
REVOLVE COMICS
TYPE 1
AWAKE AND PUMPED

REVOLVE COMICS

TYPE 1

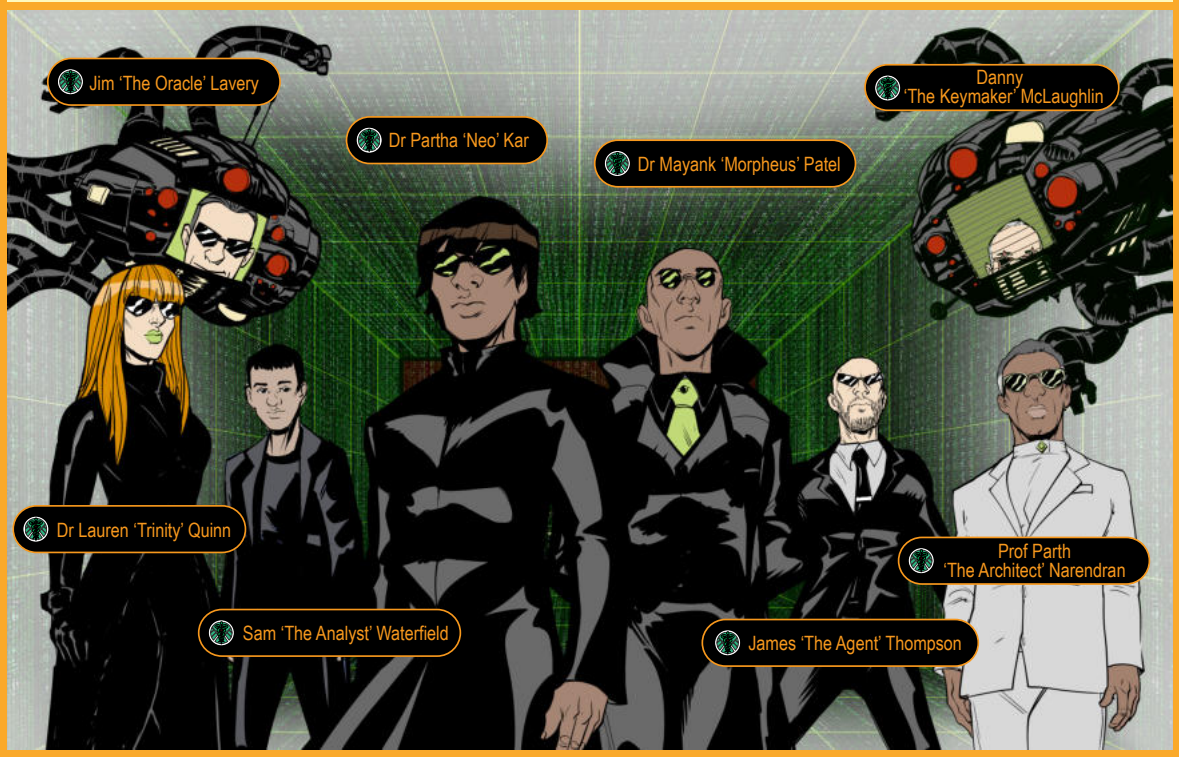
AWAKE AND PUMPED

Hello friends old and new!
Well, here we are, back once again with our latest comic chapter.
To date, we have seen Gary adapt to his diagnosis of type 1 diabetes (volume 1), Gemma getting into a spot of bother with high blood glucose levels (volume 2) and despite the personal challenges of low blood glucose, Nathan saved the day from stigma (volume 3). As if that was not enough, Kieran took a trip down memory lane to truly appreciate the power of insulin (volume 4), and a team of young, newly qualified ward staff took an 'out of this world' trip to realise how not addressing the basics of diabetes care for hospital patients can cause problems (volume 5). In all cases, no one was left to face their challenges alone, help was always at hand.

Many people who were diagnosed with type 1 diabetes in childhood recall sometimes being rushed to hospital in an ambulance, often in the middle of the night, treated in a busy Accident and Emergency department. They recall how scary the whole experience was for them and their parents. But what if it does not have to be like this anymore? what if there was a way to help determine who might be at risk of developing type 1 diabetes earlier and more formally, so they could then be kept under clinic review, with the diagnosis made and insulin started in a more ordered manner, without needing emergency care?
Well, the good news is that this is now possible, with blood tests more widely available to measure antibodies to help inform individual risk – this won't be the same for everyone.

In addition, the world of technology available to support people with diabetes is fast moving and has come a long way in recent years. This has been positively changing lives for those living with type 1 diabetesThis story also presents a version of how the newest wearable insulin delivering and glucose monitoring technology really works (well, in Mega City T-One at least!).

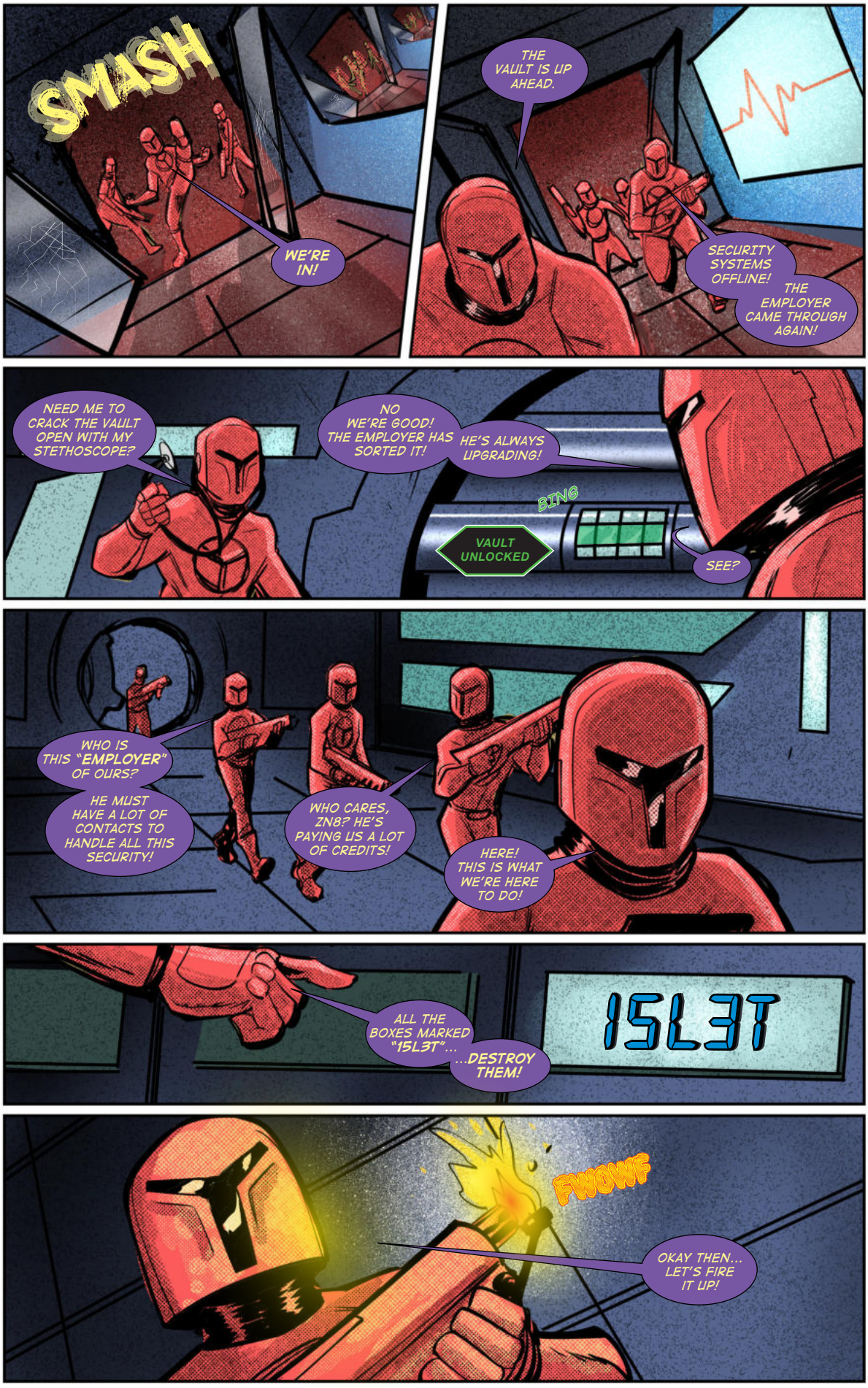
We are grateful to Professor Parth Narendran for his help with scientific scripting and of course to James and Sam, our comic reviewers.
We hope you enjoy our latest offering, happy reading!

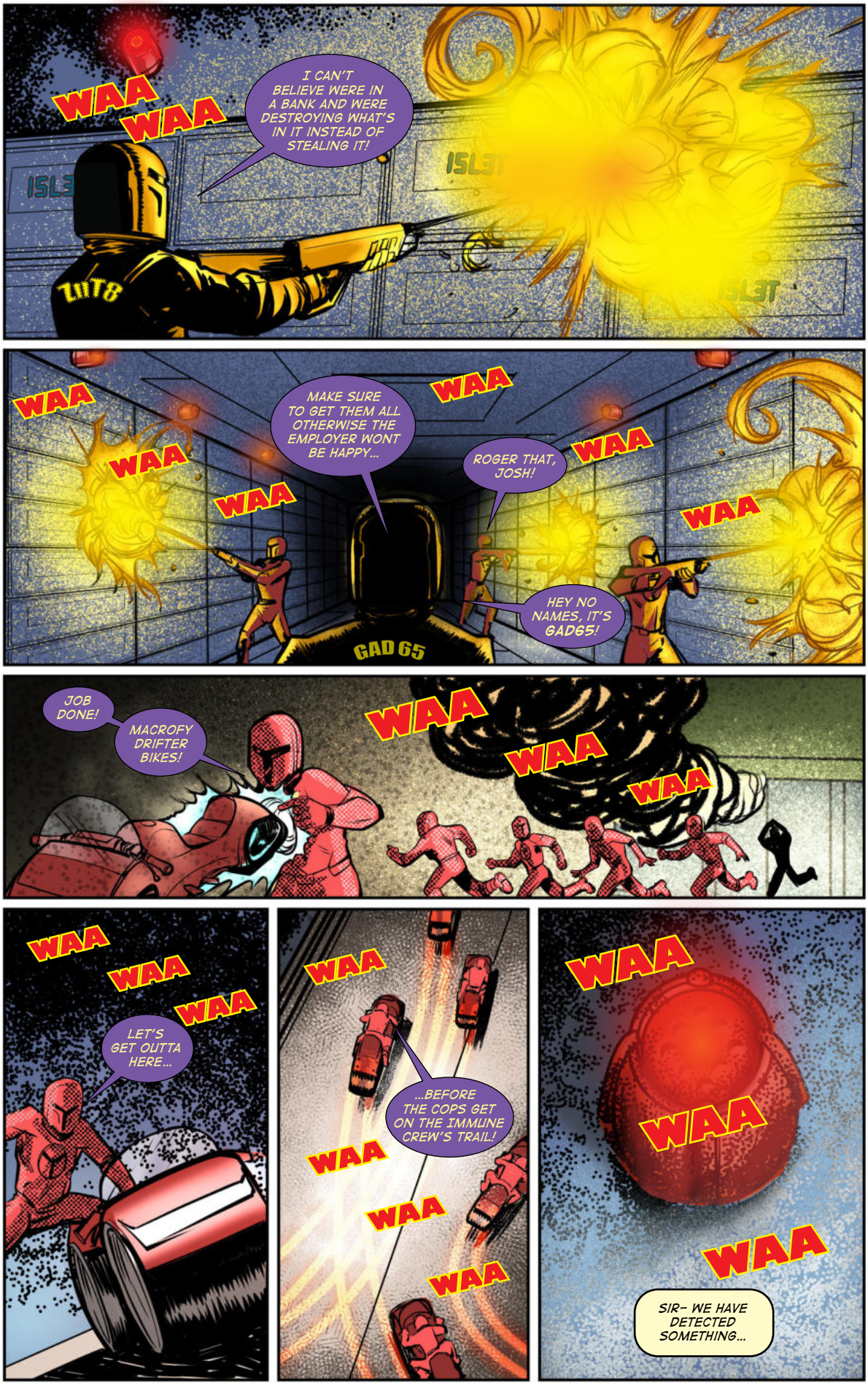


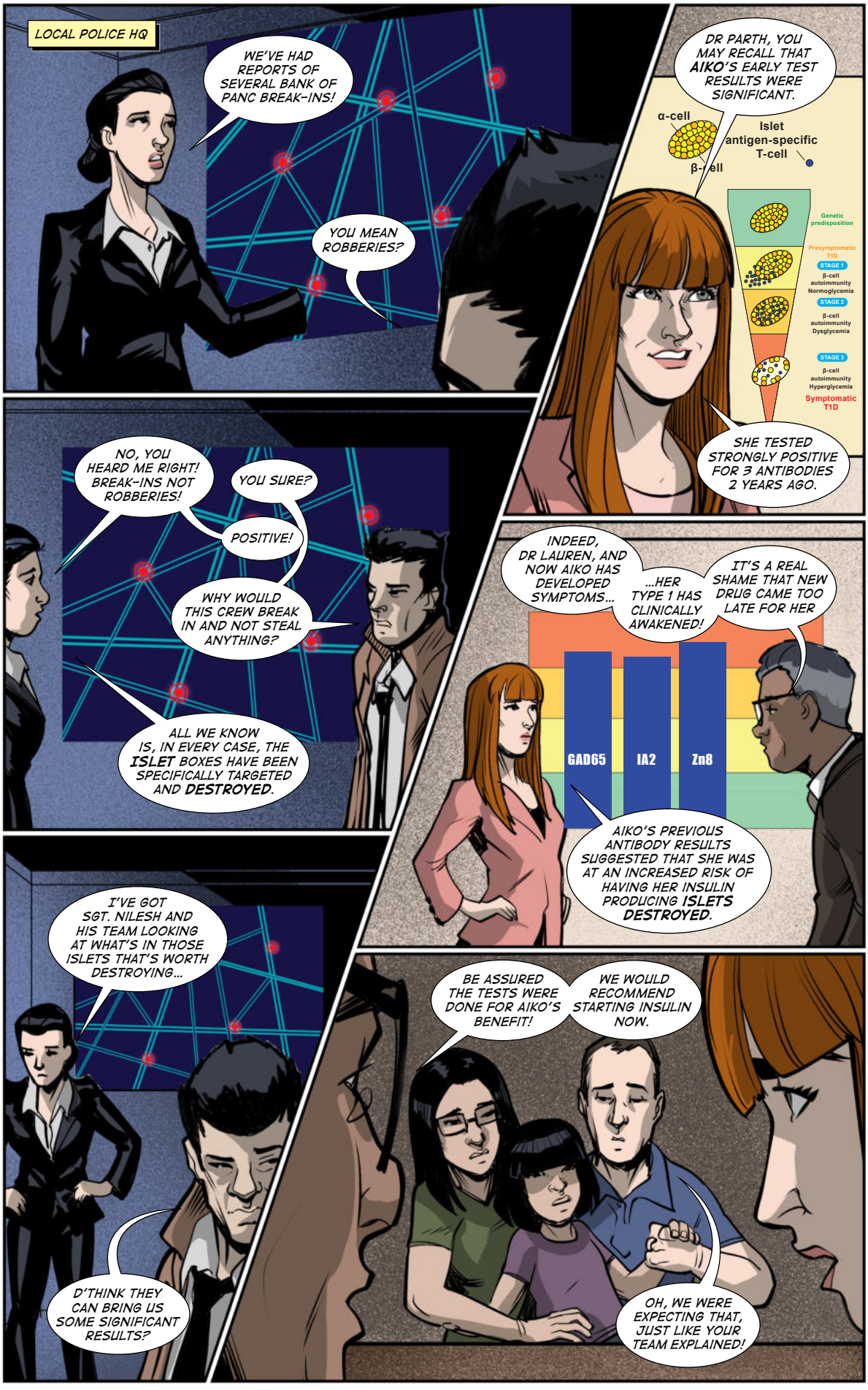
NHS England

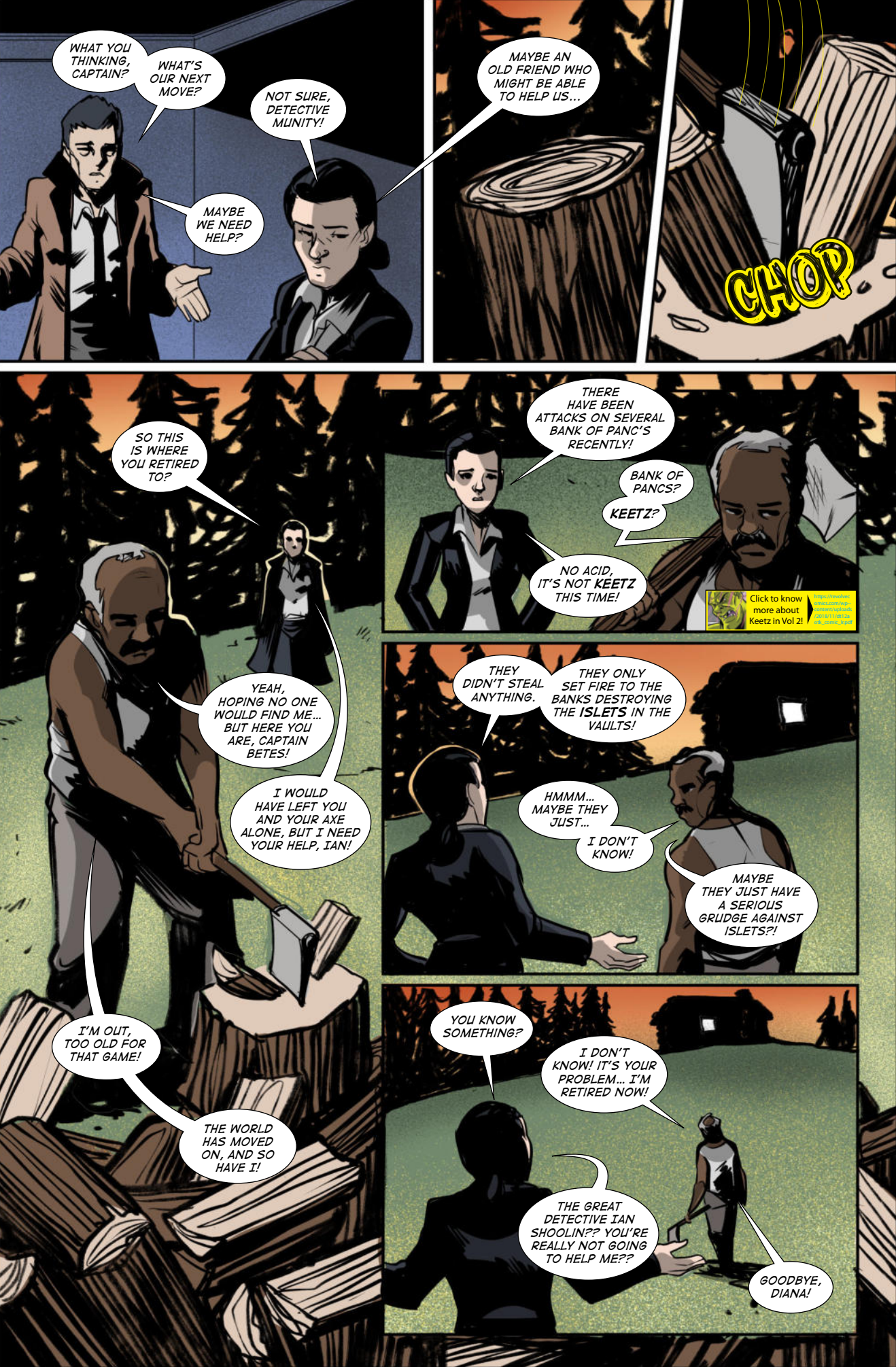
Partha and Mayank

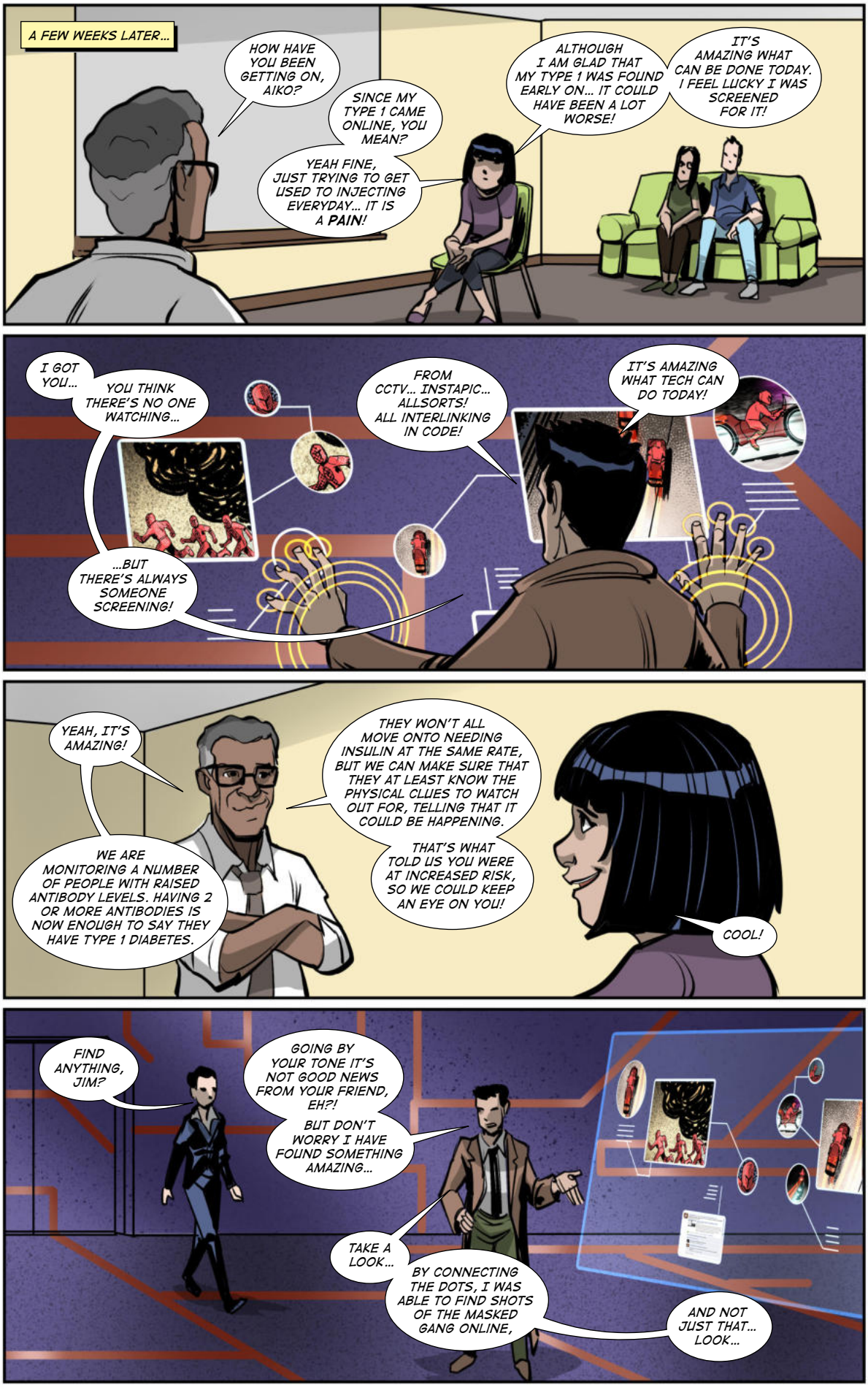

MEGA CITY T-ONE
大ソロ#ロれ#
COMING IN FOR LANDING!
GAD65
ENGAGING HOVER LANES NOW!
GAD65, ZN8, IA-2...
WE'RE JUST UP AHEAD!
IA-2
HERE WE ARE!
MICROFY DRIFTER BIKES!
ROGER THAT, GAD65!
BANK OF PANC
THIS IS THE TARGET, CREW!
LET'S DO THIS!
ZnT8

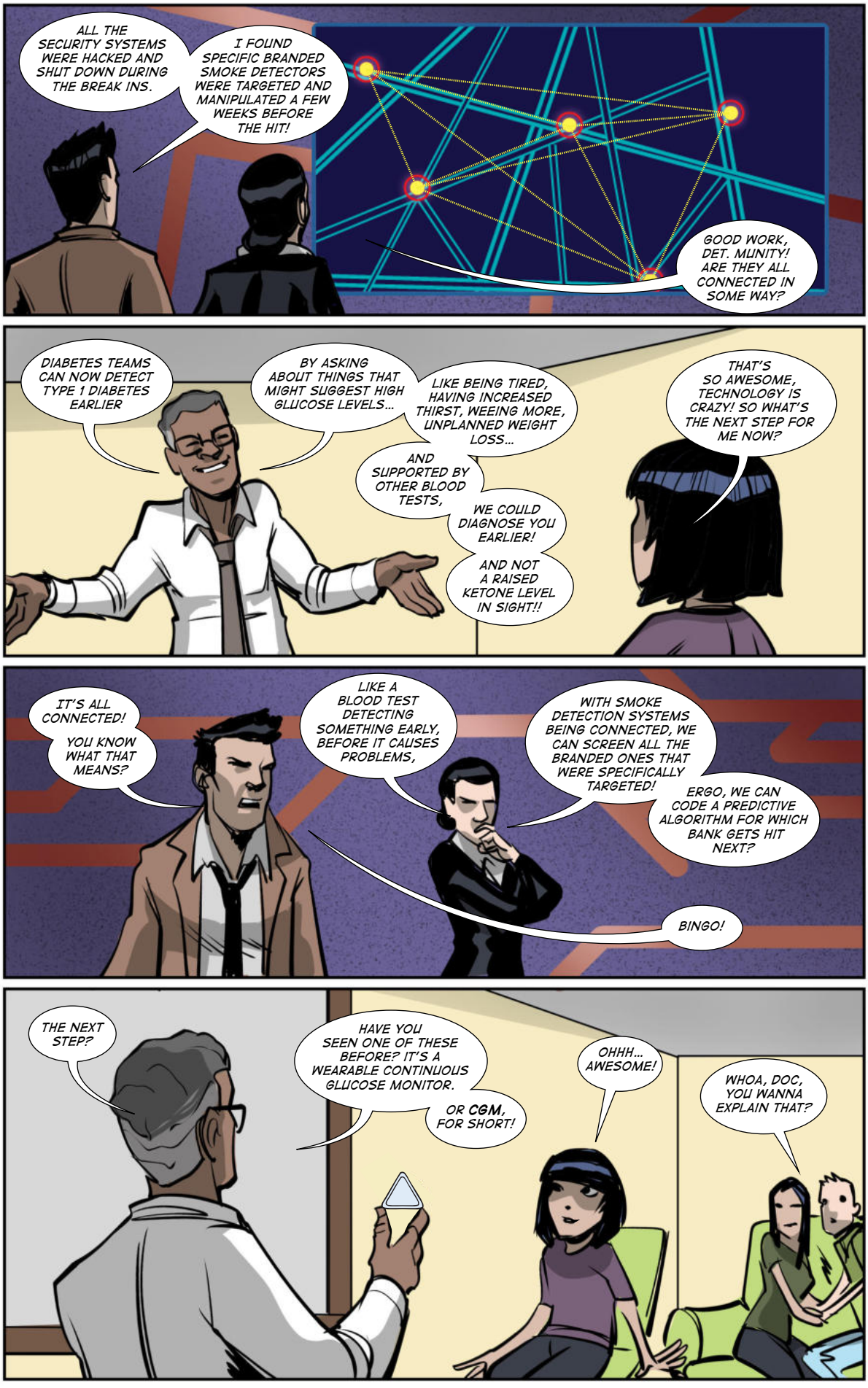

SMASH
WE'RE IN!
THE VAULT IS UP AHEAD.
SECURITY SYSTEMS OFFLINE!
THE EMPLOYER CAME THROUGH AGAIN!
NEED ME TO CRACK THE VAULT OPEN WITH MY STETHOSCOPE?
NO WE'RE GOOD! THE EMPLOYER HAS SORTED IT!
HE'S ALWAYS UPGRADING!
BING
VAULT UNLOCKED
SEE?
WHO IS THIS "EMPLOYER" OF OURS?
HE MUST HAVE A LOT OF CONTACTS TO HANDLE ALL THIS SECURITY!
WHO CARES, ZN8? HE'S PAYING US A LOT OF CREDITS!
HERE! THIS IS WHAT WE'RE HERE TO DO!
ALL THE BOXES MARKED "15L3T"...
...DESTROY THEM!
15L3T
FWOOF
OKAY THEN... LET'S FIRE IT UP!

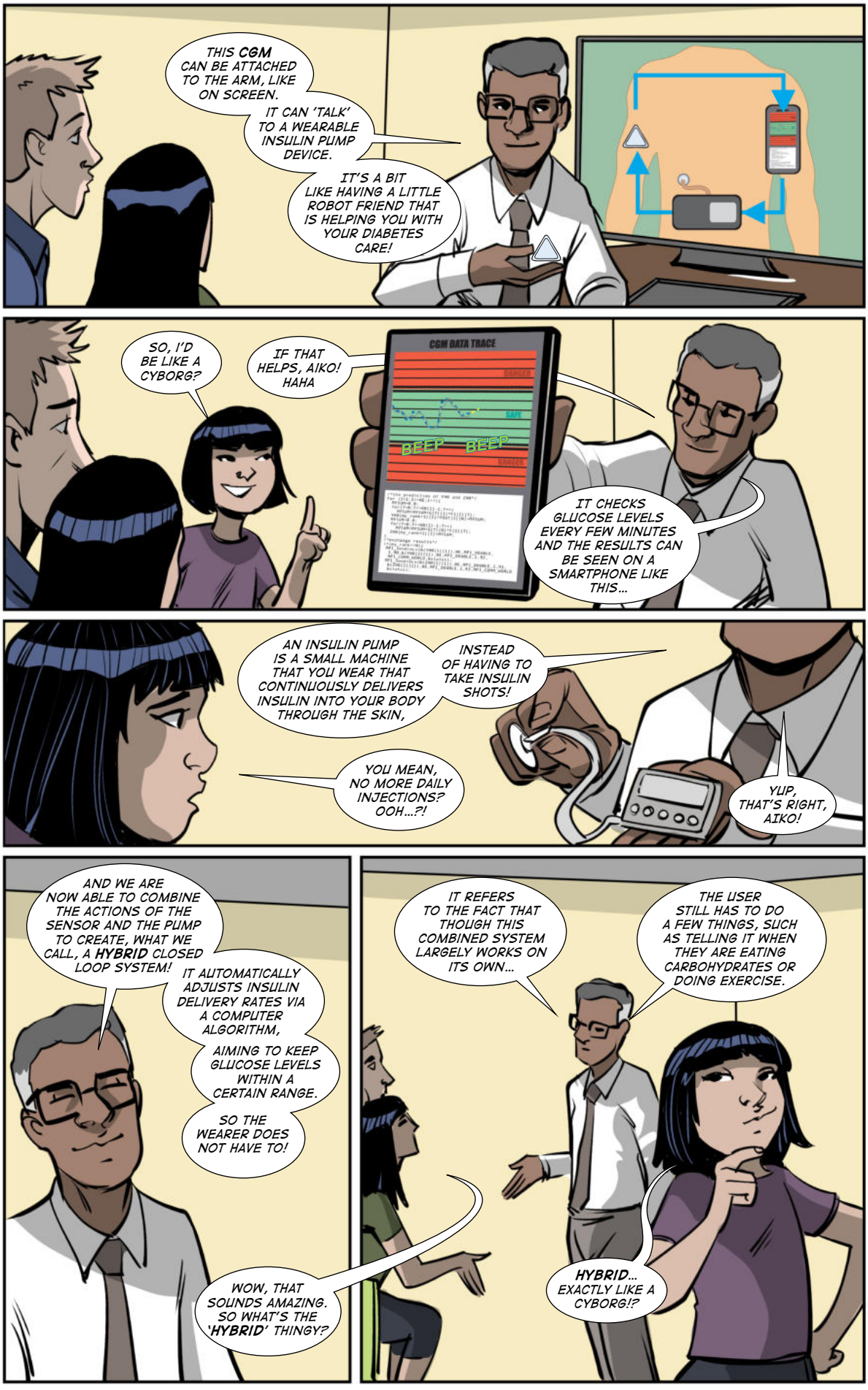

WAA
WAA
I CAN'T BELIEVE WERE IN A BANK AND WERE DESTROYING WHAT'S IN IT INSTEAD OF STEALING IT!
WAA
WAA
WAA
MAKE SURE TO GET THEM ALL OTHERWISE THE EMPLOYER WONT BE HAPPY...
WAA
ROGER THAT, JOSH!
WAA
WAA
HEY NO NAMES, IT'S GAD65!
GAD 65
JOB DONE!
MACROFY DRIFTER BIKES!
WAA
WAA
WAA
WAA
WAA
WAA
LET'S GET OUTTA HERE...
WAA
...BEFORE THE COPS GET ON THE IMMUNE CREW'S TRAIL!
WAA
WAA
WAA
WAA
WAA
WAA
SIR- WE HAVE DETECTED SOMETHING...

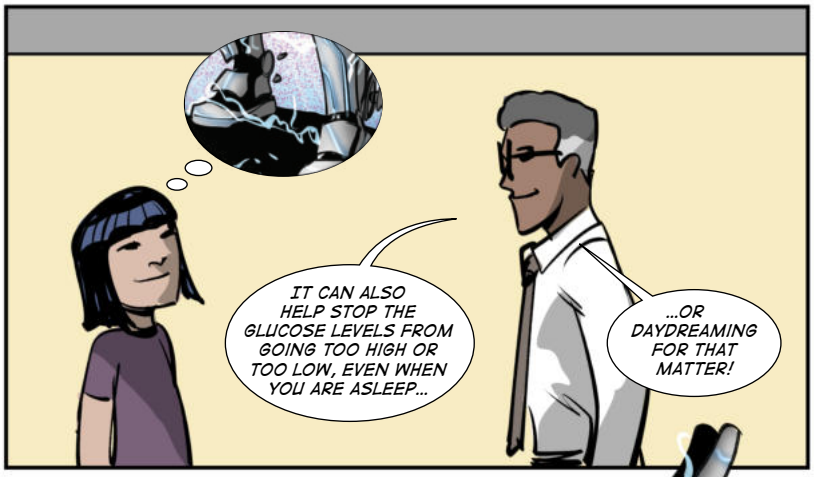

LOCAL POLICE HQ
WE'VE HAD REPORTS OF SEVERAL BANK OF PANC BREAK-INS!
YOU MEAN ROBBERIES?
DR PARTH, YOU MAY RECALL THAT AIKO'S EARLY TEST RESULTS WERE SIGNIFICANT.
α-cell
β-cell
Islet antigen-specific T-cell
Genetic predisposition
Presymptomatic T1D
STAGE 1
β-cell autoimmunity Normoglycemia
STAGE 2
β-cell autoimmunity Dysglycemia
STAGE 3
β-cell autoimmunity Hyperglycemia
Symptomatic T1D
SHE TESTED STRONGLY POSITIVE FOR 3 ANTIBODIES 2 YEARS AGO.
NO, YOU HEARD ME RIGHT! BREAK-INS NOT ROBBERIES!
YOU SURE?
POSITIVE!
WHY WOULD THIS CREW BREAK IN AND NOT STEAL ANYTHING?
ALL WE KNOW IS, IN EVERY CASE, THE ISLET BOXES HAVE BEEN SPECIFICALLY TARGETED AND DESTROYED.
INDEED, DR LAUREN, AND NOW AIKO HAS DEVELOPED SYMPTOMS...
...HER TYPE 1 HAS CLINICALLY AWAKENED!
IT'S A REAL SHAME THAT NEW DRUG CAME TOO LATE FOR HER
GAD65
IA2
Zn8
AIKO'S PREVIOUS ANTIBODY RESULTS SUGGESTED THAT SHE WAS AT AN INCREASED RISK OF HAVING HER INSULIN PRODUCING ISLETS DESTROYED.
I'VE GOT SGT. NILESH AND HIS TEAM LOOKING AT WHAT'S IN THOSE ISLETS THAT'S WORTH DESTROYING...
D'THINK THEY CAN BRING US SOME SIGNIFICANT RESULTS?
BE ASSURED THE TESTS WERE DONE FOR AIKO'S BENEFIT!
WE WOULD RECOMMEND STARTING INSULIN NOW.
OH, WE WERE EXPECTING THAT, JUST LIKE YOUR TEAM EXPLAINED!

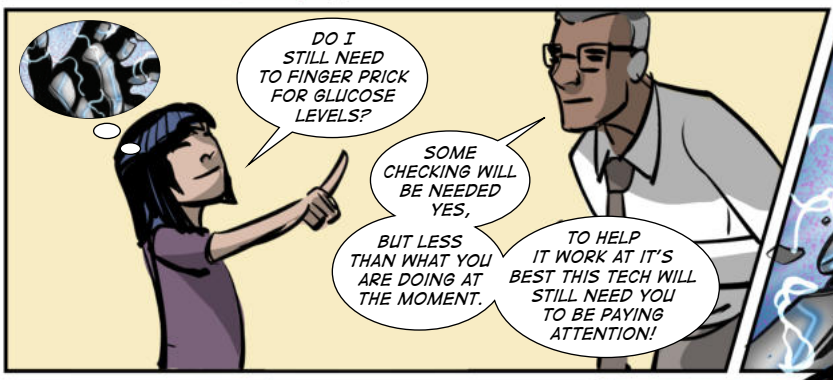

WHAT YOU THINKING, CAPTAIN?
WHAT'S OUR NEXT MOVE?
NOT SURE, DETECTIVE MUNITY!
MAYBE WE NEED HELP?
MAYBE AN OLD FRIEND WHO MIGHT BE ABLE TO HELP US...
CHOP
SO THIS IS WHERE YOU RETIRED TO?
YEAH, HOPING NO ONE WOULD FIND ME... BUT HERE YOU ARE, CAPTAIN BETES!
I WOULD HAVE LEFT YOU AND YOUR AXE ALONE, BUT I NEED YOUR HELP, IAN!
I'M OUT, TOO OLD FOR THAT GAME!
THE WORLD HAS MOVED ON, AND SO HAVE I!
THERE HAVE BEEN ATTACKS ON SEVERAL BANK OF PANC'S RECENTLY!
BANK OF PANCS?
KEETZ?
NO ACID, IT'S NOT KEETZ THIS TIME!
Click to know more about Keetz in Vol 2!
THEY DIDN'T STEAL ANYTHING.
THEY ONLY SET FIRE TO THE BANKS DESTROYING THE ISLETS IN THE VAULTS!
HMMM... MAYBE THEY JUST...
I DON'T KNOW!
MAYBE THEY JUST HAVE A SERIOUS GRUDGE AGAINST ISLETS?!
YOU KNOW SOMETHING?
I DON'T KNOW! IT'S YOUR PROBLEM... I'M RETIRED NOW!
THE GREAT DETECTIVE IAN SHOOLIN?? YOU'RE REALLY NOT GOING TO HELP ME??
GOODBYE, DIANA!

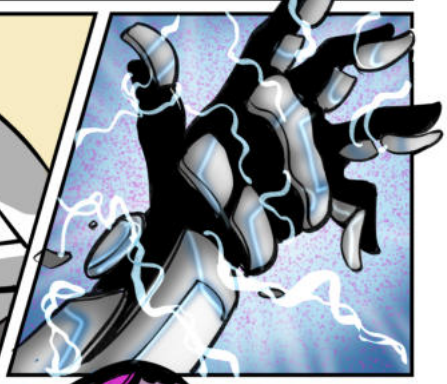

A FEW WEEKS LATER...
HOW HAVE YOU BEEN GETTING ON, AIKO?
SINCE MY TYPE 1 CAME ONLINE, YOU MEAN?
YEAH FINE, JUST TRYING TO GET USED TO INJECTING EVERYDAY... IT IS A PAIN!
ALTHOUGH I AM GLAD THAT MY TYPE 1 WAS FOUND EARLY ON... IT COULD HAVE BEEN A LOT WORSE!
IT'S AMAZING WHAT CAN BE DONE TODAY. I FEEL LUCKY I WAS SCREENED FOR IT!
I GOT YOU...
YOU THINK THERE'S NO ONE WATCHING...
...BUT THERE'S ALWAYS SOMEONE SCREENING!
FROM CCTV... INSTAPIC... ALLSORTS! ALL INTERLINKING IN CODE!
IT'S AMAZING WHAT TECH CAN DO TODAY!
YEAH, IT'S AMAZING!
WE ARE MONITORING A NUMBER OF PEOPLE WITH RAISED ANTIBODY LEVELS. HAVING 2 OR MORE ANTIBODIES IS NOW ENOUGH TO SAY THEY HAVE TYPE 1 DIABETES.
THEY WON'T ALL MOVE ONTO NEEDING INSULIN AT THE SAME RATE, BUT WE CAN MAKE SURE THAT THEY AT LEAST KNOW THE PHYSICAL CLUES TO WATCH OUT FOR, TELLING THAT IT COULD BE HAPPENING.
THAT'S WHAT TOLD US YOU WERE AT INCREASED RISK, SO WE COULD KEEP AN EYE ON YOU!
COOL!
FIND ANYTHING, JIM?
GOING BY YOUR TONE IT'S NOT GOOD NEWS FROM YOUR FRIEND, EH?!
BUT DON'T WORRY I HAVE FOUND SOMETHING AMAZING...
TAKE A LOOK...
BY CONNECTING THE DOTS, I WAS ABLE TO FIND SHOTS OF THE MASKED GANG ONLINE,
AND NOT JUST THAT... LOOK...

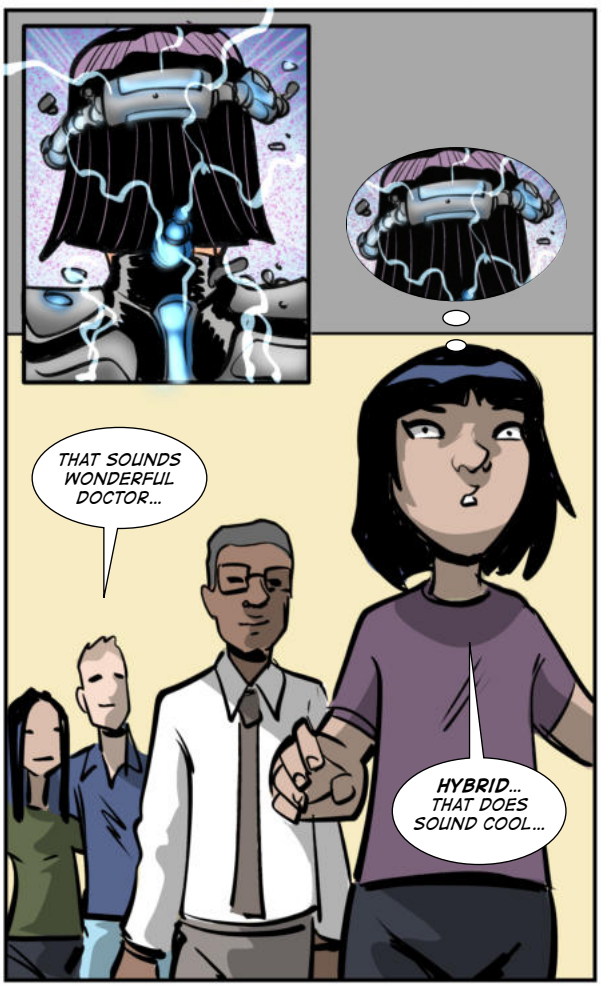

ALL THE SECURITY SYSTEMS WERE HACKED AND SHUT DOWN DURING THE BREAK INS.
I FOUND SPECIFIC BRANDED SMOKE DETECTORS WERE TARGETED AND MANIPULATED A FEW WEEKS BEFORE THE HIT!
GOOD WORK, DET. MUNITY! ARE THEY ALL CONNECTED IN SOME WAY?
DIABETES TEAMS CAN NOW DETECT TYPE 1 DIABETES EARLIER
BY ASKING ABOUT THINGS THAT MIGHT SUGGEST HIGH GLUCOSE LEVELS...
LIKE BEING TIRED, HAVING INCREASED THIRST, WEEING MORE, UNPLANNED WEIGHT LOSS...
AND SUPPORTED BY OTHER BLOOD TESTS,
WE COULD DIAGNOSE YOU EARLIER!
AND NOT A RAISED KETONE LEVEL IN SIGHT!!
THAT'S SO AWESOME, TECHNOLOGY IS CRAZY! SO WHAT'S THE NEXT STEP FOR ME NOW?
IT'S ALL CONNECTED!
YOU KNOW WHAT THAT MEANS?
LIKE A BLOOD TEST DETECTING SOMETHING EARLY, BEFORE IT CAUSES PROBLEMS,
WITH SMOKE DETECTION SYSTEMS BEING CONNECTED, WE CAN SCREEN ALL THE BRANDED ONES THAT WERE SPECIFICALLY TARGETED!
ERGO, WE CAN CODE A PREDICTIVE ALGORITHM FOR WHICH BANK GETS HIT NEXT?
BINGO!
THE NEXT STEP?
HAVE YOU SEEN ONE OF THESE BEFORE? IT'S A WEARABLE CONTINUOUS GLUCOSE MONITOR.
OR CGM, FOR SHORT!
OHHH... AWESOME!
WHOA, DOC, YOU WANNA EXPLAIN THAT?

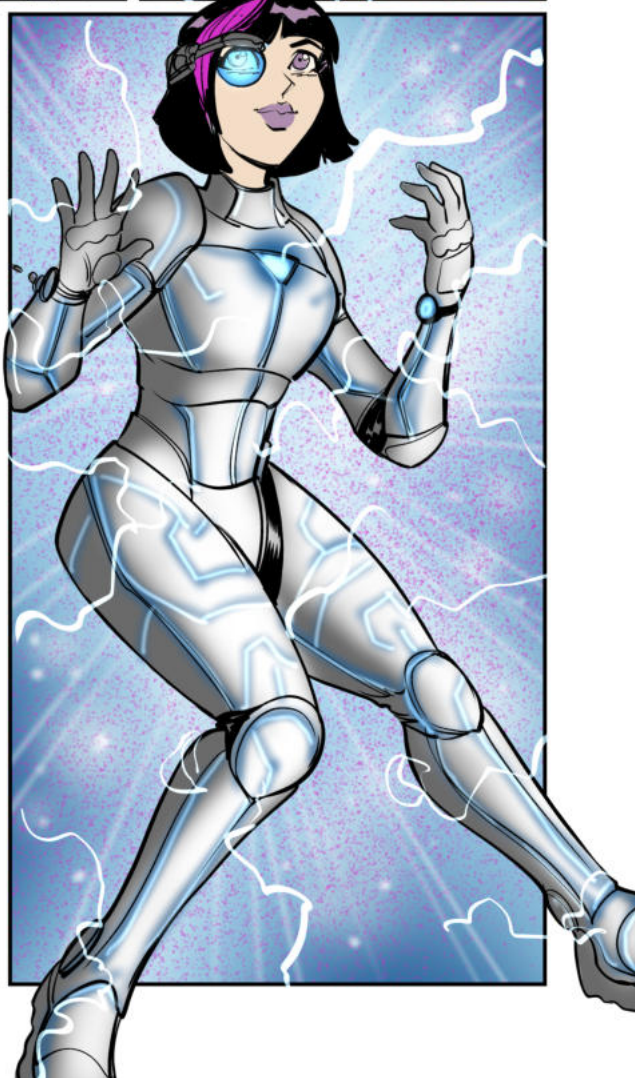

THIS CGM CAN BE ATTACHED TO THE ARM, LIKE ON SCREEN.
IT CAN 'TALK' TO A WEARABLE INSULIN PUMP DEVICE.
IT'S A BIT LIKE HAVING A LITTLE ROBOT FRIEND THAT IS HELPING YOU WITH YOUR DIABETES CARE!
SO, I'D BE LIKE A CYBORG?
IF THAT HELPS, AIKO! HAHA
CGM DATA TRACE
DANGER
SAFE
BEEP BEEP
DANGER
IT CHECKS GLUCOSE LEVELS EVERY FEW MINUTES AND THE RESULTS CAN BE SEEN ON A SMARTPHONE LIKE THIS...
AN INSULIN PUMP IS A SMALL MACHINE THAT YOU WEAR THAT CONTINUOUSLY DELIVERS INSULIN INTO YOUR BODY THROUGH THE SKIN,
INSTEAD OF HAVING TO TAKE INSULIN SHOTS!
YOU MEAN, NO MORE DAILY INJECTIONS? OOH...?!
YUP, THAT'S RIGHT, AIKO!
AND WE ARE NOW ABLE TO COMBINE THE ACTIONS OF THE SENSOR AND THE PUMP TO CREATE, WHAT WE CALL, A HYBRID CLOSED LOOP SYSTEM!
IT AUTOMATICALLY ADJUSTS INSULIN DELIVERY RATES VIA A COMPUTER ALGORITHM,
AIMING TO KEEP GLUCOSE LEVELS WITHIN A CERTAIN RANGE.
SO THE WEARER DOES NOT HAVE TO!
WOW, THAT SOUNDS AMAZING. SO WHAT'S THE 'HYBRID' THINGY?
IT REFERS TO THE FACT THAT THOUGH THIS COMBINED SYSTEM LARGELY WORKS ON ITS OWN...
THE USER STILL HAS TO DO A FEW THINGS, SUCH AS TELLING IT WHEN THEY ARE EATING CARBOHYDRATES OR DOING EXERCISE.
HYBRID... EXACTLY LIKE A CYBORG!?

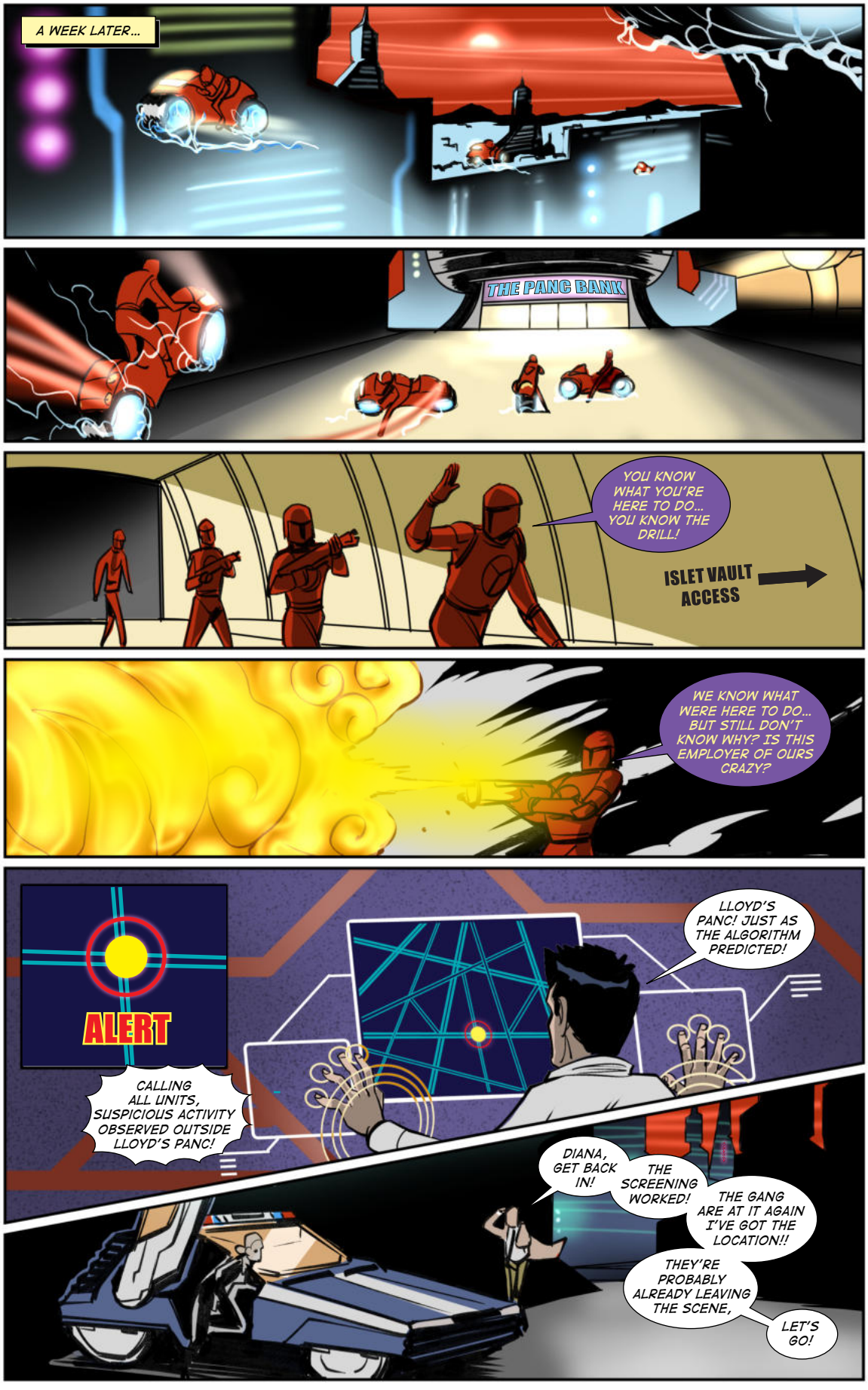

IT CAN ALSO HELP STOP THE GLUCOSE LEVELS FROM GOING TOO HIGH OR TOO LOW, EVEN WHEN YOU ARE ASLEEP...
...OR DAYDREAMING FOR THAT MATTER!


DO I STILL NEED TO FINGER PRICK FOR GLUCOSE LEVELS?
SOME CHECKING WILL BE NEEDED YES,
BUT LESS THAN WHAT YOU ARE DOING AT THE MOMENT.
TO HELP IT WORK AT IT'S BEST THIS TECH WILL STILL NEED YOU TO BE PAYING ATTENTION!




THAT SOUNDS WONDERFUL DOCTOR...
HYBRID... THAT DOES SOUND COOL...




A WEEK LATER...
THE PANC BANK
YOU KNOW WHAT YOU'RE HERE TO DO... YOU KNOW THE DRILL!
ISLET VAULT ACCESS
WE KNOW WHAT WERE HERE TO DO... BUT STILL DON'T KNOW WHY? IS THIS EMPLOYER OF OURS CRAZY?
ALERT
CALLING ALL UNITS, SUSPICIOUS ACTIVITY OBSERVED OUTSIDE LLOYD'S PANC!
LLOYD'S PANC! JUST AS THE ALGORITHM PREDICTED!
DIANA, GET BACK IN!
THE SCREENING WORKED!
THE GANG ARE AT IT AGAIN I'VE GOT THE LOCATION!!
THEY'RE PROBABLY ALREADY LEAVING THE SCENE,
LET'S GO!

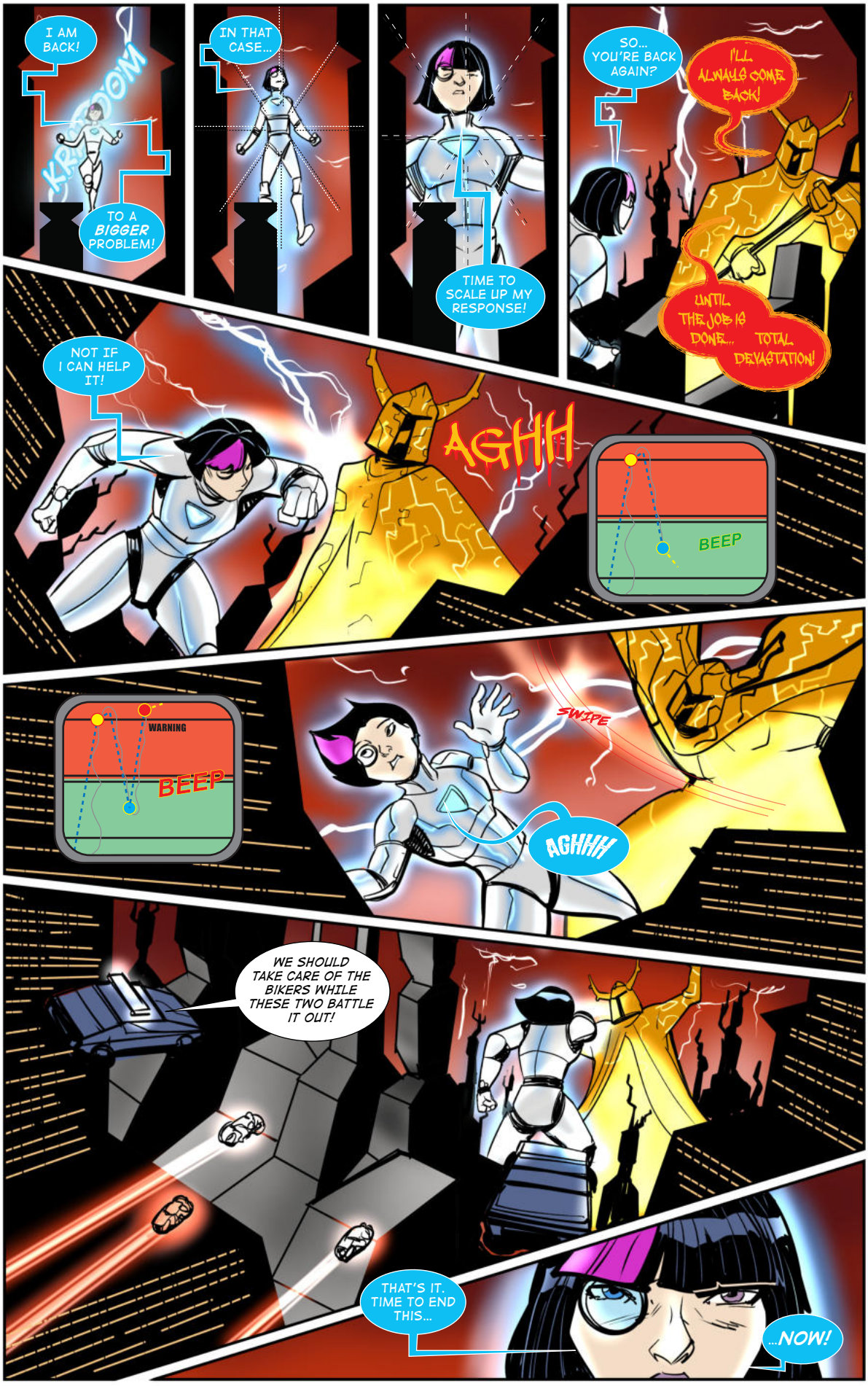

GOOD WORK TEAM, JOB WELL DONE -OH-
BUT LOOKS LIKE WE HAVE COMPANY...
THERE THEY ARE!
LET'S SPLIT!
VROOOM
IF THEY'RE SPLITTING UP...
CLICK
Initiating Separation Protocol.
SO SHOULD WE!
SPLIT
I'LL TAKE THE ONES TO THE LEFT!
I GOT THE RIGHT!
THEY'RE FAST!
ZOOM
THEY'RE NIMBLE!
ZOOM
I'VE GOT YOU!
POLICE! STOP OR...
I WILL...
...RAM YOU!
SMASH
BOSS, WE HAVE A PROBLEM...
DON'T WORRY, I'LL HANDLE THIS!
I JUST TOOK ONE OUT, AND I SEE ANOTHER...
WHERE ARE YOU DIANA? WHAT DO YOU SEE?
I HAVE NO IDEA WHAT I'M LOOKING AT...

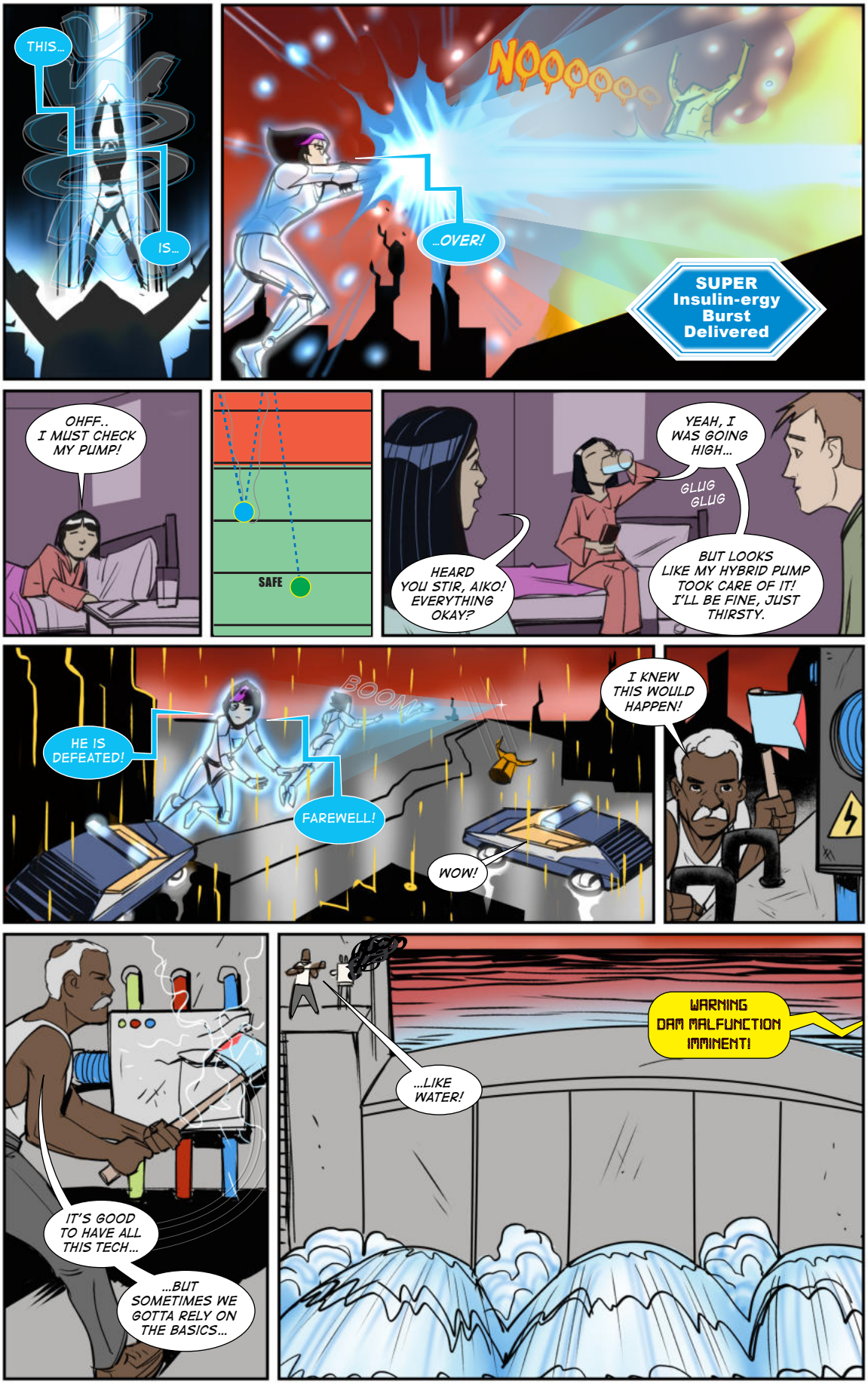

ALL YOURS, BOSS!
I will destroy them, along with everything else!
WHAT IS THAT?
KRAKOOM
Liver Industries
GLUCOSE
Hepatolabs™
BOOM!

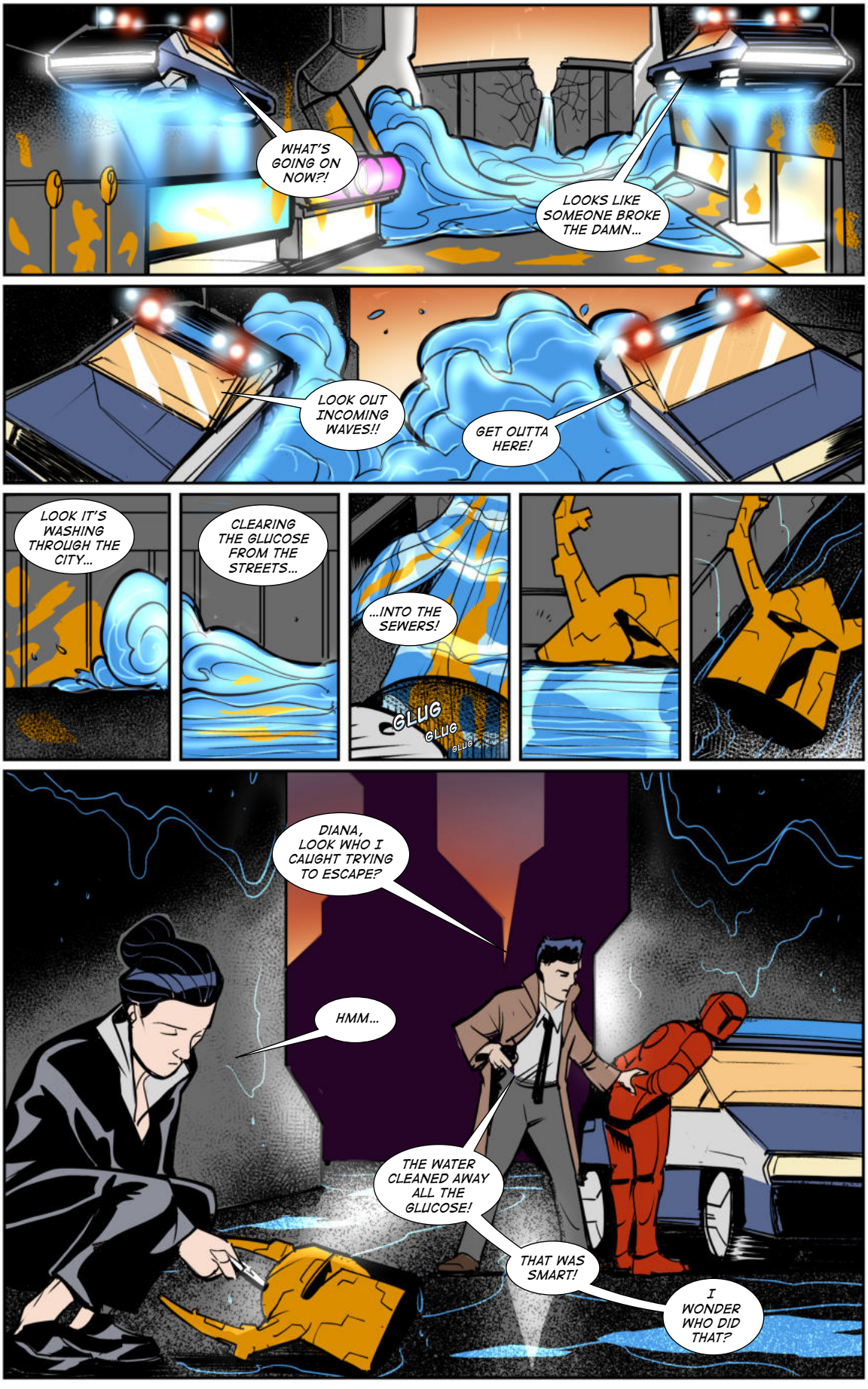

BEEP
BEEP
BEEP
BEEP
BEEP
Panic in Mega City T-One
BEEP
=ALERT=
GLUCOSE RISE PREDICTED
BEEP
BEEP
BEEP
BEEP
DIANA!
THIS THING'S JUST DESTROYED HEPATOLABS!
ACCORDING TO MY SCANNER, THAT IS LIQUID GLUCOSE. IT CAN BE TOXIC AT HIGH LEVELS,
AND IT'S FLOODING THE CITY!
I SEE IT, JIM! WHAT CAN WE DO? WE'RE GONNA NEED HELP!!
BEEP
BEEP
BEEEEEP
Trigger Threshold Crossed
Hybrid Awakening Initiated

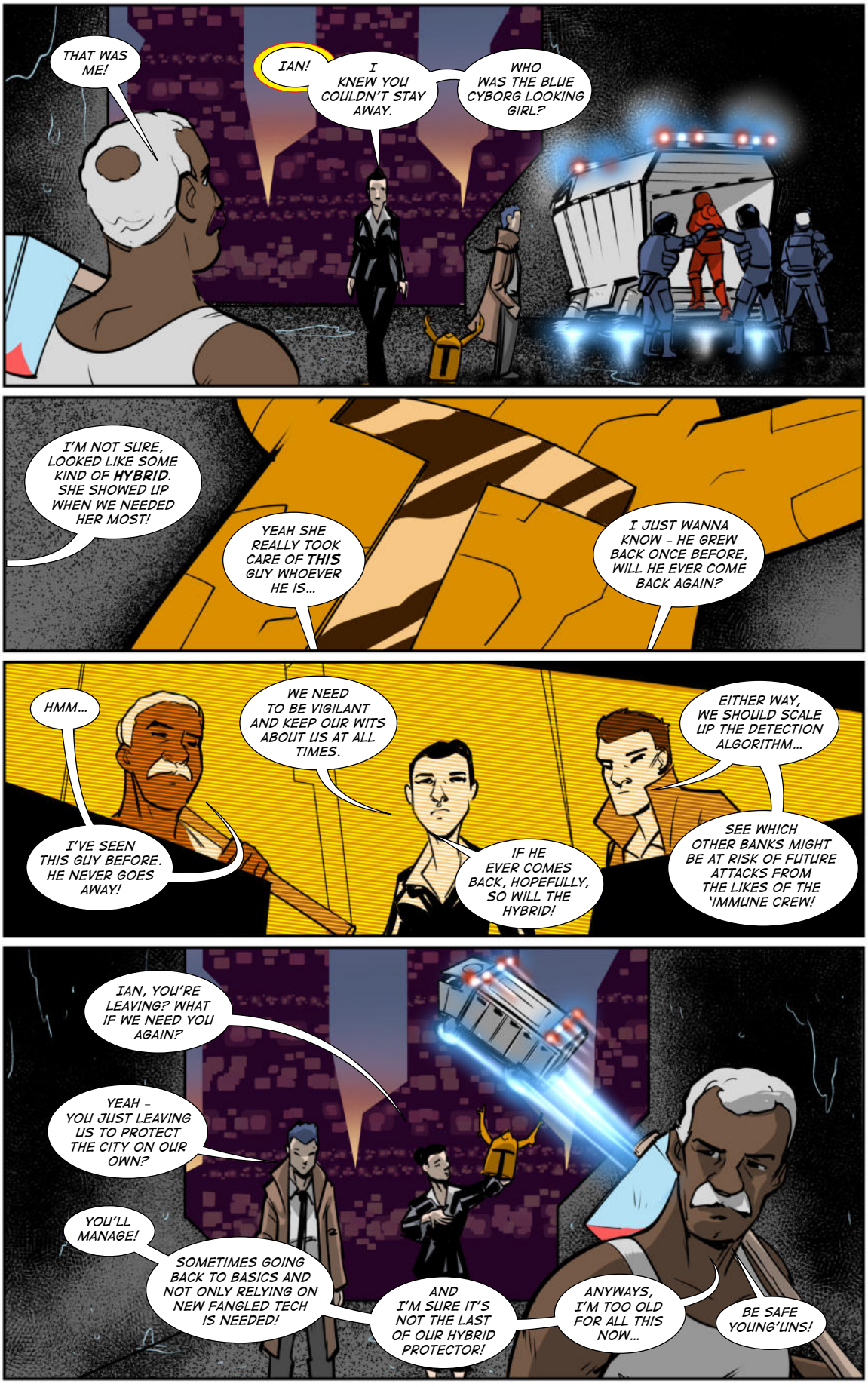

HUH?
ZOOM
WHAT THE...?
AND WHO OR WHAT MIGHT YOU BE?
I AM AIKO, A HYBRID, HERE TO DEFEND MEGA CITY T-ONE!
I SUGGEST YOU LEAVE NOW...
MWAHAHAHA
LEAVE NOW, LITTLE GIRL OR I WILL...
YOU WON'T LISTEN?
SO BE IT!
I WILL JUST HAVE SHOW YOU MY...
...POWER!
AGHHGHHH
INSULIN-ERGY BURST DELIVERED!
Insulin Boost Delivered

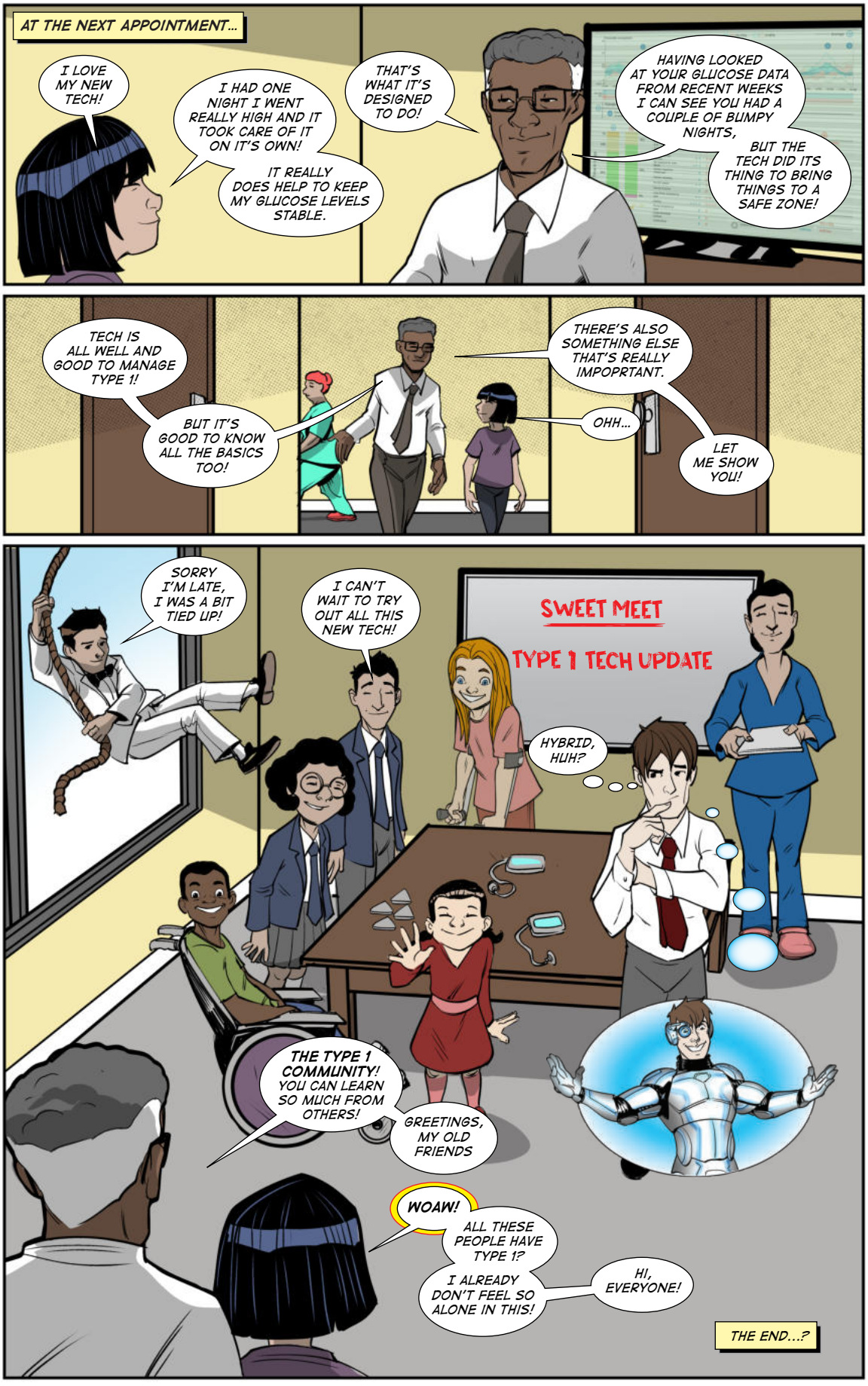

BEEP
BEEP
BEEP
BEEP
BEEP
ZZZZ
BEEP
BEEP
BEEP
BEEP
BEEP
ALERT
GLUCOSE FALL PREDICTED
THAT'S HIM TAKEN CARE OF!
TIME TO SIGN OFF!
BEEP
OH WOW, DIANA, DID YOU SEE THAT? SHE KNOCKED HIS BLOCK OFF!
YEAH, SHE SURE DID, JIM, LEAST WE KNOW SHE'S ON OUR SIDE!
BUT WHERE'D SHE GO?
SHE JUST DISAPPEARED!
BEEP
BEEP
BEEP
BEEP
BEEP
MWAHAHAHA
BEEP
YOU CANNOT...
BEEP
BEEP
...DEFEAT SOMEONE, WHO ALWAYS COMES BACK!
HAHAHA
BEEP
BEEP
BEEP
BEEP
BEEP
WHERE ARE YOU LITTLE HYBRID?
BEEP
BEEP
OH NO! THIS A BIGGER PROBLEM THAN WE THOUGHT!
BEEP
BEEP
BEEP
BEEP
WARNING
Hybrid Awakening Initiated
BEEEEEEP


I AM BACK!
KRRRDOOM
TO A BIGGER PROBLEM!
IN THAT CASE...
TIME TO SCALE UP MY RESPONSE!
SO... YOU'RE BACK AGAIN?
I'LL ALWAYS COME BACK!
UNTIL THE JOB IS DONE... TOTAL DEVASTATION!
NOT IF I CAN HELP IT!
AGHHH
BEEP
WARNING
BEEP
SWIPE
AGHHH
WE SHOULD TAKE CARE OF THE BIKERS WHILE THESE TWO BATTLE IT OUT!
THAT'S IT. TIME TO END THIS...
...NOW!


THIS...
IS...
NOOOOOOO
...OVER!
SUPER Insulin-ergy Burst Delivered
OHFF.. I MUST CHECK MY PUMP!
SAFE
YEAH, I WAS GOING HIGH...
GLUG GLUG
HEARD YOU STIR, AIKO! EVERYTHING OKAY?
BUT LOOKS LIKE MY HYBRID PUMP TOOK CARE OF IT! I'LL BE FINE, JUST THIRSTY.
BOOM
HE IS DEFEATED!
FAREWELL!
WOW!
I KNEW THIS WOULD HAPPEN!
IT'S GOOD TO HAVE ALL THIS TECH...
...BUT SOMETIMES WE GOTTA RELY ON THE BASICS...
WARNING DAM MALFUNCTION IMMINENT!
...LIKE WATER!


WHAT'S GOING ON NOW?!
LOOKS LIKE SOMEONE BROKE THE DAMN...
LOOK OUT INCOMING WAVES!!
GET OUTTA HERE!
LOOK IT'S WASHING THROUGH THE CITY...
CLEARING THE GLUCOSE FROM THE STREETS...
...INTO THE SEWERS!
GLUG
GLUG
GLUG
DIANA, LOOK WHO I CAUGHT TRYING TO ESCAPE?
HMM...
THE WATER CLEANED AWAY ALL THE GLUCOSE!
THAT WAS SMART!
I WONDER WHO DID THAT?


THAT WAS ME!
IAN!
I KNEW YOU COULDN'T STAY AWAY.
WHO WAS THE BLUE CYBORG LOOKING GIRL?
I'M NOT SURE, LOOKED LIKE SOME KIND OF HYBRID. SHE SHOWED UP WHEN WE NEEDED HER MOST!
YEAH SHE REALLY TOOK CARE OF THIS GUY WHOEVER HE IS...
I JUST WANNA KNOW - HE GREW BACK ONCE BEFORE, WILL HE EVER COME BACK AGAIN?
HMM...
I'VE SEEN THIS GUY BEFORE. HE NEVER GOES AWAY!
WE NEED TO BE VIGILANT AND KEEP OUR WITS ABOUT US AT ALL TIMES.
IF HE EVER COMES BACK, HOPEFULLY, SO WILL THE HYBRID!
EITHER WAY, WE SHOULD SCALE UP THE DETECTION ALGORITHM...
SEE WHICH OTHER BANKS MIGHT BE AT RISK OF FUTURE ATTACKS FROM THE LIKES OF THE 'IMMUNE CREW!
IAN, YOU'RE LEAVING? WHAT IF WE NEED YOU AGAIN?
YEAH - YOU JUST LEAVING US TO PROTECT THE CITY ON OUR OWN?
YOU'LL MANAGE!
SOMETIMES GOING BACK TO BASICS AND NOT ONLY RELYING ON NEW FANGLED TECH IS NEEDED!
AND I'M SURE IT'S NOT THE LAST OF OUR HYBRID PROTECTOR!
ANYWAYS, I'M TOO OLD FOR ALL THIS NOW...
BE SAFE YOUNG'UNS!


AT THE NEXT APPOINTMENT...
I LOVE MY NEW TECH!
I HAD ONE NIGHT I WENT REALLY HIGH AND IT TOOK CARE OF IT ON IT'S OWN!
IT REALLY DOES HELP TO KEEP MY GLUCOSE LEVELS STABLE.
THAT'S WHAT IT'S DESIGNED TO DO!
HAVING LOOKED AT YOUR GLUCOSE DATA FROM RECENT WEEKS I CAN SEE YOU HAD A COUPLE OF BUMPY NIGHTS,
BUT THE TECH DID ITS THING TO BRING THINGS TO A SAFE ZONE!
TECH IS ALL WELL AND GOOD TO MANAGE TYPE 1!
BUT IT'S GOOD TO KNOW ALL THE BASICS TOO!
THERE'S ALSO SOMETHING ELSE THAT'S REALLY IMPOPRTANT.
OHH...
LET ME SHOW YOU!
SORRY I'M LATE, I WAS A BIT TIED UP!
I CAN'T WAIT TO TRY OUT ALL THIS NEW TECH!
SWEET MEET
TYPE 1 TECH UPDATE
HYBRID, HUH?
THE TYPE 1 COMMUNITY! YOU CAN LEARN SO MUCH FROM OTHERS!
GREETINGS, MY OLD FRIENDS
WOAW!
ALL THESE PEOPLE HAVE TYPE 1?
I ALREADY DON'T FEEL SO ALONE IN THIS!
HI, EVERYONE!
THE END...?

Screening for Type 1 Diabetes

As Aiko's story has shown, we now live in an age where it is possible to predict if someone has very early type 1 diabetes, based on the presence of certain antibodies (the 'molecules' produced by the immune system that destroy the insulin producing islet cells in the pancreas) in their blood.

Who should consider being screened/having antibody testing for type 1 diabetes?

- Those with a relative with type 1 diabetes
- Those with other autoimmune diseases such as thyroid disease or coeliac disease
- Those for whom a diagnosis of type 2 diabetes does not seem to fit

The role of disease modifying therapy

The current role of therapy that could delay the onset of type 1 diabetes, especially at the early stages of the disease, is emerging but not part of routine clinical practice yet – watch this space!

For further information, look online here…

Diabetes UK (search 'immunotherapy')
elsadiabetes.nhs.uk
type1diabetesresearch.org.uk
www.breakthrought1d.org
t1dra.bristol.ac.uk

A few words on Wearable Diabetes Technology...

Continuous Glucose Monitors (CGMs), examples include FreeStyle Libre and Dexcom
Mode of action by measuring interstitial ('skin fluid') glucose in real time, every few minutes, results are generated than can be graphically presented as glucose trends on a phone or reader device for the wearer and shared with family, friends or healthcare professionals.
Benefits:

- The data can be used to help inform the impact of everyday factors such as dietary choices, physical activity and illness on glucose levels. This in turn can support adjustments made to insulin delivery times, rates or doses.
- Visible glucose level trending arrows and built in alarms can inform the wearer of impending high or low readings, enabling corrective actions to be taken early.

Note: Any abnormal readings obtained than do not match how the wearer might be feeling at the time, e.g. very high or low glucose results, should be confirmed with a fingerprick blood glucose check, to exclude the possibility of CGM malfunction.

Insulin Pumps

2 Types:

- Older **'traditional' pumps**: Insulin is infused continuously (via a cannula or through direct pump attachment to the body) at rates programmed by the user in response to glucose data, with mealtime insulin boluses delivered as required
- Newer **Hybrid Closed-Loop pumps**: Automated insulin delivery based on wireless 'crosstalk' between CGM and the pump (e.g., Tandem T-slim X2, Omnipod 5, Medtronic 780G, Ypsopump, Dana-i), with the user still required to deliver mealtime insulin boluses

For more information, Click here to see decision support tool >>

https://www.england.nhs.uk/wp-content/uploads/2024/01/PRN00250-decision-support-tool-making-a-decision-about-managing-type-1-diabetes-v2.pdf

Wearable diabetes technology guidance notes for hospital-based healthcare professionals

- Always check your admitted patients for wearable diabetes technology and exclude infection at insertion points.
- Follow local guidance on how to support wearable technology use.

Click here for Joint British Diabetes Societies Technology guidance >>

https://abcd.care/sites/default/files/resources/JBDS_20_Using_Technology_to_Support_Diabetes_Care_in_Hospital_1.pdf

- Recognise that CGM glucose data may lag behind blood glucose levels, especially with dehydration.
- Recognise the need to administer insulin via alternative routes (e.g. intravenously or subcutaneously), in the event of pump malfunction or if the patient is unable to manage the pump themselves, to reduce the risk of Diabetic ketoacidosis.

TYPE 1

AWAKE AND PUMPED

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