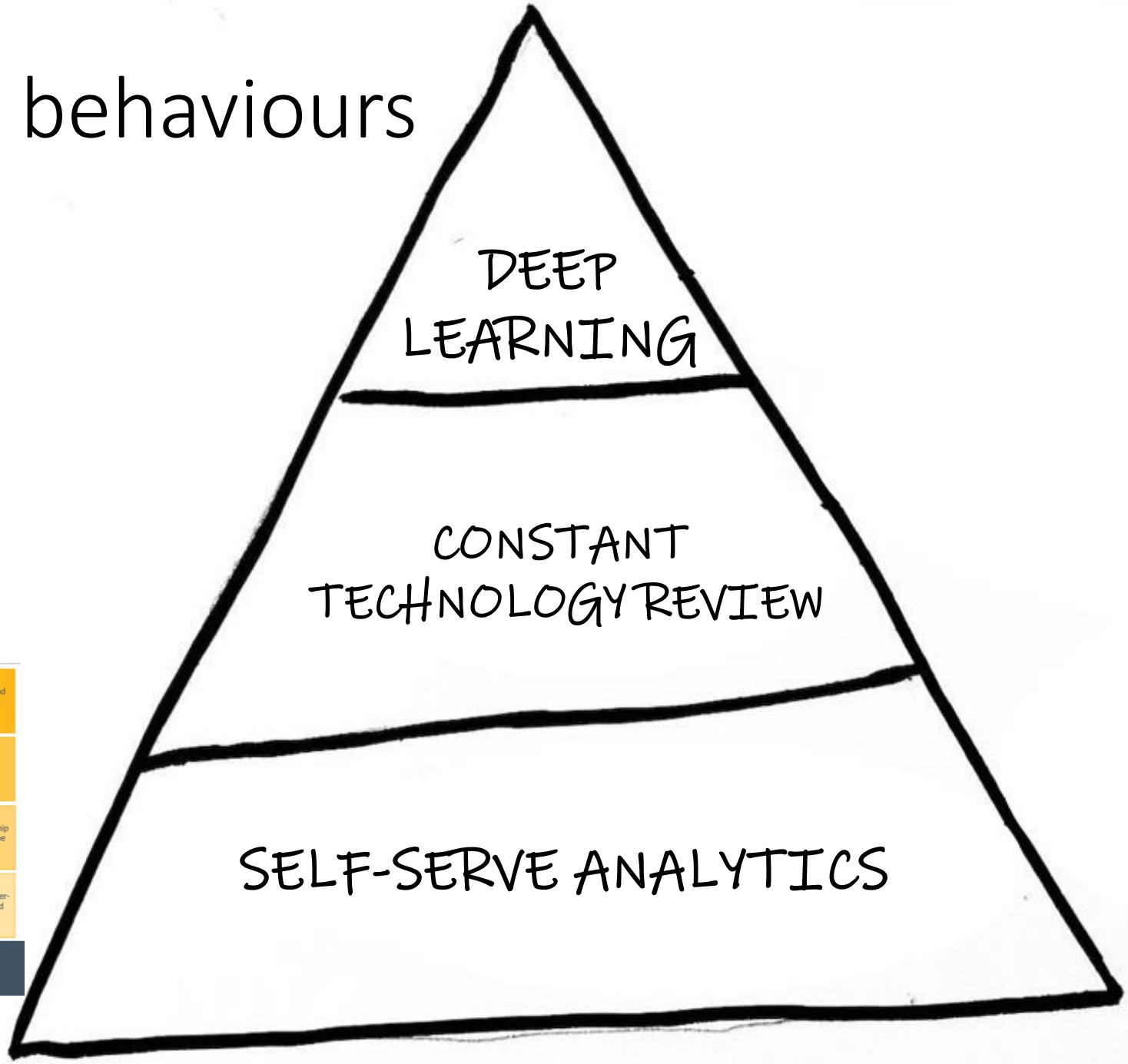
Aligning Trust and ICB behaviours



Strategy

Purpose	To improve access, outcomes and experience, for the patients of East Kent Hospitals, by providing innovative timely and high-quality insights to support decision making. By raising the level of data confidence across the organisation and creating space for deeper analytical learning we will create a culture where all staff are informed to act.				
Strategic Themes	Quality & Safety	Patients	People	Sustainability	Partnerships
Objectives	We will enhance data quality and ensure consistency throughout our systems	We will use data to make a positive difference to the quality of care and experience of every patient	We will enable everyone in our team to reach their potential	We will use leading techniques to deliver the highest possible standards We will create a commercial arm to generate income and grow our department	We will embed effective partnership working across the team, trust and wider network
Behaviours	We will maintain a positive attitude and treat others with kindness	We will work efficiently creating time for deep learning and professional development	We will communicate effectively, over-communicate when necessary, and prioritise tasks strategically		

NHS
East Kent
Hospitals University
NHS Foundation Trust



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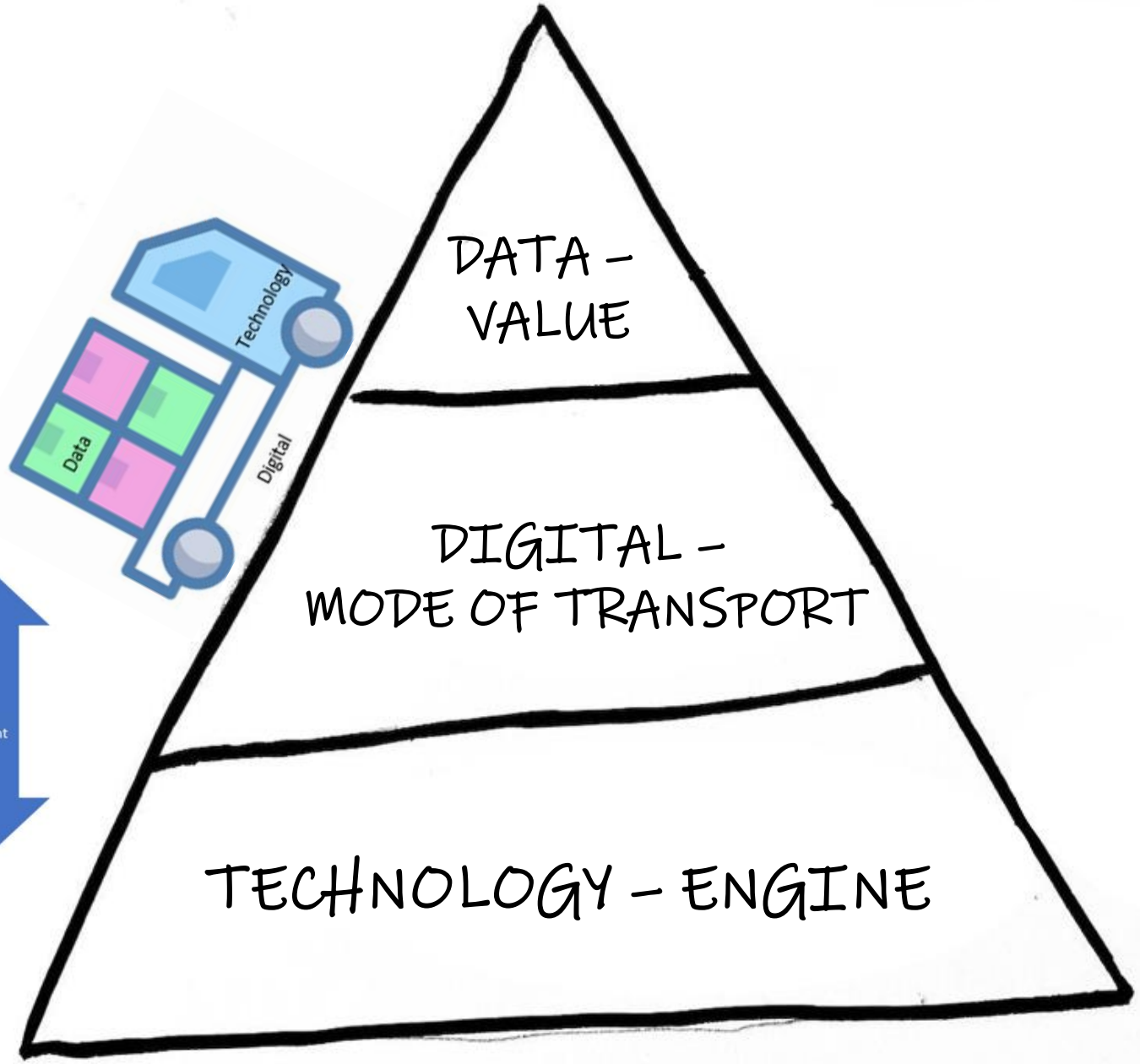
Move aside CIOs

- What is your 5 year plan for a locally integrated data-set?



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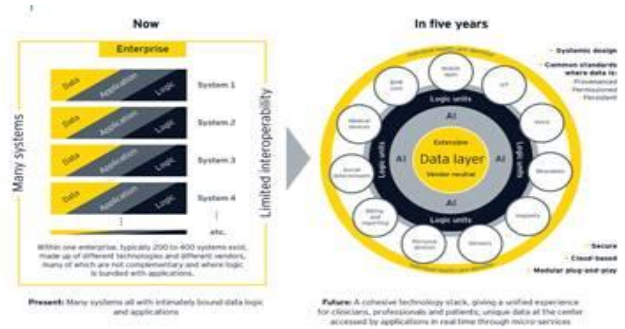
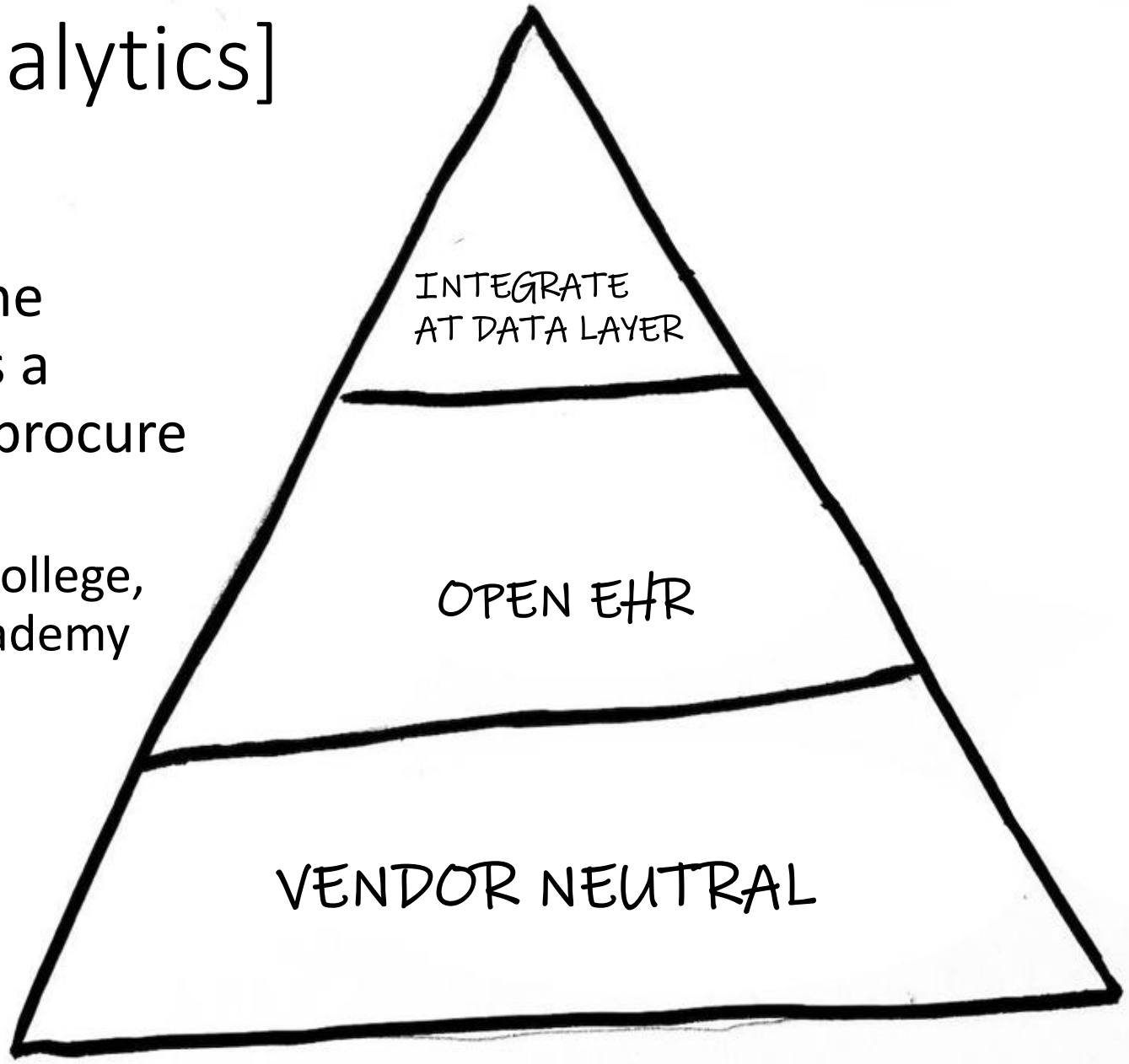
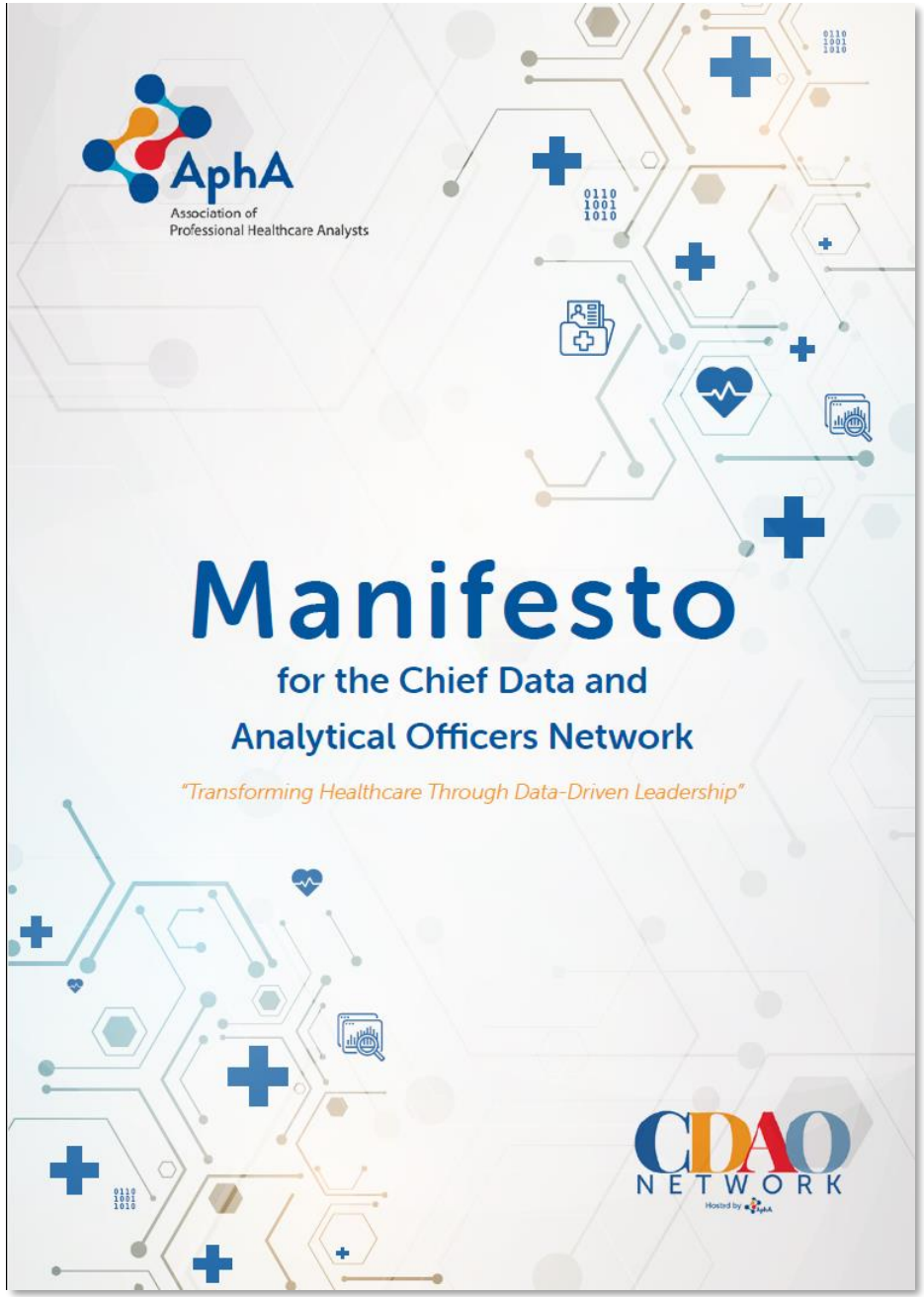
It’s the data [and analytics] stupid.

- ‘Data is for life, not just for one system. If we consider that as a principle, we will design and procure systems differently.’
  - Rachel Dunscombe, Imperial College, previously CEO NHS Digital Academy






AphA
Association of
Professional Healthcare Analysts
Manifesto
for the Chief Data and
Analytical Officers Network
"Transforming Healthcare Through Data-Driven Leadership"
CDAO
NETWORK

- **1. For many years, the NHS has been under the cosh to deliver efficiencies and productivity improvements:**
- **People and Workforce:** Leveraging AI to automate time-intensive tasks can alleviate workforce strain, allowing analysts to focus on deeper insights and strategic decisions. This shift enhances productivity and empowers staff to engage in more meaningful work.
- **Professional Enablement:** Promoting professional membership and registration through bodies like AphA, CDAON, and FEDIP strengthens the analytical community within the NHS. This fosters a knowledgeable, skilled, and engaged workforce that stays current with best practices and emerging tools, driving productivity through shared knowledge and standards.
- **Data-Sharing Legislation:** Supporting policies that promote federated data sharing enables a single, unified view of the patient. This reduces data silos, enhances clinical efficiency, and supports integrated care approaches across NHS services.

- **2. Is the breadth, quality, and timeliness of data available, and the associated analytical techniques, now suitably mature to help identify the real productivity/efficiency opportunities?**
- **Data Quality and Literacy:** Investing in data literacy at all levels ensures data quality and empowers NHS staff to make precise, informed decisions in real time. This is currently being implemented through the Data Confidence and Competence Pillars, essential for harnessing the full potential of available data and directly impacting operational efficiency.
- **Federated Data and Standardisation:** Leveraging federated data models alongside standardised data architecture and flow—aligned with recommendations from Lord Darzi's review and the NHS 10-Year Plan—creates a cohesive and actionable dataset. This unified data landscape facilitates strategic planning and the identification of productivity opportunities.
- **Advanced Analytical Tools:** Utilising Gartner-backed technologies like Microsoft Fabric, OneLake, and Power BI strengthens the NHS's data infrastructure. These advanced tools streamline data processing and enhance real-time data access and analysis, enabling timely, data-driven decisions suited to modern healthcare demands.

- **4. Are we measuring the right things? Are we using the right analytical techniques?**
- **Focus on Health and Wellbeing Metrics:** Emphasising measurements that impact workforce health and wellbeing drives outcomes beyond operational efficiency. Prioritising these metrics supports a more resilient and balanced workforce, ultimately improving patient care.
- **C-Suite Integration:** Engaging Chief Data and Analytical Officers at the board level ensures alignment of metrics with strategic goals. This integration makes data insights more targeted and impactful, influencing decision-making at the highest levels.
- **Strategic Alignment with National Reviews:** Aligning metrics with insights from the NHS 10-Year Plan, Lord Darzi's and Ben Goldacre's reviews, and Tony Blair's digital health recommendations ensures that the NHS focuses on measures that drive patient outcomes and system-wide efficiency, moving beyond traditional metrics.

- **5. What's on the horizon from an analytical perspective?**
- **AI and Data-Driven Insights:** Beyond automating routine processes, AI can identify complex patterns in patient data, enabling proactive and predictive healthcare. This advancement moves analytics from reactive to anticipatory, improving patient outcomes and system efficiency.
- **Federated Data for Predictive and Prescriptive Analytics:** Leveraging federated data allows for real-time, predictive insights that support proactive patient care and resource management. This is crucial for an agile, responsive healthcare system and enhances the NHS's ability to generate insights across patient care and operational areas.
- **Building Good Data Citizens:** Investing in data literacy and empowering "data citizens" at every level ensures the analytical capacity to tackle future challenges. A data-informed workforce can fully leverage the potential of data in healthcare, driving innovation and improvement.

- **6. Are we investing our technology in areas that have an evidence base?**
- **Evidence-Driven Tech Choices:** Adopting Gartner-backed technologies like Microsoft Fabric, OneLake, and Power BI brings proven value. These tools help the NHS balance innovation with reliability, ensuring technology investments are impactful and efficient.
- **Alignment with NHS Plans and Reviews:** Aligning technology investments with insights from the NHS 10-Year Plan, the Ben Goldacre review, and Tony Blair's recommendations provides a well-founded approach to health informatics. This alignment ensures that investments support national goals and strategic objectives.
- **Focus on Data Architecture and Governance:** Standardising data architecture and governance models supports evidence-based, reliable data flows. This foundation enables systems and staff to deliver higher-quality insights and outcomes, enhancing overall NHS efficiency and effectiveness.

- **<u>Juxtaposing to reaffirm the theme:</u>**
- **1. NHS Efficiencies and Productivity Improvements**
- **People and Workforce:**
  - *Old Challenge:* Workforce strain due to time-intensive tasks and limited resources.
  - *New Solution:* Leveraging AI to automate routine tasks, freeing up analysts for strategic work and deeper insights, thereby enhancing productivity.
- **Professional Enablement:**
  - *Old Challenge:* Need for a skilled and cohesive analytical community.
  - *New Solution:* Promoting professional memberships through organisations like AphA, CDAON, and FEDIP to foster continuous learning, collaboration, and adherence to best practices.
- **Data-Sharing Legislation:**
  - *Old Challenge:* Data silos hindering integrated patient care.
  - *New Solution:* Implementing policies that support federated data sharing to create a unified patient view, enhancing clinical efficiency and care coordination.
- **2. Data Maturity to Identify Productivity/Efficiency Opportunities**
- **Data Quality and Literacy:**
  - *Old Challenge:* Inconsistent data quality and lack of data literacy among staff.
  - *New Solution:* Investing in data literacy through the Data Confidence and Competence Pillars to ensure high-quality data and empower staff to make informed, real-time decisions.
- **Federated Data and Standardisation:**
  - *Old Challenge:* Fragmented data systems impeding strategic planning.
  - *New Solution:* Adopting federated data models and standardised data architectures as per NHS recommendations to create cohesive datasets for identifying productivity opportunities.
- **Advanced Analytical Tools:**
  - *Old Challenge:* Outdated or inefficient data processing tools.
  - *New Solution:* Utilising Gartner-backed technologies like Microsoft Fabric, OneLake, and Power BI to enhance data processing capabilities and enable timely, data-driven decisions.
- **3. Improvement in Analytical Sophistication**
- **AI as a Process Manager:**
  - *Old Challenge:* Limited analytical capacity due to manual, repetitive tasks.
  - *New Solution:* Employing AI to automate such tasks, allowing analysts to focus on sophisticated analysis and problem-solving.
- **Chief Data and Analytical Officer Roles:**
  - *Old Challenge:* Lack of strategic focus on analytics at the executive level.
  - *New Solution:* Increasing senior analytical positions to integrate analytics into strategic decision-making, promoting the profession at the C-suite and board levels.
- **Focus on Health and Well-being Analytics:**
  - *Old Challenge:* Insufficient use of analytics to improve workforce and patient well-being.
  - *New Solution:* Utilising advanced analytics for predictive insights that support initiatives enhancing health and well-being, aligning with the NHS's people-centric approach.

- **<u>Juxtaposing to reaffirm the theme:</u>**
- **4. Are We Measuring the Right Things? Are We Using the Right Analytical Techniques?**
- **Focus on Health and Wellbeing Metrics:**
  - *Old Challenge:* Overemphasis on traditional efficiency metrics.
  - *New Solution:* Prioritising metrics that impact workforce well-being to foster a resilient workforce and improve patient care.
- **C-Suite Integration:**
  - *Old Challenge:* Misalignment between analytics and strategic goals.
  - *New Solution:* Involving Chief Data and Analytical Officers in executive decisions to ensure metrics and analyses directly support strategic objectives.
- **Strategic Alignment with National Reviews:**
  - *Old Challenge:* Metrics not reflecting current healthcare priorities.
  - *New Solution:* Aligning measurement strategies with insights from national plans and reviews (e.g., NHS 10-Year Plan, Lord Darzi's review) to focus on impactful metrics.
- **5. What's on the Horizon from an Analytical Perspective?**
- **AI and Data-Driven Insights:**
  - *Old Challenge:* Reactive healthcare practices due to limited predictive capabilities.
  - *New Solution:* Utilising AI to uncover complex data patterns for proactive and predictive healthcare, improving outcomes and efficiency.
- **Federated Data for Predictive and Prescriptive Analytics:**
  - *Old Challenge:* Inability to generate real-time, system-wide insights.
  - *New Solution:* Leveraging federated data to support predictive analytics, enabling proactive patient care and efficient resource management.
- **Building Good Data Citizens:**
  - *Old Challenge:* Limited data literacy hindering innovation.
  - *New Solution:* Investing in data literacy across all levels to empower staff as "data citizens," fostering a culture of innovation and data-driven decision-making.
- **6. Are We Investing Our Technology in Areas That Have an Evidence Base?**
- **Evidence-Driven Tech Choices:**
  - *Old Challenge:* Adoption of unproven or ineffective technologies.
  - *New Solution:* Selecting Gartner-backed tools like Microsoft Fabric, OneLake, and Power BI to ensure reliability and impact.
- **Alignment with NHS Plans and Reviews:**
  - *Old Challenge:* Technology investments not aligned with national healthcare strategies.
  - *New Solution:* Guiding investments based on national plans and reviews to support coherent, strategic health informatics development.
- **Focus on Data Architecture and Governance:**
  - *Old Challenge:* Inconsistent data practices leading to unreliable insights.
  - *New Solution:* Standardising data architecture and governance to establish a reliable data ecosystem for high-quality outcomes.

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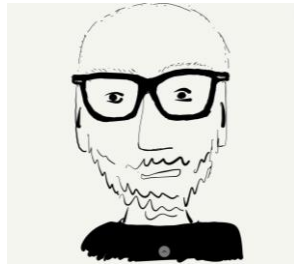
Chief Data and Analytical Officer

- East Kent Hospitals and NHS Kent and Medway