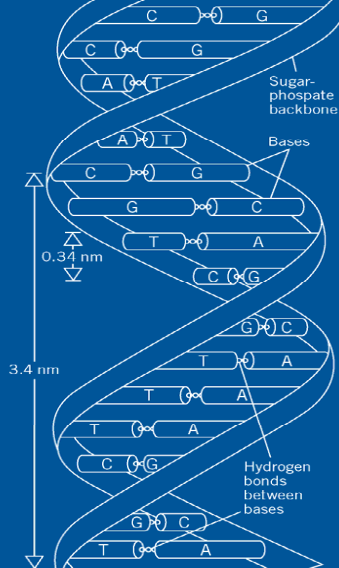




The Analyst Mindset in Statistical Programming

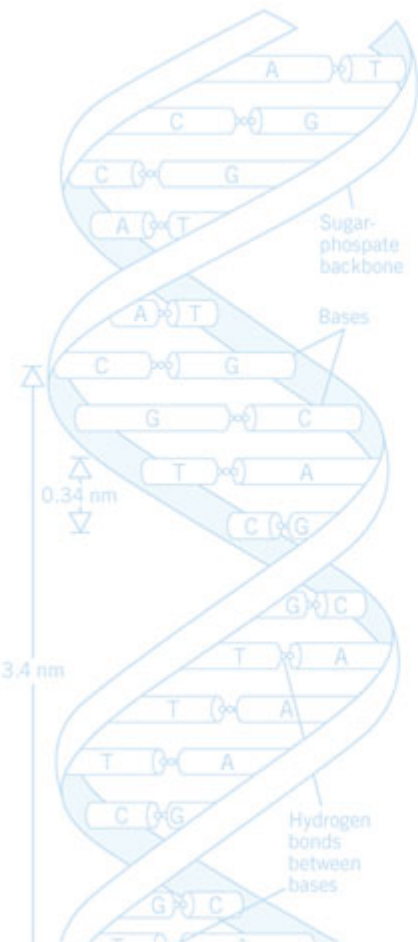
*Ross Farrugia & Ryan Copping,
Roche Products Ltd*



We'd like to start by showing the results of a short survey.

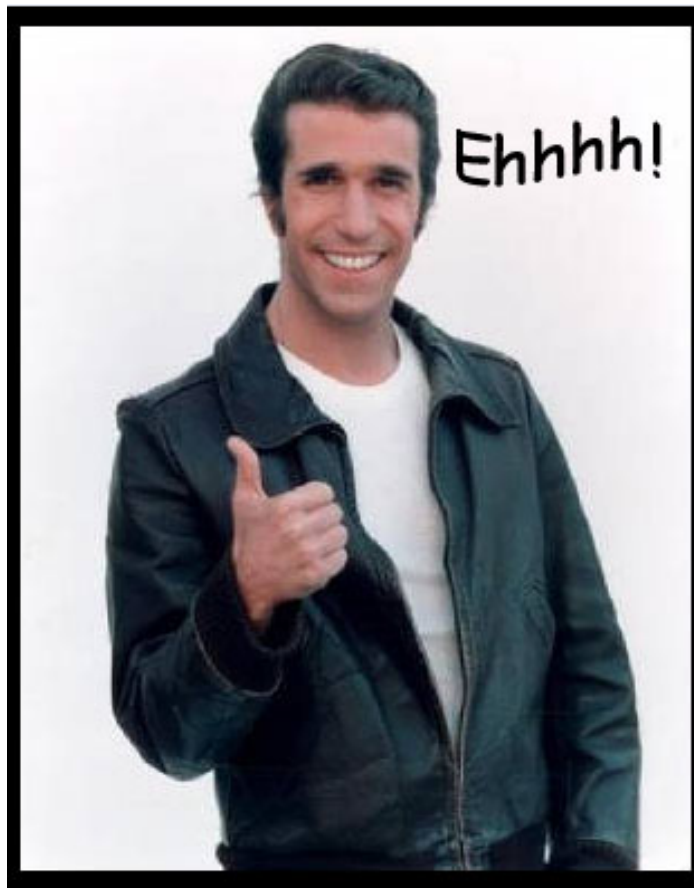
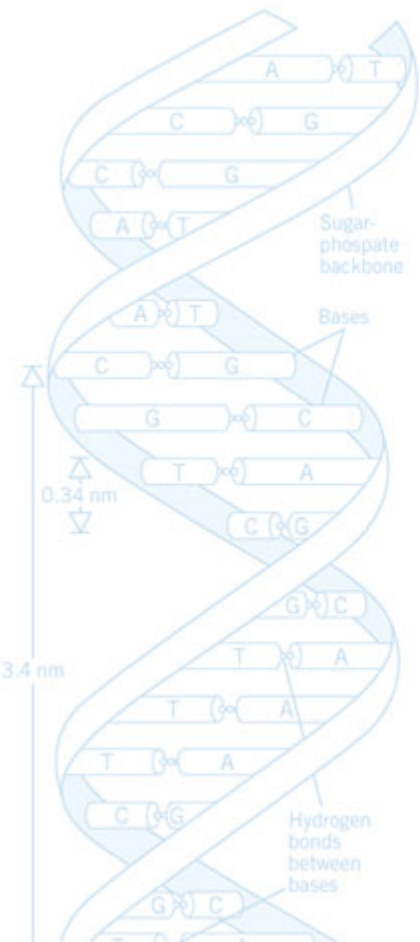
We asked 100 statisticians, data managers and clinical scientists to give us an artistic impression of the statistical programmer.

The results were unanimous

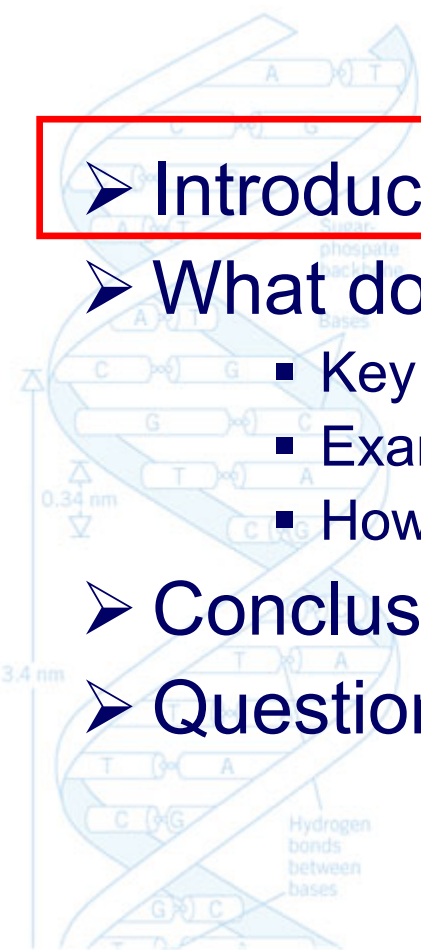


However, we all know that we can project the image of





Agenda



➤ Introduction

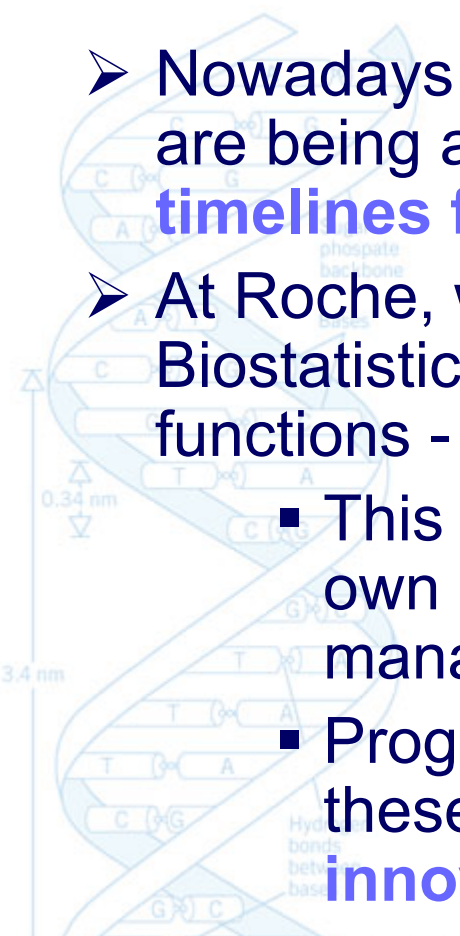
➤ What do we mean by the “Analyst Mindset”?

- Key Skills
- Example Behaviours
- How can this help us?

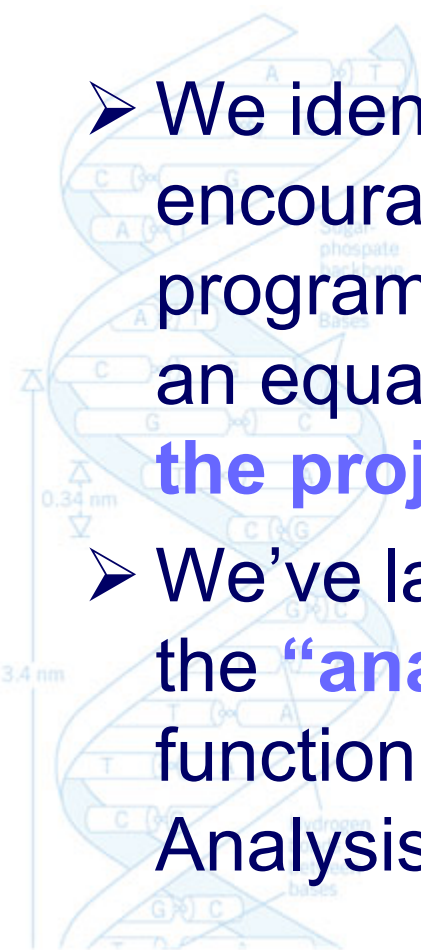
➤ Conclusions

➤ Questions

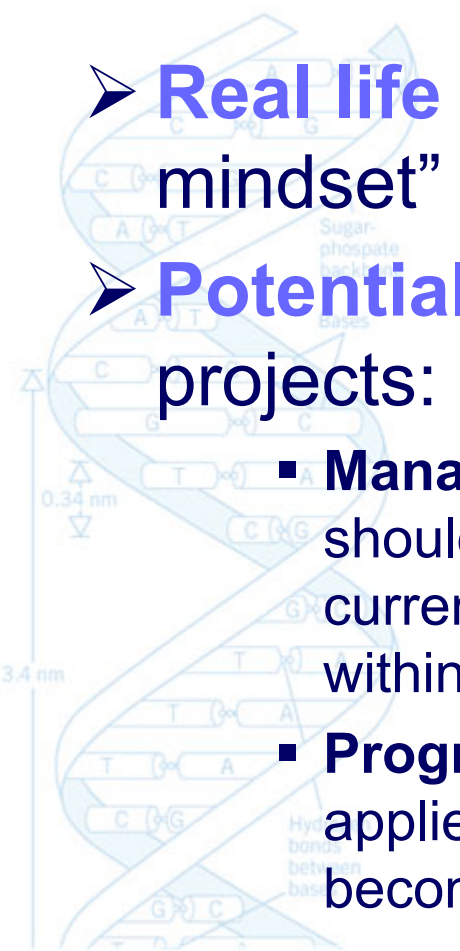
Introduction (1)

- 
- Nowadays in the industry Statistical Programmers are being asked to produce deliverables to **tighter timelines for reduced cost with the same accuracy**
 - At Roche, we had the added challenge of our Biostatistics department splitting into two separate global functions - Biostatistics and Statistical Programming
 - This gave the Statistical Programming group their own identity with an **increased responsibility** to manage, prioritize, negotiate and deliver
 - Programming teams have had to evolve to meet these demands and become an **effective and innovative partner** – Stepping out of our comfort zone!

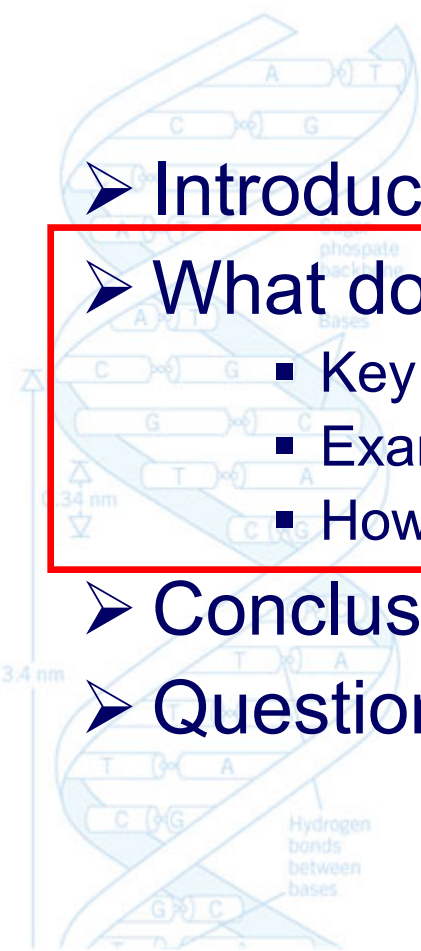
Introduction (2)

- 
- We identified **key behaviours and skills** to encourage across the department to ensure programmers are not just a service provider but an equal partner to **achieve the challenges of the project**
 - We've labelled these skills and behaviours as the **“analyst mindset”**, and re-named our function as SPA (Statistical Programming & Analysis)

What do we want you to get out of this talk?

- 
- **Real life examples** of where the “analyst mindset” has been successfully implemented
 - **Potential benefits** for you and your drug projects:
 - **Managers** – Skills and competencies identified which should be looked for in interviewees and developed in current staff to ensure there is an element of these skills within each programming team
 - **Programmers** – Examples of how these skills can be applied to optimize the time we have and how we can become active contributing participants on the drug project

Agenda



➤ Introduction

➤ What do we mean by the “Analyst Mindset”?

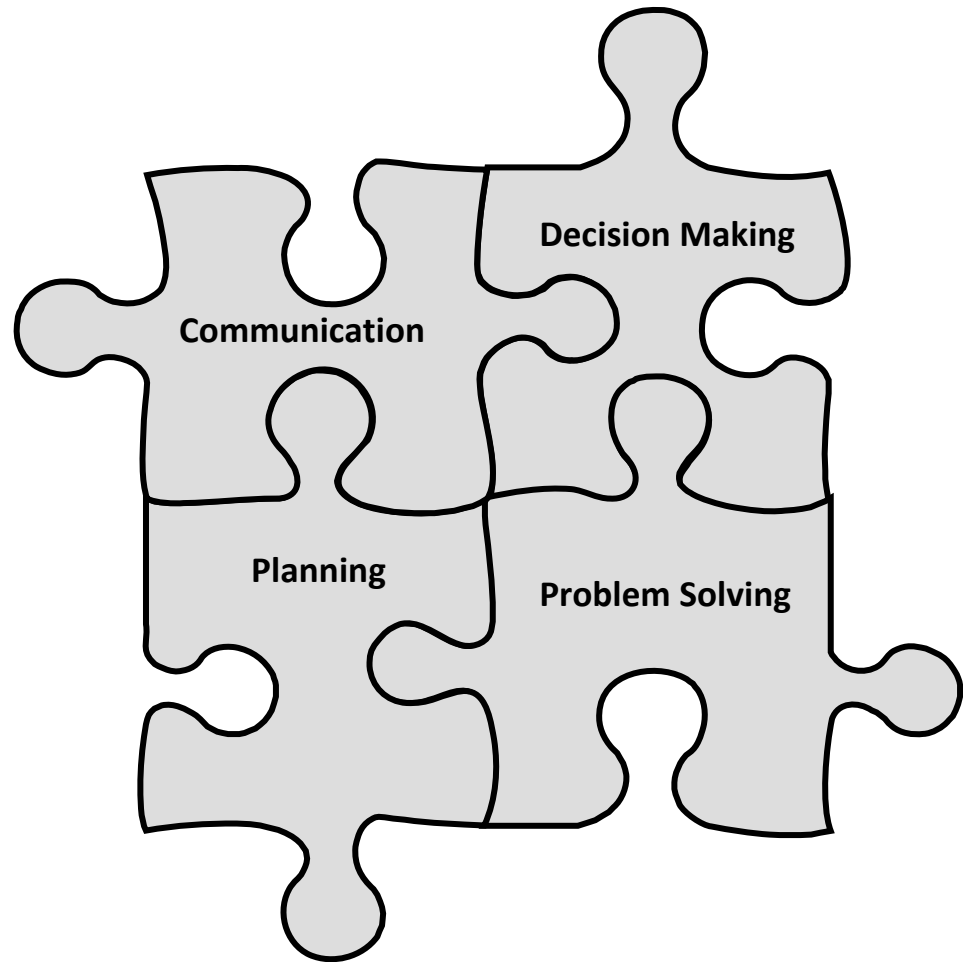
- Key Skills
- Example Behaviours
- How can this help us?

➤ Conclusions

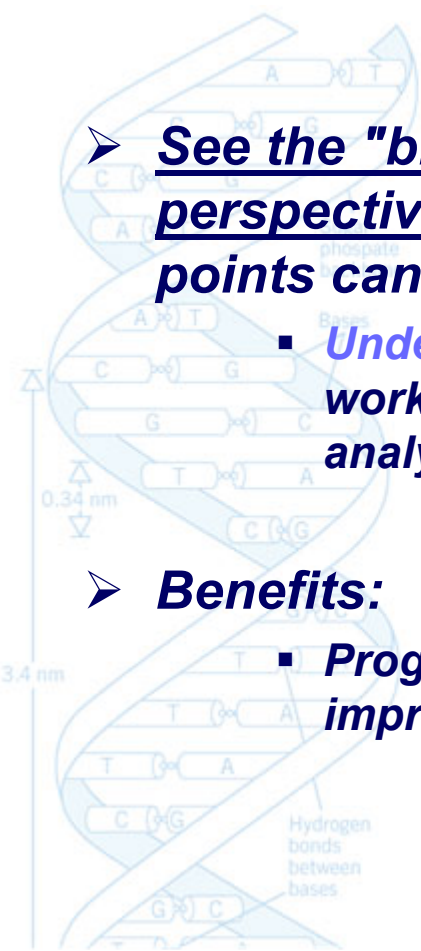
➤ Questions

Key Skills

- The “Analyst Mindset” involves a balance of many skills, but here are 4 we believe particularly important:



Example Behaviours

- 
- **See the "big picture" and understand our partners' perspectives:** *Viewing our business from various vantage points can put the best solutions into focus.*
 - ***Understand*** the protocol, the science and the scope of the study work. What is the study team trying to achieve? Where will our analyses be used?
 - **Benefits:**
 - **Programming accuracy, efficiency and decision making** will be improved with greater understanding of the required deliverable

Example Behaviours

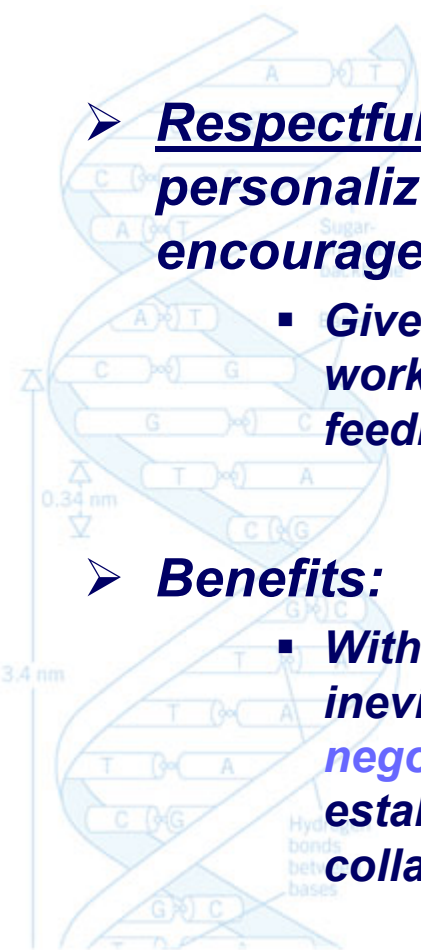
➤ **Influence without authority: Use diplomacy.**

- **Build strong relationships** with your partners to be able to call on later to reach a consensus and an agreed solution

➤ **Benefits:**

- Open **communication** with key stakeholders can give the programming team a voice
- By earning the **respect** of your drug project team and raising the profile of the programming team a **trust** will be built, so our recommendations are received with more **confidence** and hence more likely to be taken on board
- Being **honest and clear** about programming resources available can help Clinical Science and Statistics to focus on the most important deliverables

Example Behaviours

- 
- **Respectfully disagree and accept disagreement:** *Never personalize opposing viewpoints - different ideas are encouraged and can lead to better solutions.*
 - Give freedom for people to express themselves within your working teams, whilst ensuring **ideas** are met with **constructive feedback**, and explain any disagreement with clear rationale
 - **Benefits:**
 - With so many collaborations that the programming team face it is inevitable disagreements will be seen. Good **communication and negotiation** skills should ensure that agreements can be established whilst still maintaining the **respect** of your collaborators

Example Behaviours

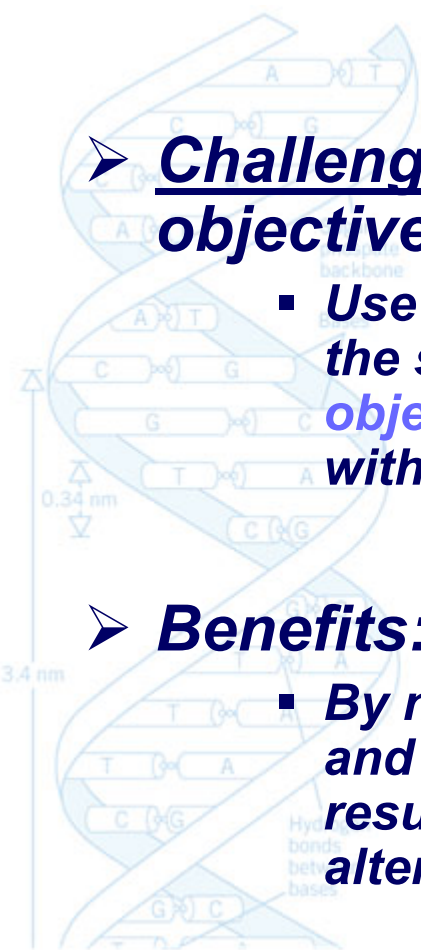
➤ **Negotiate for the "best" outcome:** *The best business outcome may not be "win-win".*

- *Strive to look ahead for the **most benefit of the drug project**, even if this may not be the best outcome for your programming team*

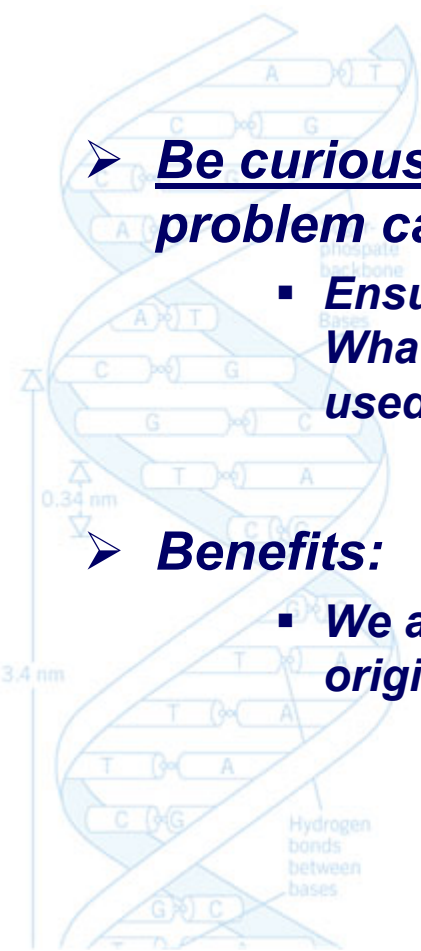
➤ **Benefits:**

- *Although at the forefront of our minds is how can we ensure we achieve our deadlines as efficiently as possible, we should always keep the needs of the drug project in perspective. Maybe not in the short-term but this will lead to a better long-term outcome*

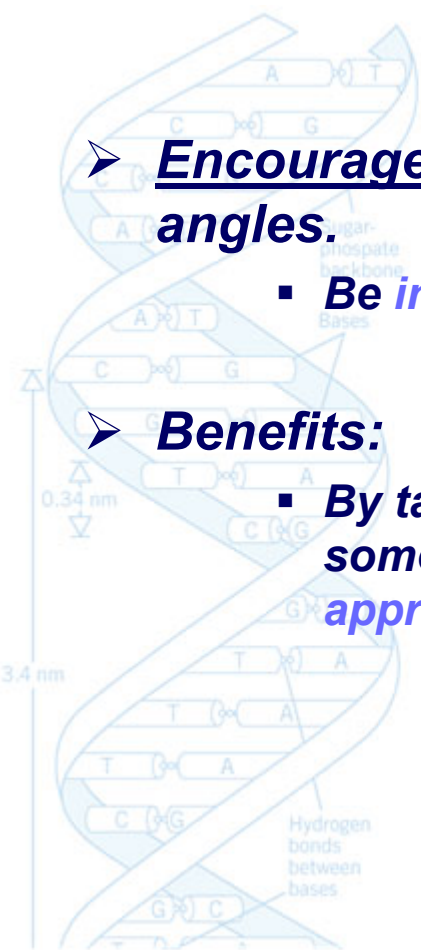
Example Behaviours

- 
- **Challenge without offending:** *Focus on the facts and objectively debate.*
 - Use your programming knowledge and understanding of the study to encourage **debate** and ensure the **key study objectives** can be achieved as efficiently as possible, without damaging partnerships
 - **Benefits:**
 - By not just simply accepting work is required as requested, and taking the time to **question requirements** often this may result in a **reduction** of the deliverables asked for or an **alternative more efficient method**

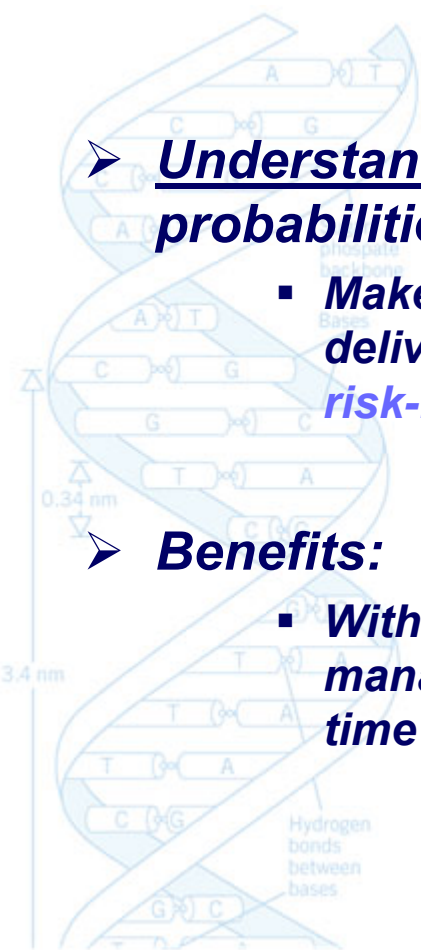
Example Behaviours

- 
- **Be curious & ask questions:** *Only after we fully understand a problem can we find a solution.*
 - *Ensure you **fully understand** the purpose behind the work we do. What is the rationale behind the analyses and what are they being used for?*
 - **Benefits:**
 - *We are able to question if the requested analyses does answer the original question in the best and **most efficient and effective way***

Example Behaviours

- 
- **Encourage different ideas:** *Think about problems from all angles.*
 - Be **innovative** and think outside the box!
 - **Benefits:**
 - By taking a second to think about what has been requested sometimes we can think of a more **long-term and cost-effective approach**, rather than just rushing straight into programming

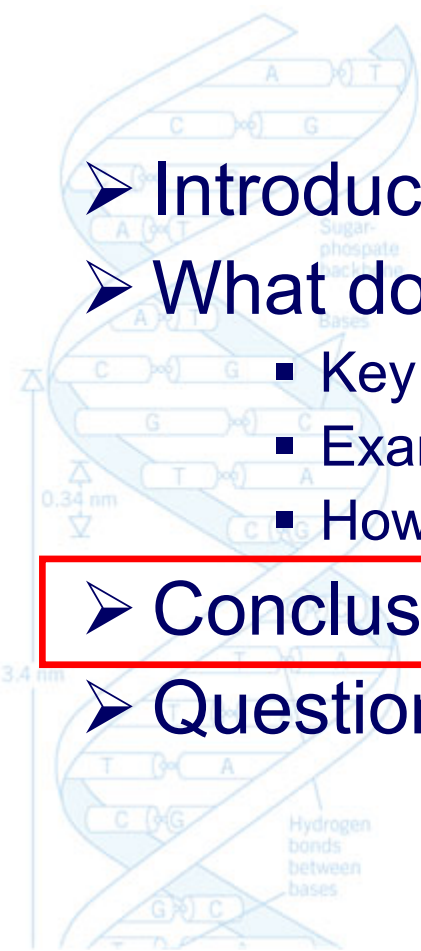
Example Behaviours

- 
- **Understand and manage appropriate risk:** Consider the probabilities and impacts of errors and strike the right balance.
 - Make the most **efficient** use of your time. What are my key deliverables? Where can I **prioritize** my work and where would a **risk-based** strategy be beneficial?
 - **Benefits:**
 - With good knowledge of the study and requirements we can risk manage to make the **best use of our time**, and avoid unnecessary time spent on elements of the analyses which are not focal

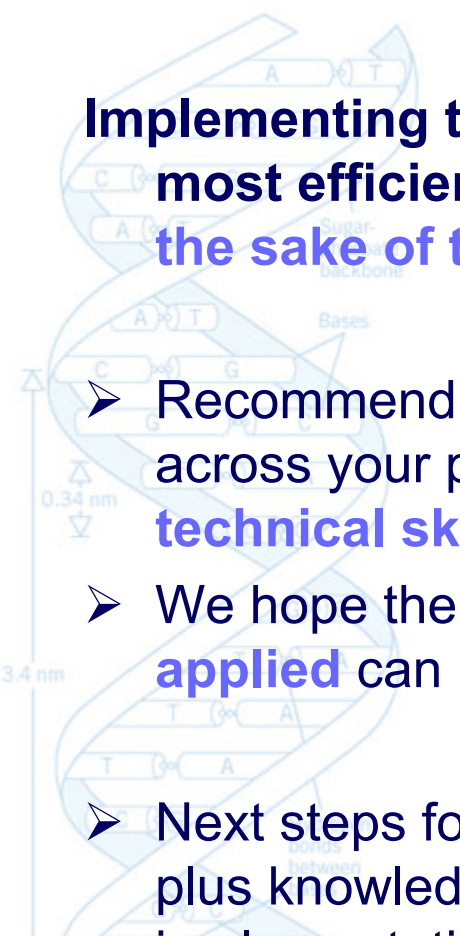
Summary of Behaviours

- 
- ***See the "big picture" and understand our partners' perspectives***
 - ***Influence without authority***
 - ***Respectfully disagree and accept disagreement***
 - ***Negotiate for the "best" outcome***
 - ***Challenge without offending***
 - ***Be curious & ask questions***
 - ***Encourage different ideas***
 - ***Understand and manage appropriate risk***

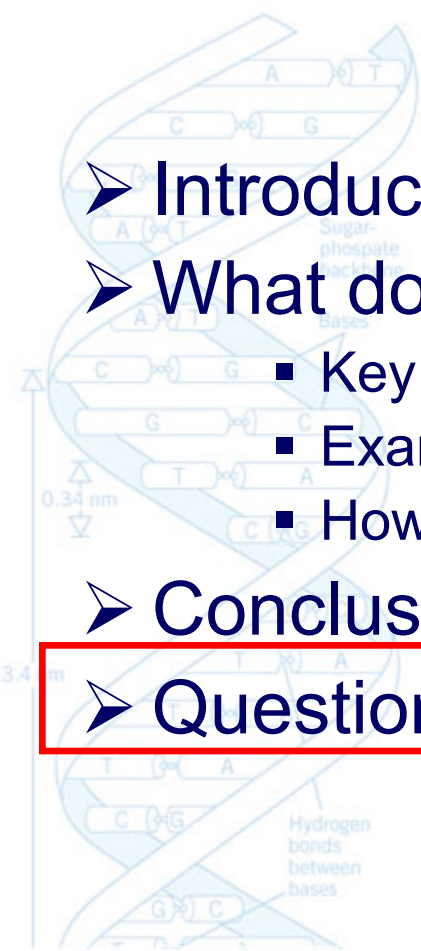
Agenda

- 
- Introduction
 - What do we mean by the “Analyst Mindset”?
 - Key Skills
 - Example Behaviours
 - How can this help us?
 - Conclusions
 - Questions

Implementing the “**Analyst Mindset**” can help ensure we make the most efficient use of time and resource, not only for us but for the sake of the drug projects

- 
- Recommend to have an **element** of these skills and behaviours across your programming teams whilst still maintaining a **highly technical skillset**
 - We hope the examples and ideas of how these skills have been **applied** can be taken back and implemented where possible
 - Next steps for Roche include additional training and development plus knowledge sharing to promote the initiative and encourage implementation

Agenda

- 
- Introduction
 - What do we mean by the “Analyst Mindset”?
 - Key Skills
 - Example Behaviours
 - How can this help us?
 - Conclusions
 - Questions

Any Questions????